

New Frontiers of Educational Research

Xudong Zhu
Kenneth Zeichner *Editors*

Preparing Teachers for the 21st Century

 Springer

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New Frontiers of Educational Research

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Preparing Teachers for the 21st Century

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Preface

Background and Highlight

The twenty-first century is featured by information blast; more and more countries are realizing that teachers are the most important single element of the state education system. Therefore, to prepare highly qualified teachers has become a great necessity for governments the world over. However, more than 10 years have passed in the twenty-first century, and up to now there is still no consensus on teachers' professional status, skills, knowledge and the direction of teacher professional development in the academic circle. New contradictions and problems concerning teacher quality are emerging around the world, which put challenges on teacher education both nationally and internationally. Thus, how to prepare teachers in the twenty-first century has been put on agenda.

How to prepare teachers in the twenty-first century is the concurring topic that both western and eastern countries are issuing now. In western countries such as the United States and England, teachers are required to meet the needs of how to improve the multi-cultural teaching competency for the growing diverse populations and promoting the pre-service teacher education quality by university-school partnership. Meanwhile, in China, the rural teachers face the challenge how to get continuing professional development and engaging in professional learning community by collaborating with peers and parents. In order to solve the problems, the eastern countries can learn the experiences from western countries, and vice versa. Thus, the question of how to prepare highly qualified teachers in the twenty-first century needs to be raised in the global contexts.

Accordingly, we highlight, firstly, the perspectives and ways in which the scholars from different countries think about teacher education research, practice and policy. We then describe their practice in the area of pre-service teacher preparation, in-service teacher training, teachers' professional development, teachers' knowledge and characteristics, etc. Lastly, we try to broaden our vision by examining teacher education from social and cultural perspectives.

The Center for Teacher Education Research at Beijing Normal University, as one of the key research institutes of humanities and social sciences in universities recognized by the Ministry of Education, is currently the only teacher education research institution at the national level in China. In order to facilitate the west–east communication and dialogue on teacher education, we organized the First Global Teacher Education Summit to provide a platform for researchers and practitioners to express their insightful thoughts and viewpoints from various stances. This book is based on the achievements of this conference.

Summary of the Book

There are five main themes in the book. In the first part, we discussed the issues on teacher preparation and challenges for improving teacher quality. Ken Zeichner addressed the problems of both the university-based teacher training program and the early entry program for teacher training. He suggested to redesign the college and university system of teacher education to be more clinically-based and focused more on the specific contexts for teacher preparation. Christopher Day discussed the factors which affected teacher quality based on evidence from existing research around the world. Diane Mayer analyzed the problems of the “policy-driven” teacher education and called teacher educators to sustain the professionalization of teacher education. In Martine Valcke’s chapter, he proposed that evidence-based teacher training model is critical for guaranteeing teacher quality. Liu Chuansheng, Fang Zengquan and Li Jinzhong’s chapter on free education in normal universities in China provides an example on how government policies, universities and schools collaborated to prepare highly qualified teachers.

In the second part of the book, we discussed how local and global factors played in teacher education. Also, we provided cases on preparing teachers and teacher educators both globally and locally. Mary Hamilton and Stefinee Pinnegar suggested that teacher researchers and teacher educators must understand ideas with global perspective within the local context and ultimately inform the global community. Lynn Paine argued that the pressure of accountability and markets create a space and need for critical research which need to interrogate discourses at global and local levels and need for unpacking frames which shape the conversations. Michale Singh criticized the Euro-American centered teacher education and argued that we need to prepare bilingual teacher-research theorists for the twenty-first century teaching force. Zhu Xudong’s chapter pointed out problems of China’s rural teacher training problem and proposed an approach to reconfigure the teacher education system for rural education. Lee Chi-kin’s paper addressed the status, issues and prospects of teacher education in Hong Kong. Emily Lin described how American doctoral programs prepare teacher educators. In Dai Weifen and Lin Goodwin’s chapter, through empirical studies, they suggested that coherence and integration in the teacher preparation curriculum are needed for preparing high-quality teachers in China.

In the third part, we discussed the issues on professional development. Andy Hargreaves clarified the concepts of contrived collegiality and arranged collegiality. Fang Zhihui discussed teacher autonomy and teacher empowerment in the context of government intrusion with high stake tests. Jean Clandinin brought up the issue of sustaining beginning teachers through the intervention of teacher education. Ora Kwo proposed an idea of professional learning as a moral drive.

In the fourth part of the book, we tried to broaden our vision by examining teacher education from social and cultural perspectives. Elizabeth Spalding advocated for preparing pre-service and in-service teachers for and about social justice. Gery Smyth proposed to apply cultural responsive pedagogy in teacher education to meet the challenge of the twenty-first century. Ninetta Santoro confirmed the need for preparing culturally responsive teachers by introducing the Australian experience.

In the fifth part of the book, teachers' knowledge and characteristics are accounted in educating highly qualified teachers. Chinese cases and stories are used for elaborating this view. Wang Jian talked about mathematics knowledge of Chinese elementary teachers. Ju Yucui explored teachers' personal practical knowledge. Xu Yueting discussed teacher emotion in relations. Zheng Hongying explored the relationship between secondary school EFL teachers' beliefs and practice.

Acknowledgement

Finally, we would like to thank all the authors of this book who contributed provoking thoughts in teacher education. We also would like to thank all the contributors of the conference. They brought their newest research to this conference and thus we could learn the frontier of the research in teacher education.

We would like to express our gratitude to Faculty of Education and the various bureaus at Beijing Normal University who provided financial support and other logistic support. At last, we want to thank our colleagues and students at the Center for Teacher Education Research, who made their great efforts to make this conference a successful one!

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Part I
Teacher Preparation and Teacher Quality

Chapter 1

Two Visions of Teaching and Teacher Education for the Twenty-First Century

Ken Zeichner

Abstract This chapter examines current criticisms of the role of colleges and universities in teacher education in the U.S. and calls for the development of new more democratic models of pre-service teacher education where the responsibility for educating new teachers is shared more equally between colleges/universities, schools and communities. Examples of the creation of these more democratic spaces in teacher education programs where the expertise of academics, teachers and community members is accessed in support of teacher learning are presented. Both traditional “college-recommending” models of teacher education and newer “early-entry” or fast track models are seen as problematic. A new more democratic approach to teacher education is advocated, is grounded in elements of cultural-historical activity theory, and is seen as critical to the survival of a significant role for colleges and universities in pre-service teacher education in the U.S.

Keywords Teacher education reform • Teacher education approaches • Teacher education U.S.

Currently there is an intense debate that is taking place in many parts of the world about the kind of teaching and teacher education that should define education in the twenty-first century. In this chapter, I will outline the main ideas at issue in these debates and offer my analysis of how we should seek to resolve the current controversies. The debates that I describe are concerned with the most basic questions about teaching and teacher education such as the nature of the teaching role for

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which we are preparing teachers, who should prepare them, when should this preparation take place, and what should be the content of the preparation.

Historically, the central issues underlying debates about the best approaches to teacher education stem from different assumptions and convictions about the purposes of public education, the teaching and learning process, and the teacher's role (Corey 1958; Labaree 1997). In the current debates, two different visions of the role of teachers and teacher preparation are being advocated. On the one hand, some have proposed building or maintaining a professional teaching force and a system of teacher education that prepares teachers for professional roles and teaching careers (Darling-Hammond and Bransford 2005; Sykes 2004). Others have argued that it is too costly to build and maintain a professional teaching force to teach everyone's children and have advocated for preparing teachers of "other people's children" as technicians who are to implement the teaching scripts with which they are provided in the belief that the preparation these teachers receive and the subsequent scripting of instruction will lead to improvements in pupils' standardized test scores. Initial Teacher education in this view (usually referred to as "teacher training") should be very brief and take place on the job. There is little expectation that these teachers will have teaching careers, and the system is designed to make it possible for these temporary teachers to be replaced in a few years by other narrowly trained teachers, often more lowly paid teachers, who also will leave the classroom in a few years (Connell 2009).¹

While these same debates are going on in many parts of the world (e.g., Furlong et al. 2008; Moon 2007), I will concentrate in this chapter on how they are being enacted in the United States, which has a teaching force of approximately 3.6 million teachers who teach in about 90,000 schools (U.S. Department of Education 2011). Approximately 1,400 colleges and universities are authorized to offer teacher education programs in the U.S. and increasingly a variety of other non-profit and for-profit programs including the school districts themselves are running programs that currently prepare about one third of the new teachers in the nation each year (National Research Council 2010).

1.1 The Landscape of Teacher Education in the United States

For most of the formal history of teacher education in the United States, a variety of pathways into teaching have existed both inside and outside colleges and universities. At one time or another since the mid-nineteenth century when formal teacher

¹One controversial program in the U.S., "Teach for America" explicitly encourages recruits to teach for a few years on their way to taking a high paying job in the corporate world. <http://www.teachforamerica.org/why-teach-for-america/compensation-and-benefits/graduate-school-and-employer-partnerships>. How long Teach for America recruits actually stay in teaching is disputed (Donaldson and Johnson 2011; Helig and Jez 2010).

education began, a variety of institutions (e.g.,) secondary schools, seminaries, academies, normal schools, teacher institutes, teacher colleges, community colleges and colleges and universities have all played important roles in educating the nation's teachers (Fraser 2007). Throughout the nation's history, most teachers have entered teaching through what might now be referred to as "alternative routes" including a substantial number of teachers who were prepared in school district-based teacher education programs. Historian Jim Fraser has noted "by 1914 virtually every city in the United States with a population of 300,000 or more and over 80 % of those over 10,000 maintained their own teacher preparation program as part of the public school system. (p. 92)."

It was for only a relatively brief period of time in the United States (approximately 1960–1990) that colleges and universities held a virtual monopoly in teacher education. Since the 1990s, there has been a tremendous increase in non college and university sponsored teacher education programs including new for-profit programs (Baines 2010; Holland 2003) and more and more individuals are entering the teaching force in the United States through non-university sponsored routes into teaching sometimes with very little or no preparation at all before assuming full responsibility for a classroom of students (Grossman and Loeb 2008).

Despite the growth in these non-university programs, most teachers in the United States still enter teaching through 4-year, 5-year undergraduate programs or 1 year or 2 year post-graduate programs. It is estimated that between 70 % and 80 % of teachers still enter the profession through college and university programs (National Research Council 2010). In some parts of the country though, nearly as many teachers enter the field through non-college and university pathways as through college and university programs (Feistritzer and Haar 2008), and in at least one state (Florida), school districts are required to have their own teacher education programs (Emihovich et al. 2011).

There is widespread agreement in the U.S. and in many parts of the world that existing institutions of teacher education that emphasize what has been referred to as "bricks and mortar" campus-based initial teacher education and training for teachers are inadequate for meeting the demands to prepare new teachers for urban or remote rural areas and that new models of teacher education are needed as well that are more school-based that distribute or "drip-feed" teacher education over time rather than only before the commencement of fulltime teaching (Berry et al. 2008; Lewin 2004; Moon 2007).

Globally, there are around 54 million teachers (UNESCO 2006) and just to meet the quantitative aspects of the international goal of achieving universal primary education by 2015 there was a need to add around 10.3 million more teachers between 2007 and 2015 (Zeichner 2010c). This projection does not even begin to address the issue of teacher quality and the need to prepare teachers to teach students with special education needs and in schools in remote areas. In preparing teachers to meet the demands to achieve universal primary education, there is a clear tension between creating high quality teacher education for a small number of candidates and opening access to large numbers of teacher candidates without being able to adequately prepare and support them.

1.2 Gaps in Schooling and Criticism of University Teacher Education

Currently in the United States, as in many other countries in the world, there are serious gaps in opportunities to learn, school completion rates and academic achievement for different segments of the population. For example, in addition to the growing inequalities in access to the resources that help individuals live their lives with dignity (Duncan and Murnane 2011), there continues to be a crisis of inequality in U.S. public schools that denies many children living in poverty and “children of color”² a high quality of education despite the good work of many dedicated and talented teachers. A number of gaps in educational opportunities and outcomes have persisted despite all of the reform efforts that have taken place in schools. These include inequalities in achievement as measured by standardized tests in reading and mathematics (Rothstein and Wilder 2005), secondary school graduation rates (Hall 2007), increased segregation of students according to their race, ethnicity and social class background (Orfield and Lee 2005), inequitable public funding for schools in different areas (Carey 2004), unequal access to advanced courses that provide the gateway to college (National Center for Education Statistics 2000), unequal access to a broad and rich curriculum that educates students to understand and to think critically (Kozol 2005), and the disproportionate assignment of students of color and English learners to special education classes with limited educational opportunities (Artiles et al. 2002; Hawkins 2011). These inequities have served to widen the gaps between which students learn to be thinkers and authentic problem solvers and those who are forced to learn out of context and to interact with knowledge in artificial ways (Rose 2011).

There is also, as there is in much of the world, an inequitable distribution of fully qualified teachers. Currently we have a situation in the U.S. where there are serious inequities between the kind of teacher education that is provided for teachers who work in different communities. Most of the teachers who enter the teaching force through one of the “fast track” or early entry programs where most of the preparation occurs while novice teachers are teachers of record fully responsible for a classroom teach in poor urban and rural communities of color (Darling-Hammond 2004; Peske and Haycock 2006). These “early-entry” teachers who complete most of their preparation for teaching while serving as teachers of record fully responsible for classrooms are not found to be teaching in public schools attended by students from the middle and upper middle classes.

Although the research on the effects of different pathways to teaching is not conclusive (e.g., Constantine et al. 2009; Decker et al. 2006; Helig and Jez 2010; National Research Council 2010), there is some evidence of a “learning loss” by pupils as underprepared beginning teachers of record are catching up with teachers who completed all of their preparation for an initial teaching license prior to

²In the U.S. context, this refers to African-American, Latino-American, Native American and Asian-American students.

becoming responsible for classrooms (Zeichner and Conklin 2005). It is clear though, given the high turnover of teachers in the most poverty impacted schools (e.g., Lankford et al. 2002), that the communities in which the schools staffed by many early entry teachers are located have become dependent on a constant supply of early entry teachers who stay for a few years and then leave. The current teacher education system does not help these communities to develop the capacity to have access to a more experienced teaching staff in its schools and to lessen their dependence on inexperienced and underprepared teachers. Given the documented importance of teacher experience in teaching quality (e.g., NCTAF 2010; Ronfeldt et al. 2011), this is a serious problem of injustice for some poor communities.

Because of the existence of some econometric studies that have shown a low correlation between teacher experience and/or degrees and student test scores, some critics have made an absolute claim that neither experience nor schooling beyond the bachelor's degree makes any difference in teacher effectiveness. Rose (2011) criticizes these claims that experience and further study by teachers are not related to teaching effectiveness based on the limited nature of the studies on which they are based.

On the face of it, this is a remarkable assertion. Can you think of any other profession from hair styling to firefighting to neurosurgery- where we wouldn't value experience and training," (p. 36). The problem is that the studies for the most part deal in simple aggregates and define experience and training in crude ways. Experience is defined as years on the job, and it is no surprise that years alone don't mean much... What people do with their time on the job is crucial, becomes the foundation of expertise. As for the question of post-baccalaureate work, the same principle applies. What kind of training? Where? What was the curriculum? The quality of supervision? ... To discount experience and training in blanket fashion is not only wrong-headed but also undercuts attempts to create better working conditions for teachers, more robust professional development, and opportunities for career advancement (p. 36).

1.3 Government and Foundation Responses to the Problems of Teacher Education in the U.S.

There have been two major responses by the U.S. government and private foundations to the enduring problems of U.S. teacher education over the last 30 years. The first response has involved efforts to build an effective system of teacher education in the country within colleges and universities. Since the mid 1960s, the federal government invested in strengthening the college and university system of teacher education through competitive grants that were administered directly in Washington D.C. or through the states. Programs like the current "Teacher Quality Partnerships" program which funds partnerships in teacher education between schools and universities are examples of how the federal government has attempted historically to improve the quality of the teacher education system in the U.S. by injecting targeted resources into college and university Education schools to engage in innovative practices (Sykes and Dibner 2009).

The federal government also for a time-between 1965 and 1995- sought to build research capacity in teacher education by funding national research and development centers focused on teacher education and teacher learning at the University of Texas-Austin and Michigan State University. Since then, apart from National Science Foundation funding that is available for teacher education research in STEM areas, there has been very little federal government funding available for teacher education research.

Additionally, several private foundations, notably the Carnegie Corporation and the Ford Foundation, have historically invested substantial amounts of money to improve the quality of teacher education in the U.S. especially for schools highly impacted by poverty. The over 100 million dollar “Teachers for a New Era” project led by the Carnegie Corporation from 2001 to 2009 which sought to reform teacher education programs around a small set of core design principles (e.g., teaching is an academically taught clinical practice) is the most visible of recent foundation efforts to transform American teacher education (Carnegie Corporation 2006). I was prepared as a teacher in the late 1960s in a Ford Foundation funded program (one of many such programs) that was designed to give special preparation to teachers to teach in high-poverty urban schools.

The second response has involved efforts to greatly reduce the role of or to dismantle the college and university system of teacher education. In recent years, in part because of a widespread perception of the unwillingness of college and university teacher educators to change, there has been a shift away from investing in the improvement of the current system that is dominated by college and university-based teacher education toward efforts to break up the system and try to replace it with market competition. Arthur Levine a former Education school dean and now president of a large private foundation that supports education has argued that:

The private sector sees teacher education and professional development as a low-cost, high-volume field with the potential for significant profits. Higher education is viewed as high in price, low in technology use, inefficient and weak in leadership. These perceived weaknesses make it a superb investment prospect (Levine 2010, p. 21).³

This deregulation of teacher education and the belief that creating a competitive market for the preparation of teachers will lead to the greatest quality is also occurring in many other countries often promoted by development agencies such as the World Bank (Klees 2008; Furlong et al. 2008; Robertson 2005; Tatto 2006).

Consistent with the current fervor in the national media to criticize university Education schools in the U.S. as obstacles to “real reform” (e.g., Hartocollis 2005; Kristof 2006; Will 2006),⁴ both the Bush and Obama governments have promoted

³The substantial influence on Education policy in the Obama government of non-profit “think-tanks” composed of advocates of privatization of K-12 schooling and teacher education and potential investors such as the Democrats for Education Reform (<http://www.dfer.org/>) and the New Schools Venture Fund (<http://www.newschools.org/>) needs further analysis. Individuals within these two organizations or those represented by them have much to gain financially from a market economy in education and teacher education.

⁴This criticism is true internationally as well (e.g., Moreno 2007).

the deregulation of teacher education and the growth of non- university providers of programs (Zeichner 2010a). One clear example of this is an “Innovation in Education” competition sponsored in 2010 by the U.S. Department of Education in which \$263 million dollars were awarded on a competitive basis to promote innovation in various sectors of education. The only teacher education projects that were funded in this competition were two of the major non-university providers of teachers, “Teach for America” (\$50 million), the “New Teacher Project” (\$20 million) and the non-profit situated “Boston Teacher Residency Program” (\$4.9 million). None of the projects that were submitted by college and university teacher education institutions were funded.

Another example is the “Race to the Top” competition recently sponsored by the U.S. Department of Education⁵ that provided a record amount of funding for school reform to states. Significantly, one of the criteria in evaluating Race to the Top proposals was whether states had legislation in place that allowed non-university providers of teacher education to operate within their borders.

Currently, college and university teacher education is not seen as worthy of significant investment either by the federal government or by many of the private foundations, and both are pouring money into supporting alternative pathways. Major conferences and the national media have been flooded with speeches and papers that wonder if a college and university system of teacher education is a good idea (e.g., Payzant 2004; Vedder 2011). Levine (2010) has claimed that “there is a growing sense among the critics that it would be more fruitful to replace university-based teacher education than to attempt to reform it.” (pp. 21–22). The lack of investment in college and university teacher education has many serious consequences, namely (and ironically) it has deepened the inability to innovate in the very programs that are in need of reform.

Along with this lack of investment by the federal government and foundations and the increased regulation of teacher education programs by states which further undermines the ability to innovate in college and university programs, most states are also continuing to substantially reduce their level of financial support to public universities where most of the nation’s teachers continued to be prepared (Newfield 2008). This lack of access to federal government and private foundation money and the continued deep cuts in state support for public universities have made it extremely difficult for university-based teacher education programs to innovate.

Additionally, new punitive forms of accountability that have been brought into teacher education even though they have been questioned by many leading experts in assessment. The most controversial of these which is the major element in the Secretary of Education’s new blueprint for teacher education (Duncan 2011) is to evaluate and rank teacher education on programs in universities based on the standardized test scores of the pupils taught by graduates from different university programs (Zeichner 2011). This is equivalent to evaluation medical schools according to how many patients are cured by doctors who graduated from different medical

⁵<http://www2.ed.gov/programs/racetothetop/index.html>.

schools or, at another level, holding business schools accountable for the terrible state of the economy in the country. All of the problems that have been raised by assessment experts about using student test scores to evaluate teacher quality (Economic Policy Institute 2010) and the additional problems raised by trying to use this same method to link student test scores to teachers and then back to their teacher preparation programs have been ignored by policymakers (Baker 2011; Zeichner 2011).

Support for non-university providers of teacher education programs continues to increase and both non-profit and for-profit independent providers of teacher education (including the New York Times, a major national newspaper, and the Museum of Natural History in NYC) are opening up new many new programs across the country. The dominant view currently among policymakers, and the public is that the U.S. needs to greatly reduce the role of universities in teacher education and move toward shorter more “practical” and more clinically-based programs. It is argued that bringing a “wider range of expertise and competition” into the preparation of teachers will promote innovation and raise the overall quality of teacher education programs (Democrats for Education Reform 2011). Despite these noble proclamations of intent, there is a lot of money to be made by private investors if teacher education in the U.S. is transformed into primarily a competitive market economy.⁶

Some of the newer non university state approved programs like “A+ Texas Teachers” advertise themselves as providing “fast, affordable, and easy access” to the teaching profession⁷ while other non-university sponsored programs provide a more substantive preparation for teaching (Grossman and Loeb 2008). One of the more recent aspects of this movement to privatize what has largely been a public teacher education system in the U.S. is an effort to open charter teacher education programs like the “Relay School of Education” that began in New York State to prepare teachers for charter schools (Gonen 2011). In return for what they claim are higher standards (e.g., program completion is dependent on demonstrating the ability to raise student test scores), these charter schools for preparing teachers want to be exempted from the many state regulations governing teacher education programs in colleges and universities. A bi-partisan sponsored bill has recently been introduced in the U.S. Congress to support the development of more charter teacher education programs across the country that would compete with college and university programs but would not be subject to much of the accountability requirements as college and university programs (Democrats for Education Reform 2011; Riley 2011).

Hess (2009) of the American Enterprise Institute has articulated a view that is shared by many others (e.g., Walsh 2004) when he proposed decoupling the

⁶One fundamental question underlying this debate is whether education and teacher education are primarily public goods for the benefit of particular individuals or public goods that benefit the common good of the nation (Tyack 2003).

⁷<http://www.texasteachers.org/our-company/>. This particular program refers to itself as a leader in the teacher education “industry.”

preparation of teachers from institutions of higher education rather than calling for investment in the improvement of programs sponsored by higher education institutions. Hess and many others want to create a system where teacher preparation is controlled by local school districts. He has advocated for:

A shift from the assumption that teacher preparation and training should necessarily be driven by institutions of higher education toward a more variegated model that relies on specialized providers, customized preparation for particular duties, and a just in time mindset regarding skill development and acquisition. Abandoning the default role for colleges and universities creates new opportunities. Rather than struggle to connect college-based education programs with site-based mentors or to boost the quality of practice teaching, new models might provide new providers or district-based operations to host training in more client-friendly locales and to import academic expertise, input and structure as they deem useful (p. 456).

1.4 Two Forms of Teacher Education and Two Vision of the Teaching Role

Currently, there are two general approaches to teacher education in the U.S. despite all of the specific program variations that exist (e.g., selectivity in admissions, curriculum variations). First, there are college-recommending programs where all of the initial teacher preparation is completed before individuals assume full responsibility for a classroom as “teachers of record.” On the other hand, there are “early-entry” programs where much of teachers’ initial education is completed by individuals while they are fully responsible for a classroom of students.

The encouragement of alternatives to university hegemony over teacher education is not necessarily a bad thing. There is a range of quality in both early-entry programs and college and university recommending programs and the introduction of different models can potentially stimulate innovation and help improve all types of teacher education programs.

What is important to note however, about many of the early-entry alternatives being proposed is that they are often closely linked with a mostly technical view of the role of teachers and with efforts to erode teachers’ autonomy and collegial authority. The focus in some of the new programs is on preparing teachers to serve primarily as “educational clerks” who implement scripted teaching strategies and curriculum rather than preparing teachers as professionals who in addition to their technical expertise, also have acquired adaptive expertise so that they are able to exercise their judgment in the classroom to adjust their teaching to meet the varied needs of their students (Zeichner and Ndimande 2008).⁸

⁸Currently, the 49 teaching strategies in “Teaching Like a Champion” (Lemov 2010) are a popular example in the U.S. of teaching skills-based approach that has been adopted in some teacher education programs. This particular set of strategies is a major aspect of the “training” given to teachers in the Relay Graduate School of education which was formed in New York as an alternative to university programs to prepare teachers for several charter school networks.

This trend to prepare teachers as only technicians and to minimize the financial cost of their preparation can also be seen very clearly in other countries such as the widespread use of para teachers in India (Kumar et al. 2001), “plasma” teachers in Ethiopia (Dahlstrom and Lemma 2009), and in the growing emphasis on teachers as implementers of tightly structured teaching scripts in others (Compton and Weiner 2008).

It is important to point out that the difference between a view of teachers as professionals and teachers as technicians is not whether teachers are taught to use a particular set of teaching skills that are based on research or in some cases (e.g., Lemov 2010) on observations of the practices of good teachers. Both a teacher as technician orientation and teacher as professional orientation should provide teachers with the tools and skills that they need to be effective in supporting student learning. The difference between these two views is that the teacher as a professional view goes beyond providing teachers with teaching and management skills and also seeks to ensure that teachers have extensive knowledge about the social and political contexts in which they work including the “funds of knowledge” (Gonzales et al. 2005) in the communities in which their students live, of the many elements connected to teaching such as assessment, learning and development theory and theories about how languages are acquired. A professional preparation for teachers also seeks to help teachers learn how to exercise their judgment in the classroom and adapt what they do to meet the continually changing needs of their students, and to learn how to learn in and from their practice so that they continue to become better teachers throughout their careers and are active participants in school renewal (Darling-Hammond 1999).

1.5 The Future for Teaching and Teacher Education

Although as I pointed out earlier, the role of alternative pathways into teaching has long been a part of teacher education in the U.S. and research on different models of teacher preparation supports the need for different pathways into teaching that provide access to teaching for individuals at different stages of their lives and in different life circumstances. However, it is clear from research as I pointed out before, that there is a great range in quality in both college and university programs and those offered by other providers (National Research Council 2010) and that there are weak programs of all kinds that should be improved or closed.

Research has begun to provide a clearer understanding of the characteristics of effective teacher education programs in a U.S. context that prepare teachers to promote student learning in the most economically challenged urban and rural areas of the country (Boyd et al. 2008; Darling-Hammond 2006; Grossman and Loeb 2008). For example, the presence of a clear and common vision of good teaching and of learning that permeates all coursework and field experiences is an example of one of these characteristics (Darling-Hammond 2006). The goal should be to support strong teacher education programs and to improve or close down weak programs whether they are sponsored by universities or others.

1.6 Problems with Disinvesting in University Teacher Education

There are several major problems with the current lack of significant investment in strengthening college and university-based teacher education while pouring substantial resources into promoting other models. The first issue is the question of capacity. Despite the exponential growth of various alternative pathways into teaching since the 1980s as noted above, colleges and universities continue to prepare between 70 % and 80 % of teachers in the U.S. (National Research Council 2010; Furlong et al. 2008). It is doubtful given a teaching force in the U.S. of over 3.6 million teachers that an alternative system can be developed by advocates of greater competition and markets in teacher education that would not include significant involvement of colleges and universities (Fallon 2010).

Second, there is also a legitimate question that should be raised about the capacity of resource-strapped school districts to handle the increased responsibilities of a more school-based system of teacher education without the infusion of additional resources. Shifting teacher education to be more school-based without building the capacity in schools for handling their increased role in initial teacher preparation will result in a situation like that which occurred in the U.K. where a shift to school – based preparation merely served to reproduce the status quo.

Experience in schools simply becomes an opportunity to receive or become acculturated to the existing practices of the setting with an emphasis on the reproduction of routinized behaviours and the development of bureaucratic virtues such as compliance ... (Ellis 2010, p. 106).

Third, following the pattern in counties that lead the world today in student educational performance, preserving and strengthening the role of colleges and universities in the preparation of a professional teaching force of career teachers is critical (Tucker 2011). Colleges and universities can potentially make important and unique contributions to the education of professional teachers to help them learn how to use research-based teaching and assessment practices, to situate their teaching in relation to the historical, political and institutional contexts in which they work, to learn how to learn in and from their practice and to exercise their judgment in the classroom to adapt their teaching to the changing needs of their students, and to be active participants in ongoing school renewal (Darling-Hammond 1999; Goodlad 1990). The solution to the problems of college and university-based teacher education is to redesign and strengthen the system not to abandon it. No county in the world today that has been successful in international comparisons of student achievement has achieved its success by relying heavily on a market-based economy in teacher education (Darling-Hammond 2010). The overall poor track record of privatization and the spread of charter schools at the K-12 level (e.g., CREDO 2009) does not bode well for the similar effort that is now underway to greatly deregulate teacher preparation in the U.S.

Finally, underlying much of the movement to privatize public schooling and teacher education is a belief that the major cause of the problems of inequities in

schooling that I have alluded to today is bad teachers and bad teacher education programs.⁹ If only we could fire the bad teachers and close the bad teacher education programs and turn public schooling and teacher education over to market competition, all will be fine. This narrative ignores the overwhelming evidence that links inequities in schooling to inequities in the broader society such as the inequitable access to housing, nutritious food, jobs that pay a living wage, health-care, early childhood care and so on (Berliner 2006; Rothstein 2004). Despite a clear need to improve university teacher education, these programs are as responsible for the crisis of inequality in public education as business schools are for the collapse of the U.S. economy and the growing inequalities in the broader society such as access to jobs that pay a living wage, housing, nutritious food, and quality early childhood and health care.

1.7 University Teacher Education Responds

Despite the indisputable problems that have existed in university teacher education in the U.S. that have been pointed out by both external critics and Ed school faculty themselves (e.g., Goodlad 1990; Levine 2006; Holmes Group 1995), the improvements that have been made in many university programs over time (Darling-Hammond and Bransford 2005), and the existence of a number of exemplary programs (Darling-Hammond 2006), there is a growing movement in college and university-based teacher education in the U.S. today to respond to some of the enduring problems that have undermined its effectiveness: (a) to move the pre-service preparation of teachers closer to practice- to conduct some of the instruction of new teachers (e.g., methods courses) in the kinds of settings in which teacher candidates will later teach¹⁰ and (b) to strengthen the clinical component in teacher preparation by investing in building the capacity of schools to serve as sites for clinical teacher education and experienced teachers to serve as effective mentors (NCATE 2010). There are a growing number of examples of a new more connected and school-based form of college and university teacher education (Zeichner 2010b).

There has also been a growth in hybrid programs (e.g., urban teacher residencies) that are centered in a rigorous clinically-based education for teaching under the supervision of an experienced teacher which offer the potential to utilize the strengths of both university and school-based teacher educators (Boyd et al. 2008). Carefully structured and well-supervised clinical experience like those that exist in the education of other professionals is absolutely essential for the education of teachers no matter what pathway into teaching is taken (Ball and Cohen 1999).

⁹The U.S. Secretary of Education has asserted that most college and university programs have done a mediocre job in preparing teachers based on his linking the inequities in public schooling for students largely with ineffective teachers (Duncan 2009). The previous Secretary of Education had argued that participation in a teacher education program should be optional Paige, (2002)

¹⁰This includes the creation of virtual settings (Pointer-Mace 2009).

We know a lot from existing research about the kinds of investments that should be made to provide this kind of experience for all novice teachers such as careful selection of clinical placements, the preparation and ongoing support for mentors and schools that serve as clinical training sites and the development of more rigorous evaluations of the success of these efforts in the practices of teacher candidates and in their ability to promote student learning upon completion of their pre-service preparation. (NCATE 2010). We also know from research about the negative consequences of not providing a strong and well-supervised clinical experience for teachers before they enter the workforce (e.g., Valencia et al. 2009).

Currently we have a situation where there are serious inequities between the kind of teacher education that is provided for teachers who work in different communities. As I mentioned earlier, most of the teachers who enter the teaching force through one of the “fast track” or early entry programs where most of the preparation occurs while novice teachers are teachers of record fully responsible for a classroom teach in poor urban and rural communities of color (Darling-Hammond 2004; Peske and Haycock 2006). These underprepared teachers who complete most of their preparation for teaching while serving as teachers of record are not found in public schools attended by students from the middle and upper middle class.

Addressing the serious inequities in educational opportunity and outcomes that continue to plague our public schools will require a significant investment in redesigning the college and university system of teacher education in the U.S. so that it becomes more clinically-based and focused more on the specific contexts for which teachers are being prepared. This new system must more effectively integrate college and university faculty and staff expertise with the expertise and knowledge that exists in successful schools and in communities to prepare the professional career teachers that everyone’s children deserve (Zeichner 2009, 2010b).

There is no reason to believe from the poor performance of deregulation and markets in any other sector of society or from the experience of other countries with strong records of student achievement in their public schools that the current trend to dismantle college and university-based teacher education and replace it with a market economy will result in anything positive for the nation. Continuing on this path, will only serve to widen the inequalities in public education that now exist between different segments of the population.

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Chapter 2

Teacher Quality in the Twenty First Century: New Lives, Old Truths

Christopher Day

Abstract This chapter is based upon a keynote address to the first global teacher education summit, organised by Beijing Normal University in 2011, in which research across the world about influences which affect teacher teachers' sense of professional identity, capacity for compassion, commitment, resilience and effectiveness long after they have graduated from their pre-service education and training programmes in universities and colleges were shared. The findings suggest that teaching pre-service students about how the conditions in which they work may enhance or diminish their capacity to teach to their best and how they might act to mediate these is a key part of the work of all teacher educators and an important focus for the work of educational researchers.

Keywords Teachers • Quality • Identity • Effectiveness • Conditions • Teacher Education

The chapter begins by making six statements which will be self evident to all of us. The first five are heard and read often in academic research. The sixth remains largely unspoken and unwritten. First, in an age of mass education, increasing economic competition and challenges to the harmony and traditional social fabric of life, ensuring the highest quality of teachers in schools is of paramount importance; second, quality is related not only to the knowledge and skills which may be developed during training and improved during the course of a career, but also to the passion which the best teachers and teacher educators bring to their work; third, that quality is neither guaranteed by qualification nor necessarily improved through experience; fourth, all in the public sector are working in contexts of government interventionist policies which challenge existing histories and current practices of

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professionals at all levels. These are designed to respond to the diverse challenges of increased economic competition, and changes in the social fabric, expectations and aspirations of society as the ligatures which bind people together in webs of social obligation begin to loosen; and fifth, despite overwhelming evidence that good teaching which is effective requires both the personal and the professional investment of teachers, care for and about learning and learners, combinations of technical competencies, deep subject knowledge and empathy, and the maintenance of a strong sense of identity (agency) and commitment and resilience, allied with strong sets of moral and ethical values, these qualities and commitments are still, 'largely neglected in educational policy and teacher standards' (O'Connor 2008, p. 117). The sixth statement is that not every teacher, teacher educator or researcher is equally committed to their work. Some start their careers in this way but do not continue. At some point the passion begins to diminish, perhaps because of lack of promotion, perhaps because their work is not being valued by others, or perhaps because the stress of managing complex work settings over time has eroded their energy, agency and capacity to be resilient. In addition, reforms – particularly those which are poorly managed – at least temporarily disturb the relative stability of teachers' work, the conditions for teaching and learning, their own development and, in some cases, challenge their beliefs, values, practices and self-efficacy; and in general they challenge existing notions of what it means to be a teacher (Bottery 2005; Helsby 1999; Goodson and Hargreaves 1996; Sachs 2003).

For these reasons, and because quality matters, understanding variations in the conditions for teachers' professional learning and development which enhance or diminish their perceived sense of positive professional identity, wellbeing and effectiveness is an important part of the work of all teacher educators and educational researchers.

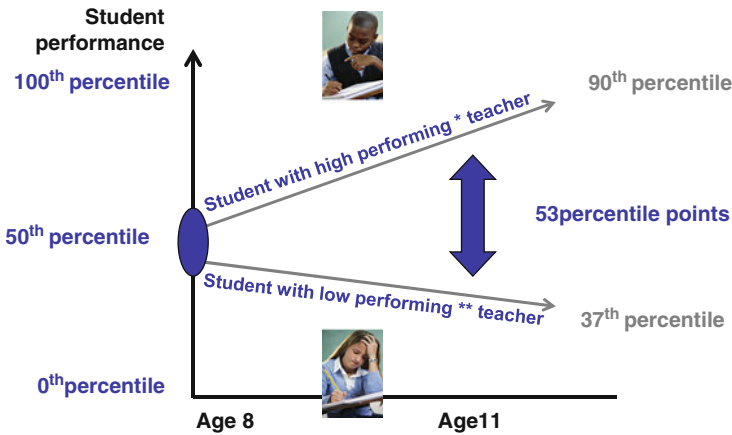
2.1 Why Teacher Quality Matters

The available evidence suggests that the main driver of the variations in student learning at school is the quality of the teachers

(McKinsey and Company 2007, p. 12)

Existing research confirms that teachers have a strong influence on student learning outcomes (Rivkin et al. 2005; Rockoff 2004); and that teacher and classroom variables and between teacher and between class variables have much more effect on student learning than school effects (Scheerens et al. 1989; Tymms 1993). In other words, teacher quality is, 'a key determinant of students' experiences and outcomes of schooling' (Rowe 2003, p. 21) (Fig. 2.1).

Eric Hanushek, an economist from Stanford, USA, has estimated recently that the students of a very bad teacher learn, on average, half a year's worth of material in one school year. The students in the class of a very good teacher will learn a year and a half's worth of material. That difference amounts to a year's worth of learning in a single year... After years of



**Among the top 20% of teachers; ** Among bottom 20% of teachers*

Fig. 2.1 Teachers can make an extraordinary difference (Sanders and Rivers 1996)

worrying about issues like school funding levels, class size and curriculum design, many reformers have come to the conclusion that nothing matters more than finding people with the potential to be great teachers. But there’s a hitch: no one knows what a person with the potential to be a great teacher looks like. ...

(Gladwell, Dec 15th 2008. The New Yorker)

In addition, there is sufficient research evidence now to argue strongly that, ‘attempts to describe the knowledge base of teachers in terms of subject knowledge and general and subject-specific pedagogical knowledge may offer tools for analysing particular aspects of practice, but fail to provide an adequate account of what is required to function effectively minute by minute in the classroom (Ainley and Luntley 2007, p. 1127).

The effect of poor quality teaching on student outcomes is debilitating and cumulative... The effects of quality teaching on educational backgrounds are greater than those that arise from students’ backgrounds...A reliance on curriculum standards and state-wide assessment strategies without paying due attention to teacher quality appears to be insufficient to gain the improvements in student outcomes sought.

(Darling-Hammond 2000)

In examining what quality means, and how it might grow or decline during teachers’ careers, I will make three research informed assumptions: **first** that teachers’ intellectual needs – their knowledge of subject area and pedagogical content knowledge – are able to be refined and updated through formal programmes of CPD and in-school mentoring, coaching and critical friendship; **second**, that what marks teachers out as good or better than good is more than their mastery of content knowledge and pedagogical skills. It is their passion for their teaching, for their students and for learning. **The third assumption** that I

will make – rather an observation than an assumption – is that good and effective teachers demonstrate intellectual and emotional commitment; that this commitment is related to their sense of professional identity both as a member of the larger community of teachers and as a member of the school and department in which they work; and, importantly, to their enduring and persistent beliefs that they have the ability to promote high attainment levels amongst their students (Day et al. 2007).

However, bringing such intellectual and emotional commitment to teaching every day of every week of every school term and year can be stressful not only to the body but also to the heart and soul, for the processes of teaching and learning are rarely smooth, the conditions and cultures are not always amenable and the results are not always predictable. Thus, the commitment, hope and optimism with which many teachers still enter the profession may be eroded as battles with those who don't wish to learn or cannot, or disrupt others' opportunities to learn, increasing media criticisms and lack of work-life balance take their toll.

2.2 Six Areas of Research Knowledge About Variation

I will highlight six areas of research knowledge internationally about influences upon teacher quality. Together, the research provides important messages which readers may choose to address in their work with, for and about teachers.

2.2.1 Area 1: Professional Life Phases

What we know from a range of research into teachers' work and lives is that:

- Career development does not always follow a smooth upward trajectory. On the contrary, teachers experience a number of discontinuities. Teachers do not begin as novices and end as experts.
- Many teachers across different career phases who enter teaching with enthusiasm become disenchanted or marginalise themselves from learning, no longer holding the good of their pupils as a high priority.
- Low self-esteem and shame (at not achieving desired results) are directly correlated with low risk teaching, unwillingness to change, less variety of teaching approaches and thus less connection with students' learning needs.

Seligman (2002) once observed that not all teachers have a vocation or calling. He claimed that, for some, teaching is, 'just a job, a means to an end'; that for others it was just a career in which, although there was a deeper personal commitment,

achievement was marked by promotion; whilst for others who saw their work as being a contribution to the greater good of society and the individual, 'the work is fulfilling in its own right, without regard for money or advancement' (p. 168). It is clear from this that there are problems, in a changing world, with assuming that the acquisition of expertise through experience marks the end of the learning journey. Linear, 'stage' models of professional development, which ignore the effects of the complexities and dynamics of classroom life, the discontinuities of learning and the challenges of changing social, policy, teaching environments and personal lives, cannot be applied.

Until recently there have been few large scale longitudinal studies of teachers' lives and work and even those have tended to focus upon the first 0–5 year period of teaching, perhaps since, in many countries, this is where traditionally there has been considerable attrition (Moore-Johnson 2004). Most teachers who survive the first 4 or 5 years remain in the job for a further 30. During this period they will be subject, as we all are, to the ageing process which may diminish energy, and to unanticipated events which may affect the course of their personal lives and their willingness and capacity to remain fully committed to their work with children and young people. They will also need to adjust their lives as colleagues come and go, as the demands of students and the processes of working with them become more complex, and conditions of service change. Whilst the ageing process affects all workers, regardless of occupation, arguably the teaching role, played out each day with 30 or more students who do not necessarily wish to learn and who have to be motivated, engaged and challenged constantly, requires of the teacher different, more intense and sustained levels of personal and professional energy and commitment if they are to make a positive difference to their learning and achievement.

The 'VITAE' project was a 4 year national mixed methods study of the work, lives and effectiveness of 300 primary and secondary teachers in 100 schools in seven regions of England who were in different phases of their professional lives (Day et al. 2007). Effectiveness was defined as that which was both perceived by teachers themselves and by student progress and attainment which was measured in terms of attainment results over a 3 year consecutive period.


The VITAE research led to the identification of generic similarities and differences within each of six professional life phases of teachers and provides new insights into positive and negative variations in personal, workplace and socio-cultural and policy conditions which teachers experience across a career and the consequences for teacher and students if support is not available. Teachers will move backwards and forwards within and between phases during their working lives for all kinds of reasons concerning personal history, psychological, social and systemic change factors. Taking on a new role, changing schools, teaching a new age group or new syllabus or learning to work in new ways in the classroom will almost inevitably result in development disruption, at least temporarily. Equally, lack of change can lead to stagnation.

Teachers' Professional Life Phases

Professional life phase 0-3 – Commitment: Support and Challenge

- Sub-groups: a) Developing sense of efficacy
b) Reduced sense of efficacy

Professional life phase 4-7 – Identity and Efficacy in Classroom


- Sub-groups: a) Sustaining a strong sense of identity, self-efficacy and effectiveness
b) Sustaining identity, efficacy and effectiveness
c) Identity, efficacy and effectiveness at risk
- 

Teachers' Professional Life Phases (2)

Professional life phase 8-15 – Managing Changes in Role and Identity: Growing Tensions and Transitions

- Sub-groups: a) Sustained engagement
b) Detachment/ loss of motivation

Professional life phase 16-23 – Work-life Tensions: Challenges to Motivation and Commitment


- Sub-groups: a) Further career advancement and good results have led to increased motivation/commitment
b) Sustained motivation, commitment and effectiveness
c) Workload/managing competing tensions/career stagnation have led to decreased motivation, commitment and effectiveness
- 

Teachers' Professional Life Phases (3)

Professional life phase 24-30 – Challenges to Sustaining Motivation

- Sub-groups: a) Sustained a strong sense of motivation and commitment
b) Holding on but losing motivation

Professional life phase 31+ – Sustaining/Dedining Motivation, Ability to Cope with Change, Looking to Retire

- Sub-groups: a) Maintaining commitment
b) Tired and trapped
- 

The provision of continuing professional opportunities is one means of support which in itself is a necessary but insufficient condition for renewal and improvement. School leadership, culture, colleagues, strength of vocation and personal factors will all affect teachers' sense of commitment, well being, identity and effectiveness.

2.2.2 Area 2: *Professional Identity*

Teachers' sense of professional identity is fundamental to the teaching self, teacher image, efficacy, and persona. Several researchers (Nias 1989; 1996; Nias et al. 1992; Hargreaves 1994; Sumsion 2002) have noted that teacher identities are not only constructed from the more technical aspects of teaching (i.e. classroom management, subject knowledge and pupil test results) but, also:

...can be conceptualised as the result of an interaction between the personal experiences of teachers and the social, cultural and institutional environment in which they function on a daily basis.

(Slegers and Kelchtermans 1999, p. 579)

Indeed, today's professional has been described as, 'mobilizing a complex of occasional identities in response to shifting contexts' (Stronach et al. 2002, p. 117). Such mobilizations occur in the space between the 'structure' (of the relations between power and status) and 'agency' (the influence we and others can have), and it is the interaction between these that influences how teachers see themselves, i.e. their personal and professional identities.

In research with teachers in The Netherlands, Douwe Beijaard illustrated the different patterns of change in teacher identities:

Mary remembers her satisfaction about her own teaching in the beginning because she experienced it as a challenge. This challenge disappeared when she had to teach many subjects to overcrowded classes. The second lowest point in her storyline was caused by her time-consuming study and private circumstances at home. Now she is reasonably satisfied, due to a pupil centred method she has developed together with some of her colleagues. Peter is currently very satisfied about his own teaching...In the beginning of his career, however, it was very problematic for him to maintain order. In this period he considered leaving the professional several times. The second lowest point in his story line refers to private circumstances and to problems in the relationships with colleagues.

(Beijaard 1995, p. 288)

Here we see the ways in which personal and professional environments affect teachers' work both positively and negatively. The interplay between the private and public, the personal and professional lives of teachers is a key factor in their sense of emotional identity and job satisfaction and, by inference, in their capacity to maintain their effectiveness.

Emotions play key role in the construction of identity (Zembylas 2003). They are the necessary link between the social structures in which teachers work and the ways they act. We know that educational organizations are places of emotional

Dimensions of Identity

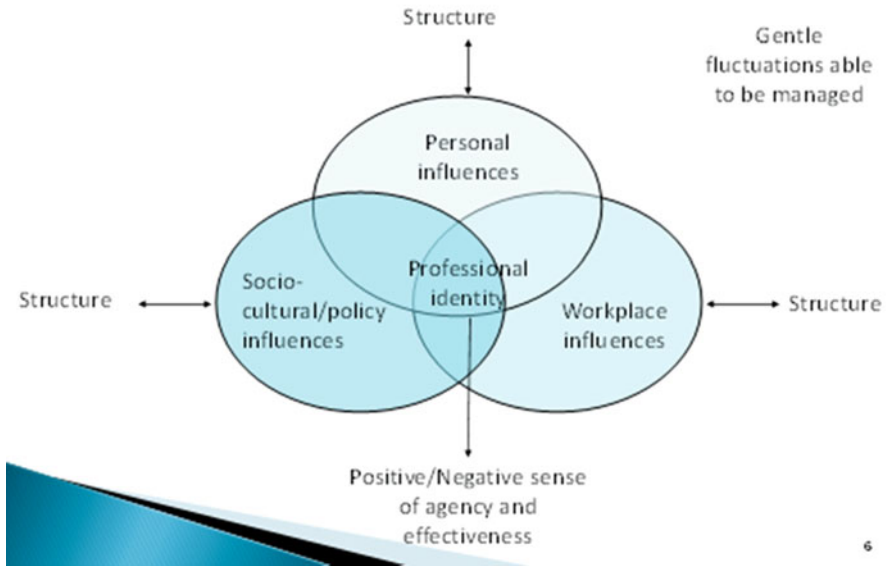


Fig. 2.2 Dimensions of identity

intensity and teachers must, according to James (2011), be able to find ways of managing this:

Many of the feelings experienced by those who work in them are ‘difficult’, and one of the most difficult is anxiety. Feelings are very hard to control and defending against them is not helpful. Both affective control and defence can reduce teacher effectiveness and make educational change more problematic. The alternative is affective containment – by individuals, groups and the whole organization – where feelings can be brought to the surface, talked about, reflected upon, learned from, accepted and re-owned.

(James 2011, p. 132)

This may suggest that knowledge of the emotional self and the ability to manage this and the emotional turbulence of classrooms over a career is a necessary contributory factor to teachers’ willingness and capacity to sustain quality teaching.

Because teachers’ professional identities can be affected by changes in their lives, work and socio-cultural and policy contexts over a career (Day 2011) they may at different times be positive or negative, stable or unstable and the different scenarios or sites of struggle which they experience will need to be managed.

The VITAE research revealed four scenarios or sites of struggle which reflected different relationships between the three dimensions of identity (Fig. 2.2).

67 % of teachers from across the professional life phases expressed a positive sense of agency, resilience and commitment in all scenarios and spoke of the

influence of in-school leadership, colleague and personal support. The supporting factors mentioned most frequently were:

- *Leadership (76 %)*. It is good to know that we have strong leadership who have a clear vision for the school (Larissa, year 6).
- *Colleagues (63 %)*. We have such supportive team here. Everyone works together and we have a common goal to work towards (Hermione, year 2). We all socialize together and have become friends over time. I do not know what we'd do if someone left (Leon, year 9).
- *Personal (95 %)*. It helps having a supportive family who do not get frustrated when I'm sat working on a Sunday afternoon and they want to go to the park (Shaun, year 9).

Teachers who judged their effectiveness to be at risk or declining (33 %) spoke of negative pressures. Those mentioned most frequently were:

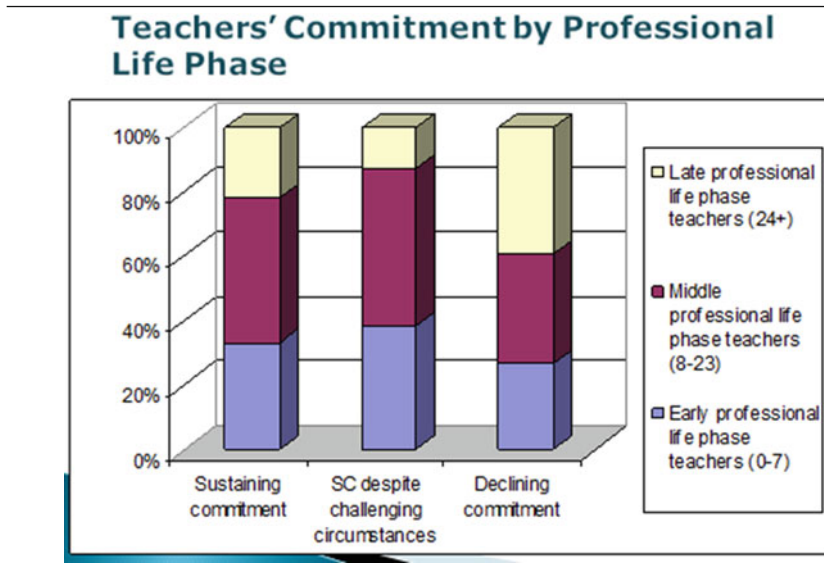
- *Workload (68 %)*. It never stops, there is always something more to do and it eats away at your life until you have no social life and no time for anything but work (Jarvis, year 6). Your life has to go on hold – there is not enough time in the school day to do everything (Hermione, year 2).
- *Student behaviour (64 %)*. Over the years, pupils have got worse. They have no respect for themselves or the teachers (Jenny, year 6). Pupil behavior is one of the biggest problems in schools today. They know their rights and there is nothing you can do (Kathryn, year 9).
- *Leadership (58 %)*. Unless the leadership supports the staff, you are on your own. They need to be visible and need to appreciate what teachers are doing (Carmelle, year 2). I feel as if I'm constantly being picked on and told I'm doing something wrong (Jude, year 9).

2.2.3 Area 3: Commitment and Resilience

There seems to be little doubt that teacher commitment (or lack of it) is, closely associated with professional identity and resilience, a key influencing factor in the performance effectiveness levels of teachers (Bryk et al. 1993; Kushman 1992; Day et al. 2007), and one of the most critical factors in the progress and achievement of students (Day et al. 2007; Huberman 1993; Nias 1981). Commitment to the workplace is understood as 'a hallmark of organisational success' (Rosenholtz and Simpson 1990, p. 241). There is, also, growing evidence of the close associations between what I have come to call, values informed commitment and student progress and achievement (Day et al. 2007, 2010).

The majority of teachers in the VITAE research maintained their effectiveness but did not necessarily become more effective over time. Indeed, **we found that the commitment of teachers in late professional life phases, though remaining high**

Table 2.1 Teachers’ commitment by professional life phase



for many, is more likely to decline than those in early and middle years (Table 2.1).

Initial commitment, however, as we have seen, rises, is sustained or declines depending on teachers’ life and work experiences and their management of change scenarios in each phase of their professional lives. Whilst many teachers enter the profession with a sense of vocation and with a passion to give their best to the learning and growth of their pupils, for some, these become diminished with the passage of time, changing external and internal working conditions and contexts and unanticipated personal events. They may lose their sense of purpose and well-being which are so intimately connected with their positive sense of professional identity and which enable them to draw upon, deploy and manage the inherently dynamic emotionally vulnerable contexts of teaching in which they teach and in which their pupils learn.

Constant striving for control over events without the resources to achieve it can take a toll on the individual who faces an objective limit to what can be attained regardless of how hard she works. If optimism is to survive as a social virtue, then the world must have a causal texture that allows this stance to produce valued rewards. If not, people will channel their efforts into unattainable goals and become exhausted, ill or demoralized. Or people may re-channel their inherent optimism into attainable but undesirable goals.

(Peterson 2006, p. 127)

To teach to one’s best over time, then, requires resilience. The more traditional, psychologically derived notions that it is, ‘the ability to bounce back in adverse circumstances’ do not lend themselves to the selfhood or indeed the work of teachers.

A range of research suggests that resilient qualities can be learned or acquired (Higgins 1994), and can be achieved through providing relevant and practical

protective factors, such as caring and attentive educational settings, positive and high expectations, positive learning environments, a strong supportive social community, and supportive peer relationships (see for example, Johnson et al. 1999; Rutter et al. 1979). Resilience, therefore, is not a quality that is innate. Rather, it is a construct that is relative, developmental and dynamic. The process of teaching, learning and leading requires those who are engaged in them to exercise resilience on an everyday basis, to have a resolute persistence and commitment and to be supported in these by strong core values.

Yet without organisational support, bringing a passionate, competent and resilient self to teaching effectively every day of every week of every school term and year can be stressful not only to the body but also to the heart and soul, for the processes of teaching and learning are rarely smooth, and the results are not always predictable.

As Moore Johnson (2004) reminds us:

... anyone familiar with schools knows that stories about the easy job of teaching are sheer fiction. Good teaching is demanding and exhausting work, even in the best of work places... (2004, p. 10)

In a survey among teachers in schools in England, for example, the picture is not promising. In 2008, teachers reported the damaging impact of these symptoms on their work performance. Issues were, in rank order; excessive workload; rapid pace of change; pupil behaviour; unreasonable demands from managers; bullying by colleagues; and problems with pupils' parents.

2.2.4 Area 4: The Leadership Effect

By far the most learning and development opportunities for teachers will, inevitably, occur in school, whether through working alongside colleagues, through opportunities to reflect upon their own and others' classroom planning and practices, through the quality of professional relationships and the attention which is given to their learning needs through the quality of regular and responsive provision for learning and development by the school leadership. We have seen already the positive and negative impacts which these factors can have.

Principals of schools play an important role in establishing the conditions, structures, cultures and climate for professional learning and development in their schools. This part of the chapter, therefore, makes reference to research on successful school principals, in particular the work of the International Successful School Principals Project (ISSPP), a 20 country network of researchers which has built a collection of now more than 100 case studies of principals who have built and sustained success in different contexts and sectors (Day and Leithwood 2007; Moos et al. 2011); and the results of a national, 3 year mixed methods project in England which focussed upon associations between effective school principals and pupil outcomes (Day et al. 2011). The findings of these and other recent research in this area (e.g. Robinson et al. 2009) are important for their contributions to knowledge of conditions which contribute to teacher quality. The leadership literature tells us

much about school environments in which teachers flourish and learn and in which they are likely to sustain commitment as well as competence, a sense of well-being and positive professional identity; and teachers over the years are consistent in telling us that where they experience sustained support, both personally outside and professionally inside their workplace, they are able not only to cope with but also positively manage adverse circumstances – in other words, to be resilient.

Research by Ross and Gray involving over 3,000 elementary teachers in Canadian schools is one of a number of studies which have found that the quality of leadership affects teachers' individual and collective sense of efficacy and their organisational commitment (Ross et al. 2008).

Cultures do not change by mandate; they change by the specific displacement of norms, structures and processes by others; the process of cultural change depends fundamentally on modelling the new values and behaviour that you expect to displace to existing ones.

(Elmore 2004, p. 11)

National and international research demonstrates unequivocally that successful heads are those who consistently provide staff with opportunities to engage in regular professional learning activities, related to individual and organisational needs both within and outside the school (Day and Leithwood 2009; Day et al. 2011). In their meta analysis of the research literature on the effects of effective leadership on student outcomes Robinson et al. (2009) identified five key leadership dimensions: (i) establishing goals and expectations; (ii) strategic resourcing; (iii) planning, co-ordinating and evaluating teaching and the curriculum; (iv) promoting and participating in teacher learning and development; and (v) ensuring an orderly and supportive environment. Of these, promoting and participating in teacher learning and development had the largest, most significant effect size at 0.84.

Robinson (2007) reported on a recent synthesis of 97 studies which evaluated the impact of CPD on the social and academic progress of students of the participating teachers (Timperley et al. 2007) which found that, 'effective learning opportunities for teachers', were, 'characterised by seven qualities' (p. 17):

- Providing extended time
- Engaging external expertise
- Ensuring teachers were engaged in the learning
- Challenging problematic discourses, especially around low expectations for students
- Providing opportunities to participate in a professional community that was focused on the teaching-learning relationship
- Ensuring that opportunities were aligned with current policy and research
- Involving school leaders who supported the learning by setting and monitoring targets and developing the leadership of others

Essentially, these leaders are promoting organisational learning through, 'the deliberate use of individual, group, and system learning to embed new thinking and practices that continuously renew and transform the organisation in ways that support shared aims' (Collinson and Cook 2007, p. 8). Yet not all teachers experience such organisational support.

2.2.5 Area 5: The Inquiring Professional

One of the hallmarks of being identified externally as a professional is that teachers will be reflective practitioners, continuing to learn throughout a career, deepening knowledge, skill judgement, staying abreast of important developments in the field and experimenting with innovations that promise improvements in practice' (Sachs 1997, p. 267). Becoming an expert, as research shows, does not mean that learning ends – hence the importance of maintaining the ability to be a lifelong inquirer. Experienced teachers who are successful, far from being at the end of their learning journeys, are those who retain their ability to be self-conscious about their teaching and are constantly aware of and responsive to the learning possibilities inherent in each teaching episode and individual interaction.

In China, teachers have engaged in Lesson Study for a long time. Ose and Sato (2003) summarise its basic principles:

- (i) School should be developed into a community where every single child can learn and grow, teachers can engage in mutual learning as professionals, and parents and citizens can learn through participation in educational practices;
- (ii) Every teacher should invite colleagues for observation and reflection at least once a year, in order to share his or her classroom practice with them and engage in mutual learning;
- (iii) Relationships based on listening and dialogue must be established among members of a school in order to develop learning relationships in the classrooms and collegiality among teachers as professionals; and
- (iv) Participation and collaboration of parents and citizens is required for the sustenance of a learning community.

They identify inquiry as being at the heart of all the activities in developing an activist teacher and that:

...teaching itself can be seen as a form of inquiry... professional teachers are viewed as researchers of their own practices, capable of producing worthwhile knowledge about teaching which can contribute to teachers' own and others' professional development. Developing the skills to help teachers inquire into their own and others' practice is fundamental to an activist oriented teacher education program.

(Sachs 2003, p. 73)

2.2.6 Area 6: System Support

Research studies about teachers' work and lives, school effectiveness and improvement, and successful school principals have been complemented recently by evidence-based inquiry into 'how the world's most improved systems keep getting better'. A recent study (McKinsey and Company 2010) examined 20 systems in action, portraying how successful reform grew and was sustained in different contexts in terms

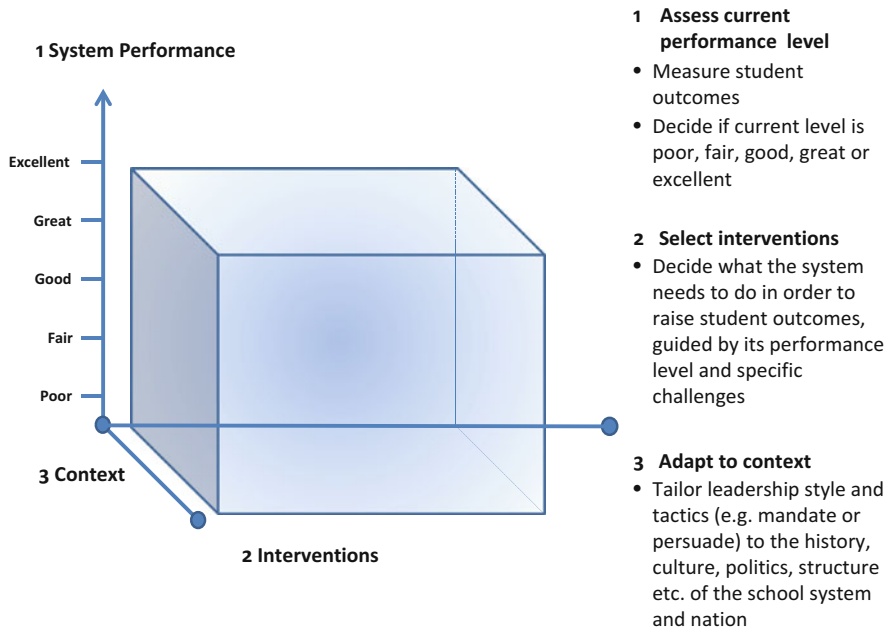


Fig. 2.3 System leaders must integrate three dimensions when crafting and implementing an improvement journey

of measured standards of attainment, irrespective of the individual system starting point. This research observed that:

The school systems that have been successful in improving select an integrated set of action from the menu of the interventions appropriate to their level of performance. These improving systems appear to be careful in maintaining the integrity of the interventions; the evidence suggests that during each performance stage they select a critical mass of interventions from the appropriate menu and then implement them with fidelity.

(McKinsey and Company 2010, p. 20)

It found also that whilst the injection of new leadership was important for new presence and energy, successful leaders had staying power, remaining, on average, for at least 6–7 years in the school as against a norm of 2–3 years. During their school improvement journeys they integrated three dimensions in their work (Fig. 2.3).

2.3 Conclusion: The Quality Challenge

Whilst it is important not to ‘sentimentalize’, it is necessary to acknowledge that moral purposes are an essential part of the identity and efficacy of many effective teachers. They are what keep teachers going. They contribute to their commitment, identity and resilience. In fact, resilience itself, without a strong sense of moral

purpose, without a passion for learning and teaching, is a necessary but insufficient condition to ensure quality in teaching. For passionate teachers, professional accountability is about far more than satisfying externally imposed bureaucratic demands or annually agreed targets for action linked to government and school improvement agendas. They understand that the nature of teaching, the terms of their work, oblige them to 'place the intellectual and moral well-being of students first and foremost' through their actions and interactions, through who they are as well as what they do (Hansen 1998, p. 651).

Teachers, teacher educators, and researchers in higher education live in uncertain times. Their work has become more intensified and diverse, with more demands from government and the media for better 'value for money', accompanied by calls for research to be 'useful' to and used by practitioners. In many countries there is a suspicion by practitioners and policy makers of the work of educational researchers and the benefits that it brings to understanding and improving education in schools. Moreover, the evidence still points to a lack of use by teachers of much research where they themselves have not been involved in the research process and the perception of a 'profession of academic educational research' which is far removed from practitioner communities continues. Huberman's (1995) seminal study of dissemination efforts in large-scale national projects of applied research lends empirical support to the importance of researchers' involvement in the organizational contexts of reform. He concluded that, 'research is more likely to have a strong conceptual influence on practitioners when researchers are active in the contexts where innovations are in process' (in Zeuli 1996, p. 177). Teacher educator researchers may, therefore, need to find new ways of creating new mind sets which couple emerging understandings of learners, teachers, learning and teaching and teacher educators' work (and the contexts in which such work is conducted) with improvements in the learning and achievement of students which speaks more directly to others.

No single model of research will necessarily be best fitted to bridge the gap. However, whether research is constructed and conducted primarily for the purpose of furthering understanding or for more direct influence on policy makers and practitioners, whether it is on, about or for education, the obligation of all teacher educator researchers is to reflect upon their broader moral purposes and measure the worth of their work against their judgement of the extent to which they are able to realise this as they continue to develop their work.

The challenge, then, for all teacher educators today, is to send out into schools teachers who know themselves, who are aware of the challenges they are yet to face and equipped to respond to them, who are determined and have the capacities always to teach to their best, regardless of circumstance. The challenge for Departments and Faculties of Education in universities is to engage in strategic planning for the establishment, development and sustaining of new kinds of lateral relationships with schools and teachers, which demonstrate a long term commitment to the establishment and growth of quality teachers, valuing old truths whilst at the same time engaging with the new, more diverse worlds in which they work. Such programmes of research and development will combine traditional expertise

with new expertise in cooperative and collaborative knowledge creation, development and consultancy that are part of a more diverse portfolio that connects more closely with the needs of the school community at large, so that in their new lives teachers may be able to make even greater contributions to the quality of the learning and achievements of their students and their country.

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Chapter 3

The Continuing ‘Problem’ of Teacher Education: Policy Driven Reforms and the Role of Teacher Educators

Diane Mayer

Abstract In this chapter, I consider the question, ‘What will the teacher education system look like in the 21st century?’ I review the ways in which teacher preparation has been framed in the past and then focus on the current ‘policy moment’ for teacher education and the associated questions being asked of teacher educators: What is the value of teacher education? What should beginning teachers know and be able to do? How can judgments be made about what beginning teachers know and are able to do? I use the example of Australia, but I believe there are many similarities in other countries. I explore governance structures and mechanisms, and examine the professionalization of teacher education practice and the work of teacher educators. In doing so, I aim to foreground the importance of formal university based teacher education and highlight the important work that needs to be done by teacher educators through their research and scholarship to inform and influence the current policies for systems and standards and ensure a professionalised teacher education system.

Keywords Teacher education • Policy reforms

3.1 Introduction

In this chapter, I consider the question, ‘What will the teacher education system look like in the 21st century?’ I review the ways in which teacher preparation has been framed in the past and then focus on the current ‘policy moment’ for teacher education and the associated questions being asked of teacher educators: What is the value of teacher education? What should beginning teachers know and be able to do? How can judgments be made about what beginning teachers know and are

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able to do? I use the example of Australia, but I believe there are many similarities in other countries. I explore governance structures and mechanisms, and examine the professionalization of teacher education practice and the work of teacher educators. In doing so, I aim to foreground the importance of formal university based teacher education and highlight the important work that needs to be done by teacher educators through their research and scholarship to inform and influence the current policies for systems and standards and ensure a professionalised teacher education system.

3.2 Teacher Education as a Policy Problem: The Case of Australia

Like many countries, teacher education in Australia is current being positioned as a ‘policy problem’. In the early days of white settlement in Australia, the pupil-teacher apprenticeship model of learning on the job was the main way in which teachers were prepared – a few years helping and watching the master teacher. Then, in the 1960s teacher training began in teacher colleges and notions of ‘the natural teacher born to teach’ and characteristics and skills associated with a ‘good teacher’ regularly underpinned the policies and practices of teacher preparation.

The 1980s and early 1990s were characterised by a focus on the preparation of a professional teaching workforce with teacher education being informed by research on the professional knowledge base of teaching and teacher education. Terms like ‘teacher training’ were rejected in favour of ‘teacher education’ and ‘learning to teach’, and ‘reflective practice’ became a major focus in the new teacher education. Teacher education students were engaged in activities that helped them reflect on their pre-existent beliefs and the effects of their professional practice on students. In the main, teacher education was self-governed by the institution responsible for the delivery of the teacher preparation program. Teacher educators had programmatic control over the way they prepared teachers and to a large extent influenced the political agendas related to professional learning and professional practice.

However, a sharper focus on ‘quality assurance’ and ‘outcomes’ emerged in the 1990s and since the early 2000s teacher education governance has been characterised by an increasing focus on outcomes, particularly student learning outcomes and whether or not teacher education makes a difference to student learning in classrooms. It has been argued that the most appropriate policies and practices for teacher education should be decided according to empirical evidence about their value-addedness in relation to student achievement (e.g. Cochran-Smith and Fries 2005; Grimmer 2009). The policy debates around teacher education governance have become increasingly polarized, posing the deregulation and marketisation of university-based professional training (often in tandem with calls for increased centralized control of curriculum and pedagogy) against a defence of professionalism grounded in the academy. Those promoting deregulation argue there is little valid evidence to support the value-addedness of teacher education as it is

currently practiced, and argue instead for regulatory standards and performance indicators in lieu of traditional teacher preparation pathways. Those calling for increased professionalization call for policies and practices that promote professional self-regulation and semi-autonomy, arguing that the most important factor in student learning is the teacher and that therefore time and money should be put into professionalising the teaching workforce with high level qualifications and on-going professional learning.

The Australian higher education system is small by comparison with other countries, with 39 universities of which 37 are public institutions and two are private. These are all comprehensive universities offering bachelors, masters, honours and doctoral programs across a range of disciplines. Teacher education is offered in the Schools or Faculties of Education in 34 of the public universities. Teachers are prepared in multiple study pathways including: (i) four-year undergraduate Bachelor of Education degrees, (ii) four-year double degrees comprising a degree in the subject discipline area and a degree in education, and (iii) one-year Graduate Diploma in Education or 2-year Master of Teaching programs after an initial 3-year Bachelor's degree in the discipline area. The programs usually comprise a combination of professional studies, curriculum studies and professional experience or practicum.

In Australia, schools and teachers' work is the jurisdiction of the states/territories while higher education is governed by the federal government. However, in recent years the Commonwealth has made moves to increase its influence over schooling and teachers' work. One example is the *Smarter Schools – Improving Teacher Quality National Partnership* (TQNP) program funded by the Commonwealth at \$550 million over 5 years (2009–2013). Specific areas for reform via this program include:

- Attracting the best graduates to teaching through additional pathways;
- Improving the quality of teacher education;
- Developing national standards and teacher registration;
- Improving retention by rewarding quality teachers and school leaders;
- Knowledge of teachers and school leaders through their careers; and
- Improving the quality and availability of teacher workforce data.

This policy has so far resulted in the introduction of alternative employment-based pathways into teaching, the establishment of School Centres for Teaching Excellence designed to enhance the practicum experience for preservice teachers, and the development of national professional standards for both the accreditation of teacher education programs and the registration of teachers.

Teach for Australia, a program not unlike *Teach First* in the UK and *Teach for America* in the US, commenced in 2010 as an alternative pathway into teaching aimed at recruiting and selecting outstanding university graduates from all disciplines to teach in socio-economically disadvantaged secondary schools. *Teach for Australia* Associates complete an intensive 6-week teacher training program and then teach for 2 years during which time they are supported by mentors and work with business partners who provide leadership support and business coaching. At the end of the 2 years or work and study, the Associates graduate with a Postgraduate Diploma in Teaching. Full course costs for the Postgraduate Diploma in Teaching

are funded by the Commonwealth government. It is fair to say that the introduction of *Teach for Australia* has attracted much attention and criticism from the academic sector and many in the profession suggesting that becoming an effective beginning teacher requires rigorous professional education prior to practice. We are looking to learn from the US experience with *Teach for America*. For example, Berliner and his colleagues argue that *Teach for America* is not effective preparation for teachers trying helping students in poverty learn more and that students taught by fully certified teachers score higher than students of *Teach for America* teachers (Laczko-Kerr and Berliner 2002). Moreover, concerns about retention and stability for these teachers in high needs schools are raised by Linda Darling-Hammond et al. (2005) who found that 69 % of *Teach for America* teachers had left by the end of their second year of teaching and 88 % had left by the end of their third year.

The other major change as a result of the TQNP program has been the development and implementation of national standards for teaching and accreditation of teacher education programs. In Australia, entry into the profession and ongoing certification or registration of those in the profession has traditionally been the responsibility of the states and territories. Eight teacher registration authorities accredit teacher education programs and graduates are eligible for teacher registration in that state/territory. Registered teachers are usually granted registration in other states/territories through mutual recognition procedures. However, the Commonwealth government has established the Australian Institute for Teaching and School Leadership (AITSL) with a brief to develop national professional standards for teachers and school leaders, national regulation of teacher education accreditation and teacher registration, and national professional development for teachers and school leaders. The new regulation for accreditation of teacher education includes some significant changes for teacher education providers, including the increased emphasis on outcomes and the need to provide evidence that graduates can demonstrate the expected professional knowledge, practice and engagement as outlined in the new national graduate standards.

So, the current policy moment for teacher education in Australia is calling into question the value of teacher education as it has been practiced, proposing alternative pathways into teaching and at the same time tightening the outcomes with statements of professional standards for teachers and the regulation for teacher education accreditation.

3.3 Sustaining the Professionalization of Teacher Education: What Will the System Look Like and What is the Role of Teacher Educators?

Many features of the current policy turn have the potential to deprofessionalize the teaching profession and teacher education. I am not arguing that some sort of accountability framework should not exist. Rather, I want to consider how

teacher educators can shape the current and future agendas in order to sustain the professionalization of teacher education and shape the teacher education system in the twenty-first century. In so doing, I argue that we need to address the key questions being asked of us: What is the value of teacher education? What should beginning teachers know and be able to do? How can judgments be made about what beginning teachers know and are able to do? First, we must continually argue for a self-regulated profession and a model of 'professional accountability' to frame the work we do. To do that, we must ensure research-validated statements of professional standards for teaching at various junctures in a teaching career as well as reliable and valid measures of teacher quality in relation to those standards. Finally, we need to examine our research to respond to and inform the questions being asked of us in this policy moment.

3.3.1 Professional Accountability

What does it mean to be accountable as a teacher and as a teacher educator? Accountable for what? Accountable to whom? Much of what we see in the current policy moment is a strengthening of bureaucratic accountability mechanisms whereby government agencies closely manage teachers' work in order assure the public of standardised and 'acceptable' levels of teacher quality and student achievement. This bureaucratic accountability narrows teachers' opportunities to respond to individual student needs in specific contexts and overlooks the need for teachers to draw upon their professional knowledge base as part of informed decision making to meet the learning needs of every student in their care. Moreover, it obfuscates the need for teacher education to prepare teachers to make such knowledge informed professional judgements.

An alternative way of thinking of accountability which acknowledges the value of teacher decision making and informed professional judgement drawing on a rigorous knowledge base, is what Linda Darling Hammond has called 'professional accountability' (Darling-Hammond 1989). This means a self-regulated teaching profession taking collective responsibility for ensuring that all those permitted to teach are well prepared, have and use all available knowledge to inform professional practice and maintain a primary commitment to students, their families and communities. Such a professional accountability model represents a 'policy bargain' the profession makes with society, whereby greater (self) regulation of teachers is guaranteed in exchange for deregulation of teaching. Has this 'bargain' been kept? I think not, though not through lack of trying. As a profession, we have established professional standards but they have often been multi-purpose, varied, prolific and generally not cohesive and convincing to policy makers. Moreover, we have not been effective in convincing policy makers that we have valid and reliable mechanisms for judging teacher quality. As a result, governments have stepped in to establish their versions of these features for a teacher education system. I turn to these issues of professional standards and teacher quality.

3.3.2 Professional Standards: What Should Beginning Teachers Know and be Able to do (and be)?

Professional accountability and a self-regulated profession demands explication of what it is teachers know and do. But teaching is complex and therefore recognizing and naming quality teaching is complex. Changing and challenging curriculum expectations along with increasingly diverse learners mean that teachers have to be quite sophisticated in their understanding of the effects of context and learner variability on teaching and learning. Instead of implementing set routines, teachers need to be adept at evaluating teaching situations and developing teaching and learning opportunities that can be effective under different circumstances. Teaching is intellectual work requiring professional judgment. Despite these challenges, professional standards for teaching have been developed to describe effective professional practice at various junctures in a teaching career (for example, beginning or new teacher, fully qualified teacher, accomplished teacher, and teacher leader). These standards try to capture the nuances associated with teaching in different subject areas and grade levels as well as in different school systems and contexts.

However, while statements of professional standards are intended to create a shared and public 'language of practice' that describe how the specialised knowledge of teaching is used in practice and also be a vehicle for assessing and judging professional activity (Yinger and Hendricks-Lee 2000), the profession has not always been consistent and coordinated in this work. For example, many constituencies within the profession in Australia have attempted to articulate effective professional knowledge and practice at various junctures along the professional learning continuum and related career transition points, and to control and regulate their slice of the profession. As a result, the profession has not been heard as a strong collective voice and has been more easily disregarded by policy makers as new national agendas unfold. With the establishment of AITSL and its political and financial backing, the Commonwealth has introduced a common set of professional standards for teachers to be used across the country. Of course, it will take some time to see the effect of this legislation and its impact. The standards are grouped into three domains of teaching; Professional Knowledge, Professional Practice and Professional Engagement, and include descriptors of four professional career stages; Graduate, Proficient, Highly Accomplished and Lead (Australian Institute of Teaching and School Leadership 2011b). The Graduate and Proficient levels will be used for teacher registration purposes in determining provisional registration after completion of an accredited teacher education program and full registration after a period on induction into the profession. Indeed, the Graduate standards have quickly been included in the new national system for accreditation of initial teacher education (Australian Institute of Teaching and School Leadership 2011a). However, because of the related industrial issues (career stages and related salaries which are the province of the employers), the Highly Accomplished and Lead levels and how they might be used, are prompting much discussion and debate across the country. At the moment, it is being suggested that a process for recognising Highly

Accomplished and Lead teachers will be managed by the state/territory registration boards and that such a process would be voluntary. The related industrial issues are far from resolved.

As this agenda unfolds in Australia, teacher educators will have to ensure that their research interrogates the validity of the standards statements as accurate descriptors of what effective teachers know and can do (and some would argue, 'be'), over time. Many statements of professional standards statements simply reflect the collective wisdom of whoever is invited to develop and then comment on them at a particular point in time. There is sometimes reference to review of research on effective teaching, but rarely are articulated standards they subjected to rigorous research interrogation over time. This is an important role for teacher educator researchers.

3.3.3 Judging What Beginning Teachers Know and are Able to do

Once research- and practice-validated professional standards for teaching are developed, the profession has to think about how to use them to professionally regulate entry into the profession and progression within it. For teacher education, this involves providing evidence of graduates' effectiveness as beginning teachers and considering the resultant implications for the teacher education curriculum. Authentic judgement of beginning teacher quality is a crucial issue we need to address as we think about the teacher education system of the twenty-first century.

Until now, entry to the profession in Australia has been regulated by state agencies that use input models to make decisions about teacher registration and readiness to teach. Judgments are made about the quality of a teacher education program usually by paper review involving a panel of stakeholders deciding on the likelihood that the program will prepare an effective beginning teacher. Then, employers and teacher registration authorities use proxies like completion of the accredited teacher education program, grades in university subjects or results in practicum evaluation forms and observations of teaching to make a judgment about a graduating teacher's level of professional knowledge and practice – about their readiness to teach. So while systems are increasingly arguing for a standards-based and outcomes-focused approach to regulation of the profession, the mechanisms by which decisions are made often still draw on an older inputs-based approach. I argue that authentic assessments of the actual professional practice of teachers in the workplace, incorporating multiple measures, and focussing on judging the impact of teachers on student learning, are needed in an outcomes focused professional accountability system that we as teacher educators must drive.

So, how do we authentically capture effective teaching in all its dimensions? Darling-Hammond and Snyder propose five aspects of authentic assessment to judge teaching:

1. The assessments sample the actual knowledge, skills and dispositions desired of teachers as they are used in teaching and learning contexts, rather than relying on more remote proxies.

2. The assessments require the integration of multiple kinds of knowledge and skill as they are used in practice.
3. Multiple sources of evidence are collected over time and in diverse contexts.
4. Assessment evidence is evaluated by individuals with relevant expertise against criteria that matter for performance in the field.
5. The assessment practice includes multiple opportunities for learning and practicing the desired outcomes and for feedback and reflection, ... in order to develop as well as measure teaching judgement and skill.

(Darling-Hammond and Snyder 2000, pp. 526–528)

Portfolio assessments (both *structured* or *unstructured*) are often used in teacher preparation programs, usually as a capstone assessment (St. Maurice and Shaw 2004). Structured portfolios require preservice teachers to submit specific artefacts of teaching in response to standardized prompts. These artefacts and responses are then scored in a standardized way by trained scorers using a common evaluation tool, usually a rubric. With unstructured portfolios, what and how artefacts are selected varies: ‘showcase’ portfolios involve selection of ‘best work’; professional learning portfolios involve things like a statement of teaching philosophy, a videotape of teaching, lesson plans or units, and reflections. These portfolios serve primarily a formative purpose. However, if a portfolio is to be used as an authentic assessment to support a graduation or registration decision, then its design and the development must be much more structured and psychometric issues need attention (Mayer et al. 2011).

An example of a structured portfolio that has been used for high stakes credentialing decisions is the Performance Assessment for California Teachers (PACT). PACT represents a multiple measures assessment used for initial teacher registration in California. It is designed to collect evidence of preservice teachers’ content and pedagogical knowledge as well as higher-order thinking skills (Pecheone and Chung 2006) and assesses ‘the planning, instruction, assessment, and reflection skills of student teachers against professional standards of practice’ (Darling-Hammond 2006a, p. 121). The tasks ‘are designed to measure and promote candidates’ abilities to integrate their knowledge of content, students and instructional context in making instructional decisions and to stimulate teacher reflection on practice’ (Pecheone and Chung 2006, p. 24).

At Deakin University in Australia, a group of teacher educators have drawn on both the structure and the content of PACT to inform the design, implementation and evaluation of what is being called the Deakin Authentic Teacher Assessment (ATA) where graduates of teacher education programs demonstrate their effectiveness in relation to the work of teachers in the workplace as framed by the Victorian Institute of Teaching (VIT) *Standards of Professional Practice for Graduating Teachers*. Like PACT, the ATA is designed to include ‘multiple measures that allow a comprehensive view of what candidates learn and what a program contributes to their performance’ (Darling-Hammond 2006a, p. 135). It requires candidates to submit a structured portfolio including teaching plans, teaching artefacts, student work samples, video clips of teaching, and personal reflections and commentaries,

which are organized in four categories to reflect the regular ongoing work of teachers in the classroom over time, in cycles of planning, teaching, assessment, and reflection. The ATA is assessed using rubrics aligned with the VIT *Standards of Professional Practice for Graduating Teachers*.

Recent research on the ATA investigated (i) its validity as a measure of professional practice for beginning to teach, (ii) key considerations in the development and implementation of the ATA as a capstone assessment, (iii) its role in course evaluation and course improvement, and (iv) its role in pre-service teachers' professional learning (Dixon et al. 2011). This 2-year study, involving two graduating teacher cohorts, showed that the Deakin ATA is generally succeeding in its aim to be a meaningful and authentic means of assessing beginning teacher readiness in relation to the VIT graduate standards. Findings indicated that it provided the opportunity to appropriately document the actual work of teachers and it also provided program evaluation by clearly highlighting areas of weakness in the teacher education programs (for example, designing and implementing techniques for assessing student learning and then using that data to make informed professional decisions for the next stage of student learning). Moreover, it has provided a framework for backward mapping curriculum design for a new teacher education program. The teacher educators examined what is was that the graduates would be expected to demonstrate and then worked backwards to make decisions related to the teacher education curriculum content and processes, in order for the graduates to develop the necessary knowledge, skills, and capabilities. Of course, the research highlighted aspects of design and implementation that are now part of continuous improvement as the ATA is incorporated into all the teacher education programs at this institution.

An important consideration as we move forward with this work is that whilst it is comprehensive, capstone and incorporates multiple measures, the ATA, like PACT, does not and cannot capture all dimensions of teachers' work. Essentially, these measures capture teachers' work in the classroom as they work to enhance student learning. However, there are other aspects of teachers' work across the school and indeed the profession which are not captured, for example engaging with colleagues, perhaps even dimensions of ethical engagement. Therefore, other ways of providing opportunities for graduating teachers to demonstrate their capability in these areas will be needed. In California, Embedded Signature Assessments (ESAs) were identified within teacher education programs to provide this evidence.

Therefore, I argue that if teacher educators are to reclaim the 'policy bargain' of professional accountability, we need to develop research informed and validated professional standards that capture the complexity and context specific dimensions of quality teaching and professional judgement, but we also need to develop ways of judging quality teaching and professional judgment and the associated student learning, in authentic ways. Finally, I argue that we need to ensure that our voices as teacher educators and teacher education researchers are informing these developments as well as the policy that drives new agendas and political imperatives.

3.3.4 *Researching Teacher Education: The Research We Have to Have*

Given the challenges to teacher education exemplified by the questions I presented at the beginning of this paper and the related analysis of teacher education as a policy problem, how is current teacher education research responding? Grossman suggests that ‘as researchers and practitioners in the field of teacher education, we seem ill prepared to respond to critics who question the value of professional education for teachers with evidence of our effectiveness’ (Grossman 2008, p. 13). This is not a recent realisation. Successive reviews of teacher education research have come to similar conclusions. In 2005, a major review of teacher education research in the US by Division K of AERA pointed out that there were almost no studies that could demonstrate direct causal links from teacher education programs to student learning (Cochran-Smith and Zeichner 2005). I suspect that this would be true of many other countries and that 6 years later, little has changed. Successive government inquiries into teacher education in Australia have recommended large-scale research projects investigating the value of teacher education (e.g. Education and Training Committee 2005, pp. 66–67). However, as yet, few large-scale studies of this sort have been conducted.

Of course, there are many reasons for this situation. Major grants are rare in the field of teacher education and consequently teacher educators study their own programs, producing many small-scale and often unconnected studies of teacher education practice. The findings from these studies do not produce convergent findings; indeed they never set out to do so. Moreover, it is important to remember that there are at least two causal links in the teacher education field, one linking teacher preparation with what the pre-service teachers learn (their professional knowledge), and another linking their knowledge, skills and dispositions as enacted in the classroom (their professional practice) with student learning or other outcomes. The type of research needed to examine all these links requires far more resources than has traditionally been available for teacher education research.

However, it must be said that teacher education practice has benefited greatly from the currently available research. Teacher educators have learned about how to design and implement effective teacher education programs by drawing on studies like that conducted by Linda Darling Hammond which examined the features of a number of teacher education programs identified as producing well prepared teachers from their first days in the classroom (Darling-Hammond 2006b). In addition, large-scale reviews of relevant research help us understand the subject matter and pedagogical preparation of prospective teachers, the content and character of high-quality field experiences and alternative routes, and the effects of various policies on teacher preparation (for example, Wilson et al. 2002). From the major review of teacher education research conducted by the AERA panel mentioned above (Cochran-Smith and Zeichner 2005), we have learnt a great deal about the curriculum of effective teacher education – its coursework, field experiences, assessment, and pedagogical approaches – in addition to effective preparation for teaching diverse populations and working with students with disabilities. While such studies

may provide a useful research base for informing teacher education programs and practice, a significant gap remains for high quality, larger scale research into the effect of teacher education, research with which policy makers will engage. The issue still remains:

[A]s a research community, we have spent relatively little sustained effort trying to determine how teacher preparation, of any kind, affects either teachers' classroom practices or their influence on student learning, outcomes that are arguably those that the public – including parents and policy makers alike – care about most (Grossman 2008, p. 14).

There are some attempts in the US to do this in a large and systematic way. One is a study in New York City involving a team of researchers who are examining a number of different pathways into teaching, the characteristic of those programs and the impact of their characteristics on a range of things, including student achievement in reading and mathematics (Boyd et al. 2006). The other is a study in Ohio (Lasley et al. 2006) and is similarly ambitious in its scope and its goal to identify the impact of teacher education programs on teacher effectiveness. At the University of Michigan, Deborah Ball and her colleagues are developing multiple measures of teachers' pedagogical knowledge and exploring the relationships between teacher knowledge and student achievement (Ball et al. 2008; Hill et al. 2004).

In Australia, one empirical investigation of the effectiveness of teacher education recruited a group of teacher education students in their final year of teacher education and followed them through to the end of their second year of teaching. The research attempted to link program characteristics and personal characteristics with effectiveness in literacy and mathematics teaching, taking account of the impact of school context on teaching effectiveness (Louden et al. 2010). Another longitudinal mixed-methods study is following all teacher education graduates in two states into the first 3 years of their teaching career to determine the effectiveness of their teacher preparation for the diverse settings in which these graduates teach (Mayer et al. 2011–2014).

While such large-scale empirical studies employing a mixed-methods approach will go a long way to helping us respond to our critics, there are other measures we can take with the case study and ethnographic work which typifies a lot of our teacher education research. We can systematically connect with other studies that have asked similar questions and conduct research which builds on its own findings and where possible use common instruments and outcome measures that make it possible to aggregate findings (Zeichner 2005).

3.4 Concluding Comments

In this paper, I have examined the teacher quality reforms currently being debated and enacted in Australia as responses to the political positioning of teachers and teaching and related questions about the value of teacher education, professional standards and teacher assessment. The Commonwealth Government is implementing

a 'national solution' through its *Smarter Schools – Improving Teacher Quality National Partnership* (TQNP) program. This program is emphasising alternative pathways into teaching and at the same time more rigorous standards for entry into the profession as well as progression within it. Traditional approaches to teacher education are being questioned and teacher education itself is seen as a 'policy problem'. I have suggested how teacher educators might engage the current and future agendas in order to sustain the professionalization of teacher education and shape the teacher education system in the twenty-first century. I have argued that we need to address the key questions being asked of us: What is the value of teacher education? What should beginning teachers know and be able to do? How can judgments be made about what beginning teachers know and are able to do? We must continually argue for a self-regulated profession and a model of 'professional accountability' to frame the work we do. To do that, we must ensure research-validated statements of professional standards for teaching at various junctures in a teaching career as well as reliable and valid measures of teacher quality in relation to those standards.

Importantly, it is clear that teacher educators in Australia will have to direct their research foci and professional activity to areas where findings speak directly to the questions being asked of teaching and teacher education; that or risk marginalisation as Commonwealth funding and political energy are directed towards agendas which could end up simply bypassing teacher education as it is conducted in universities and increasing bureaucratic control of the teaching profession across the country. It is important that teacher educators direct their research to studies examining the value of teacher education and lead national policy discussions about quality teaching within a professional accountability framework. It is important that our research is relevant to and continues to inform the construction and reconstruction of national statements of quality teaching as well as the processes of initial teacher accreditation. Moreover, it is critical that our work informs the mechanisms by which new teachers are judged as eligible for entry into the profession and the ways in which they are recognised and rewarded for reaching significant professional milestones throughout their teaching career. Failure to do so could mean further bureaucratic control and accompanying directives for teacher education programs.

So, what will the teacher education system look like in the twenty-first century? I don't know exactly but I propose that teacher educators must focus on the influencing the *system* and the related *standards*, to pick up on the theme I decided to focus on. To do that we must make our research count and make sure it is heard as standards are developed and used to make decisions about regulation of the profession, including the teacher education component of the profession.

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Chapter 4

“Evidence-Based Teaching, Evidence-Based Teacher Education” (Quality of Teachers and Quality of Teacher Education)

Martin Valcke

Abstract Worldwide, teachers are considered as the critical actor determining to a large extent the quality of education. In education, we observe a clear trend towards evidence-based teaching and learning approaches that build on available research evidence to ground educational practices. This trend seems not to be reflected in the way teacher education is being set up. Meta-analyses are critical as to the outcomes of teacher education. Dominant approaches also neglect new approaches towards teacher’s professional identity and do not respect the full complexity of the teaching and learning setting. The present article therefore centres on the urgent need to reconsider teacher training models that reflect a congruency with the way teachers are expected to teach (evidence-based) in their future practice. At the same time, it urges teachers to adopt a reflective practitioner approach and a “teacher as a researcher attitude” towards the efficiency and efficacy of their educational practices. In line with the debate pursued with this article, we centre on the critical issue of “outcomes” of teacher education and how this affects macro-level and meso-level perspectives on teacher education.

Keywords Evidence-based • Models • Congruency • Teacher-as-a-researcher

4.1 The Teacher at the Centre of the Quality Debate

Educational quality is at the centre of a worldwide debate. Both scientific educational research and scientific policy oriented research stress the need to guarantee a high level of educational quality. Exemplary studies that are a catalyst in the discussion about educational quality are the PISA studies. The lower PISA 2006

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results of students in e.g., Germany resulted in a very heavy political debate and nearly resulted in the collapse of the federal government (see Figazzolo 2011). At the same time – building on the German case – this has resulted in a fierce public debate and a resulting reform of education. This is pointedly described in the chapter about Germany in the recent OECD (2011) publication “Once Weak International Standing Prompts Strong Nationwide Reforms for Rapid Improvement”. At the centre of the debate, we find as expected a plea for “improving teacher quality” (ibid, p. 212). “Teachers were not steamrolled” and “blamed” for the state-of-affairs. Instead, educational authorities took measures to put teacher quality at the centre of the reforms. A typical reform – also discussed below – is that teachers from now on are enabled to meet the demands of struggling learners. German education did not seem to be explicitly aware of the drastic changes in student profiles during the last decade. This resulted in neglecting strong shifts in the socio-economic-status of the pupils’ family background and a lack of awareness about the tension between mother tongue use at home and the “German” school language. Germany is presented in this context only as a “case”, but it mirrors the many problems that have been encountered in other educational systems worldwide because education in general and especially teacher training in particular doesn’t seem to catch up with a number of continuous shifts or changes in the educational reality. At the same time, educational theory building has evolved, but hardly seems to affect educational practices.

Again, building on the PISA results, Turkish higher education has changed the structure of teacher education as such, that teacher education is now set up in university settings (Kavak and Baskan 2009).

The outcomes of the teacher quality debate even result in discussions about linkages between teacher pay or salaries and student outcomes. Macro-level and comparative research of Woessmann (2011) points out that paying teachers more when their efforts result in higher performance has a significant impact: “The use of teacher salary adjustments for outstanding performance is significantly associated with math, science, and reading achievement across countries”. (Ibid, p. 404). This is particularly addressed in the US where the link between educational quality and the quality of the teachers is dominantly stressed (Smith 2008). But at the same time, this issue raises a major problem about “What are the outcomes of teacher education”. As analysed by Cochran-Smith (2001), a discussion about the quality of teacher education immediately introduces the related questions about “what to measure, how to measure, when to measure” the outcomes of a teacher education program. She stresses that – in the US context – this debate follows three main lines: (1) what are the long term results of teacher education when we focus on its professional status; (2) what are the aggregated test scores of student teachers; teacher training programs, and/or teacher education institutions; and (3) what is the professional performance of student teachers in practice settings? Depending on the perspective being adopted, the “outcomes” discussion takes a very different turn. In the current article, the debate will shift even further and centre on the impact of teacher education approaches on the learning processes of future learners and resulting learning performance. Hattie (2009, p. 117) reports in this context research findings that are

discomforting: *“having poor teachers can be devastating. Sanders and Rivers found that the last effective teachers elicited average student gains of roughly 14 percentile points a year, whereas the most effective teachers elicited an average gain of 52 percentile points a year.”*

4.2 Evidence-Based Teaching and Learning

The focus on learner performance as the result of teacher education approaches is a challenging one. It introduces a multidimensional perspective on the quality of teaching and learning in general and – next – on the particular added value of teachers in this complex interplay between actors, variables, and processes. In his seminal publication “Visible Learning – a synthesis of over 800 meta-analyses relating to achievement”, John Hattie (2009) presents an overview of variables and processes in actors and contexts, affecting future learner performance. These are organized into the following cluster of contributors to learner performance:

- Contributions from the student
- Contributions from the home
- Contributions from the school
- Contributions from the teacher
- Contributions from the curricula
- Contributions from teaching approaches

The value of Hattie’s overview does not only result from the integration of data from over 50.000 educational research studies, but especially from the fact that the model that is reflected in the research reflects the multi-dimensional nature of learning performance predictors. It immediately shows that pre-service teacher education, the teacher and how/her practices are part of an interacting set of processes and variables in a variety of actors.

In Fig. 4.1, Valcke (2010) integrates the variables and processes (didactical activity, learning processes, organization) and links them to key actors in the instructional setting (learner, instructor) and the context (e.g., parents); in this case at the micro-level. We have to stress that this picture hides another complex reality; e.g., the didactical activities incorporate decisions as to learning objectives, learning content, didactical strategies, media, and evaluation. Nevertheless, Fig. 4.1 shows how all these elements in the model are interrelated. Changing the nature of one variable or one process, will impact other variables. As such, instructional settings can be compared to a “puppet-on-a-string”. If teachers e.g., want to adopt “peer tutoring” as a new key strategy, this will have an impact on the way they evaluate, the infrastructure, the timing, ... It will affect the expectations as to the abilities of learners to become involved in peer tutoring (e.g., the need for tutor training). It will affect expectations and/or reaction from parents as to what is going on in the classroom: “Do they now ask the pupils to teach?” The interrelated nature of instructional elements indicates that things hardly have

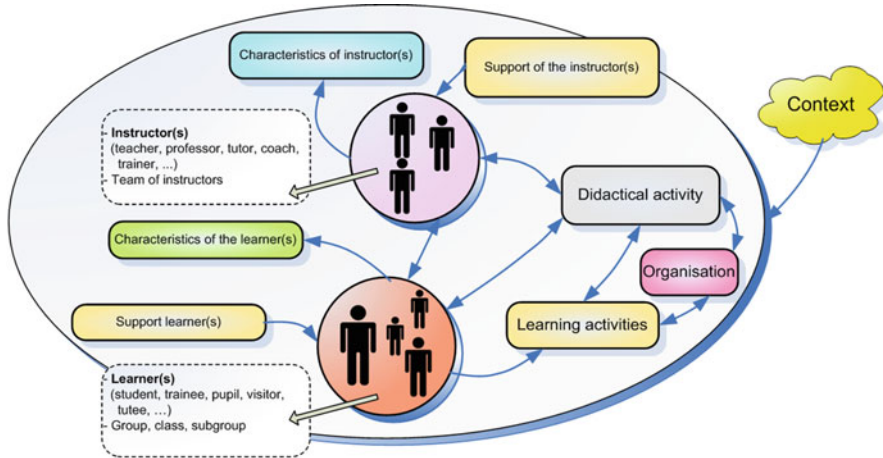


Fig. 4.1 Actors, variables and processes that learning performance of learners (Valcke 2010, p. 21)

a single “direct” effect on each other and that in many cases we have to consider “indirect” effects through mediating variables. For example: peer tutoring works (instructional strategy) when we implement successfully additional tutor training (instructional strategy) that results in a sufficient level of tutor self-efficacy (characteristic of the learner).

The interrelated nature of the determinants influencing learning performance directly affects the way teachers can operate in an instructional setting. When centering on the “teacher”, we see that his/her characteristics play a role. This is reflected in the research data, summarized by Hattie in Table 4.1. In this table, the indicator that represents the impact on learning performance is referred to as the “effect size”, abbreviated as d . Effect sizes refer to the increase/decrease in the standard deviation on learning performance. For example, when comparing learners receiving an innovative “reading comprehension” instructional approach (experimental condition) with learners in a control group working in the traditional way, an effect size of $d=1$ implies that the students in the experimental condition outperform 84 % of the learners in the control condition. Since almost everything in education “works” (has an impact on performance), we have to be careful to interpret empirical research results. We have to look for elements that go beyond the natural development of learners over time (the development effect) and what goes beyond the average effect of all types of teacher behaviour (the teacher effect). Therefore, it is suggested that only effect sizes that are $d=40$ or larger are to be expected when looking for variables or processes that really make a difference.

Applying the rule of thumb – $d=or>0.40$ – to the research summarized in Table 4.1, we see that a number of teacher characteristics are very important in view of their impact on (future) learner performance. Whereas we hardly see an impact of “initial teacher training” (discussed below), we especially see that basic

Table 4.1 Comparison of technical rationality approaches to professional education/training and alternative approaches that stress linking theory and practice (Based on Kielhofner 2005)

Technical rationality	Engaged scholarship
Assumption that mastery of general or propositional (declarative) knowledge will automatically lead to its application	Recognition of the tension between general/propositional/declarative knowledge and practical knowledge and skills
Knowledge is considered as valuable in its own, without consideration of its potential relevance	Knowledge is pursued to solve future problems in practical settings
Emphasis on objective scholarship independent from practice or application fields	Emphasis on “engaged scholarship” that results in being active in communities, practice settings, etc.
Knowledge is valued because of its inherent structure and available empirical support	Knowledge is judged for its practical utility
Research is only valuable when it is internally valid	Research should be set up in real life settings contexts to guarantee external validity
A general theory is the key for the knowledge base	Knowledge can be valuable for a number of reasons: theory, experiential, practical
Adoption of a conception of the expert that is in control of the process	Adoption of a collaborative model in which researchers and practitioner works together in designing, and implementing research

characteristics of the instructor have to be stressed. It is striking that “teacher-student relationships” ($d=0.72$), teacher expectation ($d=0.43$), teacher clarity ($d=0.75$) and teacher not labelling students ($d=0.61$) have a strong impact on learner performance.

Contributions from the teacher	N meta-studies	Total number studies	N subjects	N effects	d^a	CLE ^b (%)	Rank ^c
Teacher effects	1	18	–	18	0,32	23	85
Teacher education	3	53	–	286	0,11	8	124
<i>Microteaching</i>	4	402	–	439	0,88	62	4
Improving subject matter knowledge	2	92	–	424	0,09	6	125
<i>Quality of teaching</i>	5	141	–	195	0,44	31	56
<i>Teacher-student relationship</i>	1	229	355.325	1.450	0,72	51	11
<i>Professional development</i>	5	537	47.000	1.884	0,62	44	19
<i>Teacher expectations</i>	8	674	–	784	0,43	31	58
<i>Not labelling students</i>	1	79	–	79	0,61	43	21
<i>Teacher clarity</i>	1	na ^d	–	na ^d	0,75	53	8
Total	31	2.225	402.325	5.559	0,49	35	–

^a d =Cohen’s effect size

^bCLE Common language effect. If CLE is e.g., 62 %, this means that in 62 % of the cases this intervention or characteristic will have a positive impact on learning performance

^cRank refers to the ranking of the effect size in the total number of effects compiled in the book. As such, microteaching is listed as the fourth best strategy in the list when considering its impact on the related performance of learners

^dna indicates this element was not available to be incorporated in the table

Fig. 4.2 The onion – a model of levels of personal and professional change (Korthagen, 2004, p. 80)

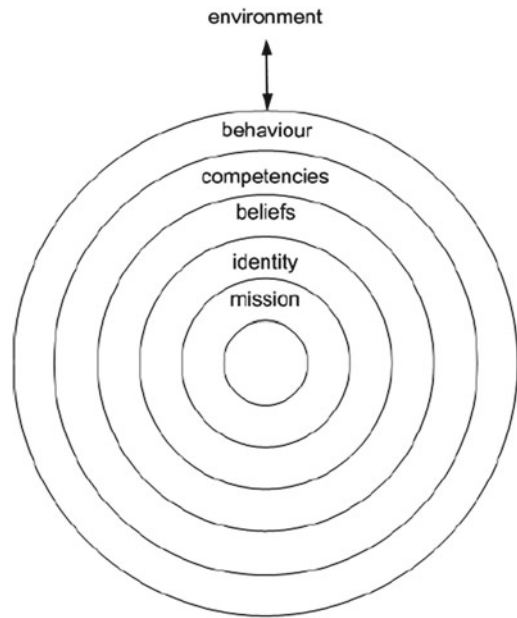


Table 4.1 from Hattie (2009, p. 109) summarizing teacher related variables that influence future learner performance.

The former examples bring us back to the issue at hand about teacher quality and the quality of education as reflected in learning outcomes. When we consider the results in Table 4.1, our observations introduce a specific picture when we talk about the professional identity of teachers. In the research literature, teacher's professional identity has received increasing attention during the last decade; especially since the conception of the "onion" model to represent the multi-layered nature of what a teacher is. Korthagen (2004) introduced the following representation of the model (Fig. 4.2).

This model emphasizes that teachers cannot only be described in terms of their teaching behaviour (in the instructional environment), but that in the description we have to consider their competencies (knowledge and skills), their beliefs about knowledge, instruction, ..., their identity (who am I) and their mission as a professional being (what do they strive after). This multi-layered model is also reflected in the approach of Dilts (1990) who asks the following questions about teachers: where am I (environment), what am I doing (behaviour), what can I do (capacities or competencies), where do I believe in (beliefs), who am I (identity), and what do I want (mission) (see also Schepens et al. 2009). It has to be stressed that these onion-layers influence one another and that they have to be in balance. As to the latter, experience has sufficiently illustrated that when teacher who are e.g., very teacher-centred, adopt collaborative learning approaches, they hardly succeed in

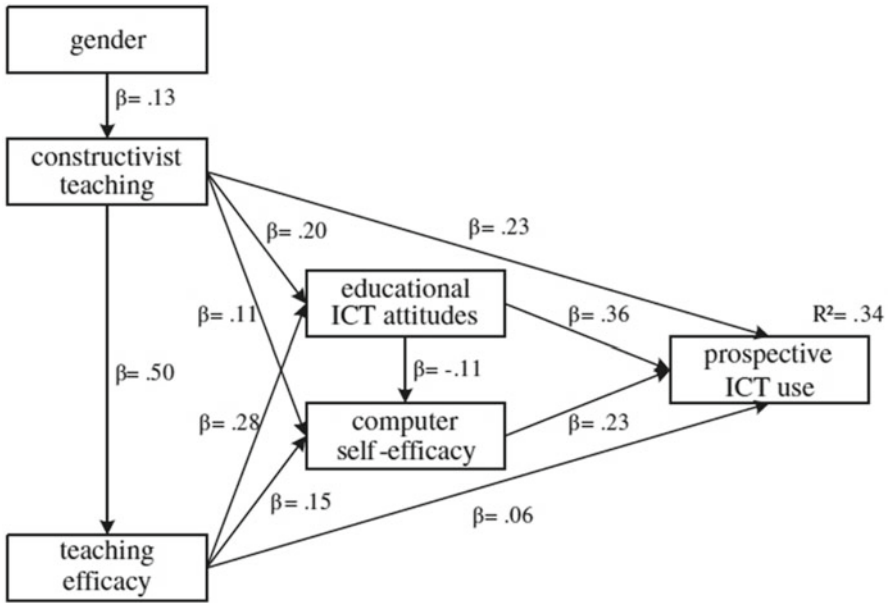


Fig. 2. Path coefficients of the research model.

Fig. 4.3 Path analysis results showing the predictive power of teacher beliefs on prospective usage of technology in the classroom (ibid, p. 108)

attaining adequate learning performance since there is not a congruency or balance between their beliefs and their behaviour.

In the Chinese context, Sang et al. found that teacher beliefs are related to the adoption of specific instructional practices, more in particular the integrated use of information and communication technologies (Sang et al. 2010). In this study, the focus is e.g., on constructivist teaching beliefs. The latter are defined by Taylor et al. (1994) as focusing on five critical components: scientific uncertainty, student negotiation, shared control, critical voice, and personal relevance. In an empirical study, the researchers found that the adoption of this type of beliefs was a relevant predictor – next to other variables – for the adoption of integrated usage of educational technology. Figure 4.3 depicts the results of the path analysis. Constructivist teaching beliefs significantly load on the usage of ICT ($beta=0.23$). But the path analysis results also show how other professional identity related variables affect the prospective educational usage of computers and the Internet: education attitudes towards ICT, teaching self-efficacy, computer self-efficacy. The latter are also beliefs and identity related variables.

Building on the growing debate about the importance of teacher identity, we perceive in the literature a growing interest in the ways to construct these teacher identities. Typical examples are recent articles, published in *Teachers and Teaching: Theory*

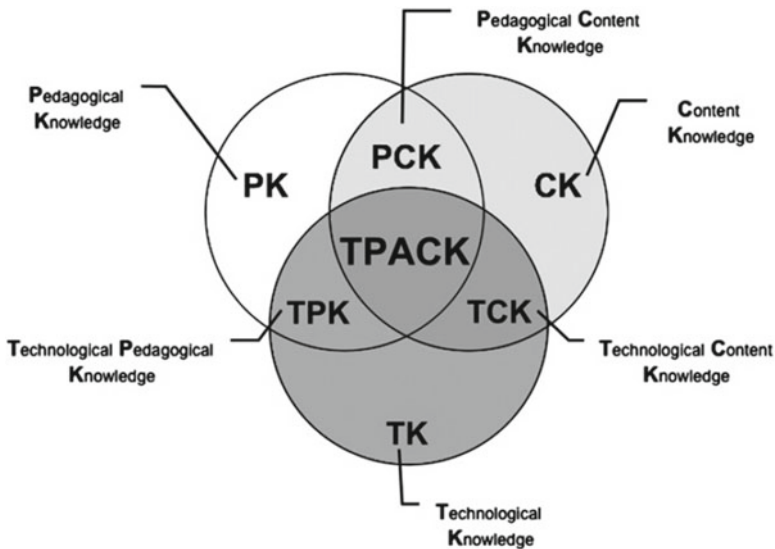
and Practice: Beyond what works: understanding teacher identity as a practical and political tool (Mockler 2011), and Four years on, I'm ready to teach: teacher education and the construction of teacher identities (Trent 2011).

The former discussion has immediate implications for our discussion about teacher education settings. Teacher education that merely focuses on the adoption of subject knowledge and/or educational strategies and techniques, is doomed to fail.

4.3 The Debate About the Quality of Teacher Education

Table 4.1 is again a useful starting point to open the discussion about the potential impact of teacher education on educational quality. Hattie (2009, pp. 109–111) introduces a very heated debate about the relevance, adequacy, efficacy and efficiency of teacher education. On the base of the meta-analysis results, he reiterates Levin who stated “*teacher education is the Dodge City of the education world. Like the fabled Wild West town, it is unruly and disordered*”. When we look at the effects sizes related to teacher training or education approaches (to the extent they are related to learner performance), the picture is discomfoting: teacher training ($d=0.11$), attempts to strengthen teacher subject matter knowledge ($d=0.09$). Hattie (ibid, p. 110) concludes: “*I have sat through many meetings where colleagues have decided on the essential core knowledge and experiences that should be taught to teacher education students. In every place this has been a long and often vexed discussion and every time the “core” knowledge decided on by the group has been different. There is no set of essential experiences that must be taught, let alone a correct order for students to become a teacher. Moreover, it seems surprising that the education of new teachers seems so data-free; maybe this is where future teachers learn how to ignore evidence, emphasize craft, and look for positive evidence that they are making a difference.*” This long quotation is at the centre of the rationale presented in the current article. Especially since it is repeatedly stated that most student teacher emphasize that the best part of their teacher training was when they learned-on-the-job.

This debate can be approached from a different angle when we build on the conceptual framework of Shulman (1987) about pedagogical content knowledge (PCK model); further refined in a variety of fields; e.g., when discussing the integrated usage of ICT in education: technological, pedagogical and content knowledge (TPACK) of Mishra and Koehler (2006). According to these frameworks, a teacher’s knowledge base requires the integrated development of at least content knowledge and pedagogical knowledge; resulting in the emergence of pedagogical content knowledge that goes beyond the addition of the first two. The same applies when we consider what the integrated nature of teacher knowledge has to be, when teachers want to use information and communication technologies in their classrooms. Graham (2011) depicts this as follows:



To sum up, the discussion about teacher education and educational quality presents a number of key implications for the way teacher education has to be set up. It has to respect the professional identity, it has to be geared to the full complexity of the teaching and learning setting and lastly it has to result in the integrated development of a variety of knowledge and experience domains.

4.4 A Plea for Evidence-Based Models

In a rather recent study of the European educational monitoring organization EURYDICE (2005), a number of shared characteristics of European teacher training approaches has been outlined. Two characteristics represent a striking picture of the way pre-service student teachers develop their pedagogical skills versus content knowledge base (see pp. 203 and further). Most teacher education is positioned at the tertiary education level. But critical is that generally teacher education is still executed in two – often not interrelated – approaches: the subject studies approach and the professional (pedagogic) approach. Both approaches are found in training structures where they are set up concurrently (both at the same time) or consecutively (one after the other).

In a recent overview reflecting the extent to which concurrent and consecutive approaches are found in different European countries (Eurydice 2005, p. 202), it is striking to observe the number of countries where the consecutive model is found. As will be discussed below, this model easily results in a training situation where theory and practice are isolated from one another and in which student teachers are being trained in a separated setting from the future school reality.

The latter risk is not only observed in most European countries, but seems to be a worldwide phenomenon that is often labelled as the “technical rationality” problem of pre-service education. The technical rationality discussion is not only dominant in the development of teachers as professionals but a recurrent issue in many professional training and education field. The discussion is for instance also found in training approaches in the health sciences (Kielhofner 2005), the anthropology field (Copeland-Carson 2005) or in engineering (Riley 2008). Other authors reiterate the same discussion but by adopting other concepts: the theory-practice gap (see for a conceptual overview Schepens et al. 2007). Authors also stress that the observed technical rationality approach and the theory-practice gap are in part responsible for the subsequent practice shock when student teachers enter the teaching profession (Schepens et al. 2009). This practice shock has been defined as a critical variable in attrition models that describe and explain variables and processes that affect the extent to which new teacher stay or leave the profession (Rots et al. 2007).

Kielhofner (2005) presents a table that teacher educators will easily understand and will be able to transfer to the discussions about the nature and orientation of teacher education of pre-service students. In his “engaged scholarship” conception he stresses the importance of authentic, practice related, complex, shared, and responsible conceptions of knowledge that should be pursued in the professions.

The former puts at the centre of the debate the urgent need to develop alternative models to design the structure and content of teacher training/education of pre-service student teachers. These alternative models have to be geared to the “engaged scholarship” approach and should consider the complexity of the teaching and learning situation and the resulting new approaches towards teacher’s professional identity.

In the next paragraphs we explore two examples of new models that could direct pre-service teacher education.

4.5 Model 1: Congruent Teacher Education: Teacher Education Models Future Practice

A first model for teacher education stresses that teacher education “models” the future educational practice of teachers. Especially during the last five recent years, the literature increasingly suggest adopting instructional designs by which student teachers experience in their training setting what state-of-the art instructional strategies are. This reflects the critique on current approaches as expressed by Kennedy (1997) who indicates that when student teachers enter their training solely on the base of their personal earlier school experiences, they automatically replicate these experiences and/or adopt an inadequate frame of reference to interpret new knowledge and practices. Teacher education has to consider these personal and rigid frames of reference that also define beliefs systems of student teachers as to the nature knowledge, learning and teaching. Hattie (2009, p. 110) is again harsh in his reflections about inadequate teacher education approaches,

when he states: *“Spending three or four years in training seems to lead to teachers who are reproducers, teachers who teach like the teacher they liked most when they were at school, and teachers who too often see little value in other than practice-based learning on the job.”*

In many ways, teachers enter the teacher profession with the nearly the same beliefs as when they started their student teacher education career.

A typical “model” for teacher education to counter the latter trend, is to opt resolutely for a modelling approach in the design of the teacher education programs. The literature grows about evaluative approaches of such modelling endeavours (see e.g., Lunenberg et al. 2007; Loughran and Berry 2005). The key of the “model” is to be very explicit about the way teacher educators actually teach. They implement specific strategies – e.g., collaborative learning – and at the same time comment, reflect, criticize, argument about their adoption of the particular instructional strategy. This modelling seems to have a profound impact on student teachers who observe and/or are involved in the – mostly experienced as an innovative – instructional approach. Loughran and Berry (ibid, p. 196) describe this as follows: *“Explicit modelling through “talking aloud” and “debriefing teaching”, creates new ways of encouraging student teachers to grasp the possibilities for learning about teaching that are embedded in their experiences and to see these possibilities as opportunities, not instructions or recipes, for practice.”* The same authors indicate that this was a challenge for the teacher educators to start talking aloud, criticising themselves, expressing their doubts, It also held the risk of not meeting expectations of student teachers as to the authoritative position of a teacher educator as an expert.

At a practical level, we can build on a well-established practice in Belgium, where a large number of teacher education institutes have started to implement student tutoring. Student tutoring can be seen as a specialized type of peer tutoring or peer learning, but in which the tutor is a higher education student (in the present case a student teacher) who works with children in schools or even at home to tackle prior knowledge deficiencies, comprehension problems, language problems, ... The actual integration of the student tutoring approach in which students are object and subject has resulted in valuable outcomes for both the tutees and the student tutors. The modelling, as reflected in the way teacher education adopts promising instructional strategies as a core element of teacher education strategies has been found to be very valuable. De Backer and Van Keer (2008) found that the impact on student teachers went beyond the mere acquisition of particular knowledge and skills in relation to student tutoring. They list the following positive impact (ibid, p. 126):

- A positive evolution in their social and communication skills
- A positive evolution in their approach to motivate learners.
- A clear increase in skills to coach and guide learners.
- A better personal understanding of the learning content they tutored.
- An increase in self-concept and self-confidence.
- A more conscious understanding of the way to deal with diversity in education.

A last example builds on the implementation of “Peer coaching” as a systematic part of the teacher education experience. Peer coaching is a process in which teams of pre-service teachers regularly observe each other to provide assistance, suggestions, and support (Chism 1999; Joyce and Showers 1980). Joyce and Showers (1980) introduced peer coaching as a vehicle for experienced teachers to use the skills learned during in-service training in their classrooms. Peer coaching is anticipated to yield fruitful results in developing self-efficacy of student teachers. Available research gives support to the future implementation of peer coaching when student teachers enter classroom practice, it promotes collegiality through peers’ exchange of feedback, as well as the development of reflective teachers (Brown 2001; Garmston 1989).

4.6 Model 2: The Teacher as a Researcher

Above, we stressed that the impact of teachers on learning and resulting learning performance is the result of the complex interplay between a large set of elements and actors and related processes and variables. This implies that it is difficult to be sure whether a particular strategy, tool, handbook, evaluation instrument, ... will be effective given the context, the characteristics of the learner, the learning phase, the level of prior knowledge, etc. Though educational research reports on the efficacy and efficiency, research points clearly at the contextualized nature of research findings that cannot easily be generalized to all educational settings, contexts, student populations, subjects, ... This introduces the need to develop in (student) teachers a research attitude. Atkin (1992) emphasizes in this context the adoption of a collective teacher-initiated inquiry cycle.

Research in teacher education contexts and school settings is clear about the impact of these approaches. Hattie (2009, p. 117) reports the following:

- Teachers tested hypotheses about the effects of their teaching ($d=1.09$);
- Teachers adopt a problem solving disposition to teaching ($d=0.82$).

Of course, developing student teachers as “researchers” should not be interpreted as a goal to move from a professional orientation teacher education to an academic repositioning of teachers. The “teacher as a researcher” movement is rather to be seen as student teachers (1) becoming partners of researchers, student teachers identifying key concerns, problems, instructional design problems, ... or (2) teachers who are involved in an inquiry cycle about their own teaching and learning. The latter is exemplified in the city of Shanghai school system where there is a very intensive inter-vision cycle of peer teachers observing, discussing, re-developing each other’s lessons. But – important – teachers learn to gather high quality data in order to be able to derive conclusions from the reliable and valid observation, descriptions, survey data, etc. This approach can easily be adopted in teacher education settings. It is e.g., not surprising that in Table 4.1, microteaching is positioned

as a top strategy to – on the one hand – develop student teachers, and – on the other hand – develop inquiry skills requiring student teachers to observe, structure data, analyse data, present conclusions, look for explanations, develop alternatives that are tested as hypotheses, etc.

The “teacher as a researcher” model is getting accepted to an increasing extent. Nevertheless, its actual implementation stalls; especially due to the missing link: a partnership between teacher education institutes and educational research experts.

4.7 Conclusions

Research about the “outcomes” of teacher education force educational authorities, policy developers and teacher educators to reconsider the nature of current “models” adopted to involve student teachers in the complex process of becoming a teacher.

The present article offered a reflection to respect, in the search for new teacher education models, the full complexity of a teaching and learning situation. Student teachers are not to be considered as “vessels” to be filled with knowledge and skills. Their professional identity should be respected and approaches should be adopted that also centre on their beliefs, mission, attitudes, motives, etc.

Two exemplary “models” were presented that put forward an avenue to move into new directions. The latter will require an institution-wide reengineering exercise that results in systemic changes in the way teacher education institutes educate the key player in attaining educational quality: the teacher.

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Chapter 5

Practices, Experience and Policy Orientation for Free Education in Normal Universities in China

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Abstract The Chinese government has been prioritizing to cultivate quality teachers in rural areas. By implementing major projects and piloting reforms, the central government has been committed to improving the comprehensive quality and professionalism of teachers in rural areas. To carry out the policy for **free education in normal universities** is one of the exemplary decisions made by the Chinese government. This essay analyzes the background and the value pursuit of implementing this policy, reviews the history of policy implementation, systematically summarizes the experience, and proposes suggestions for improving this policy. Efforts should be made to further strengthen the design of top-level policies, establish the long-standing incentives, constantly empower the local governments and hold them accountable, so as to build a multi-tier free normal education system.

Keywords China • Free normal education • Practices • Experience • Policy orientation

5.1 Introduction

Since reform and opening up more than three decades ago, China's education has scored remarkable achievement. As an essential part of the education cause, normal education has also registered historic accomplishment during the reform and opening up process, which offers teachers for the world's largest-scale basic education system and accumulates our own experience. However, at the same time, the

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foundation is relatively weak for developing China's rural education. Education in rural areas is still impeding the leapfrog development of China's education as a whole. The build-up of teachers' team in rural areas is a burning issue which hampers the development of rural education. At the new historic starting point of China's education cause, to build up a quality and professional teachers' team in rural areas is the important link and requirement for implementing plans, following outlines and improving the comprehensive quality of China's education.

Teachers' quality has a direct impact on the quality and level of education, which is a global consensus of the education community. In order to strengthen the build-up of rural teachers' team, the Chinese government has carried out a batch of important projects in rural teachers' cultivation, training, supplement and exchanges, in a bid to raise the comprehensive quality of rural teachers. The projects are National Level Training Plans for Primary and Middle School Teachers (2010), Policy for **free education in normal universities** (2007), Teachers' Posts Setting Plans during the Compulsory Education Period in Rural Areas (2006), and Graduates Training Plans for Schools in Rural Areas (2006). Efforts have also been made to establish a regular posts rotation and exchanges system for rural teachers to promote the balanced development of the compulsory education. These projects have achieved great results. In particular, the implementation of free normal education policy has aroused close attention from the whole society.

In May 2006 and February 2007, Chinese premier Wen Jiabao conducted research in Beijing Normal University and Northeast Normal University. In May 2007, the Chinese government issued Implementation Measures of Free Normal Education with Education Ministry directly affiliated Normal Universities (in trial). The Measure proposes that six Education Ministry-affiliated Normal Universities including Beijing Normal University start to carry out free normal education to new comers since the fall of 2007. This is an exemplary decision made by the Chinese government to facilitate education reform and strengthen the build-up of rural teachers' team. The core of this policy are as follows: free normal education students are exempted from tuitions, accommodation fees and enjoy subsistence subsidies. Their education funding is earmarked by the central fiscal spending. They are recruited ahead of the common students. Before being admitted to the Normal University, they are asked to sign an agreement with the University and the provincial education authority of their hometown, promising that they will teach in the primary or middle schools for at least 10 years upon graduation and they will teach in rural areas for at least 2 years to support the local compulsory education. During the tenure set by the agreement, they could rotate their posts among Normal Universities. These free normal education students are able to apply for on-the-job masters' degree in education, free of entrance examination, as long as they teach in primary or middle schools for one semester upon graduation.

In 2011, the first batch free normal education students successfully graduated from Universities and started to teach in primary or middle schools. General speaking, any major policy or system is destined to go through the process of delivering, adjustment, development and improvement. This is also true with free normal education. To take the stock of what we've learnt is of great significance to better implement free normal education and achieve the expected targets of the policy.

5.2 The Value Pursuit of Free Normal Education

Compared with non-free education system, free normal education policy or system is funded by the central government which is purchasing the teaching resources for the general public. It is an important method for the central government to adjust education resources. With the popularity of the compulsory education and the ever increasing demand for high quality teachers, the independent and free normal education system has gradually evolved into an open education system for teachers, which is supplemented with strict teachers' qualification system. In the twenty-first century, why China's normal education moved back to the traditional free normal one? What is the background and the value pursuit of implementing free normal education?

- (I) From the historical perspective, China's modern normal education was upholding the cultural tradition of free normal education. Since the inception of China's normal education, it was free, as earliest as 1897 when Shanghai Nan yang Public Normal Academy was founded. In 1904, the Qing Dynasty government enacted the Charter of Prioritized Normal Education Schools, which for the first time stipulated, in the form of the state's policy, that students who promised to teach upon graduation could receive the education free of charge (Guan 2009).¹ During the Republic of China period (1912–1949), the free normal education policy witnessed twists and turns. Since the founding of the People's Republic of China in 1949, higher education institutes have began to carry out overall free education. After 1997 when higher education institutes underwent recruitment reforms, normal universities began to charge tuition. In 2007, related policies saw another tremendous change. Chinese premier Wen Jiabao proposed in his government work report that six normal universities directly affiliated to Ministry of Education should implement free normal education. In retrospect of China's modern education development, free normal education is the unique feature of independent normal education system. It has contributed a lot to popularizing education and balancing the quality of basic education.
- (II) In practice, balanced development of the compulsory education and improved quality of basic education badly need high quality primary and middle school teachers. On one hand, with the higher education becoming generic in China's socialist market economy system, the elite normal education in former planned economy faces major challenges. Traditional normal universities are obsessed with expanding non-normal majors. They are busy with reforming systems, upgrading, merging or demerging. Some resourceful normal universities are trying to transfer to comprehensive universities. All these have undermined the

¹Guan Peijun, *The Process, Achievement and Basic Experience of China's Normal Education over the Three Decades of Reform and Opening Up* [J], *China Higher Education Research*, 2nd edition of 2009.

unique feature and advantage of the original normal education. Official statistics show from 1999 to 2010, the nationwide associate degree-granting normal colleges decreased to 36 from the previous 140 units. The medium-level normal schools shrank from 815 to 141 units, 40 schools training kindergarten teachers included. Meanwhile, higher education institutes increased to 107 from the previous 87 units. There were also 352 non-normal institutes which carried out normal education.² Normal education institutes used to be the main provider of normal education. But this dominance has been shattered. Therefore, the supply of quality primary and middle school teachers has been severely compromised. On the other hand, the imbalance of basic education has been worsening. Primary and middle school teachers used to be under supplied. But now it is the structural imbalance between the supply and demand of primary and middle school teachers. Normal education is now facing the challenge of improving its quality rather than meeting the quantity requirement. At present, there is the glut of primary and middle school teachers in cities, while rural China sees the sharp shortage of teachers. It is not an easy job to supplement more teachers for rural China. Quality teachers are quite scarce in rural areas. The proportion of primary school teachers with associate or above degrees and the proportion of middle school teachers with bachelor's degree or above in rural areas are 18.9 % less and 25.3 % less, compared with those of urban China.³ Besides, high school and kindergarten teachers are in shortage, while primary and middle school teachers are relatively abundant. In 2010, the State Council issued *Several Opinions on Developing the Pre-school Education*, which called for an increase in pre-school education input, given the fact that the gap between the supply and demand of kindergarten teachers continued enlarging. The primary and middle school teachers' gearing ratio and the discipline structure have been optimized. In 2009, the gearing ratio of primary school teachers to pupils was 1–18.2, middle school teachers to students 1–16.8.⁴ But some disciplines, such as English, science, music, physical education, arts and information technology, badly need more supplements of teachers. This shortage hinders some schools in rural areas from launching the required classes. To implement free normal education policy is sending a signal to the whole society that normal education should be prioritized. Efforts are made to attract the most talented and excellent students to work as teachers, and encourage more talents to work in the educational front throughout their lifetime. To implement this policy is to create an atmosphere of respecting teachers and prioritizing education in the society, so that teachers receive the most respect and admiration (Wen 2007).⁵

²The source of data: Normal Education Department with Ministry of Education, internal material, 2011 (data of 2010).

³The source of data: Development and Planning Department with Ministry of Education, 2010's Material Compilation of MOE's Statistics and Analysis (data of 2009).

⁴The source of data: Development and Planning Department with Ministry of Education, 2010's Material Compilation of MOE's Statistics and Analysis (data of 2009).

⁵Wen Jiabo, Normal Universities to Carry out Free Normal Education[N], Chinanews.com, March 5th 2007.

(III) From the perspective of future development strategy, the key to making the human resources power and sharpen China's core competitiveness is to build a high quality primary and middle school teachers' team. In this era, more and more countries take innovation as the major strategy to raise national competitiveness. To build innovative country relies on enterprising talents who stress innovation. To train innovation-motivated human resources needs world-class education which mainly hinges on a high quality teachers' team. Teachers are the most important resources in the education cause. Now, more than half of China's school-age children are living in rural areas, and 77 % primary and middle school teachers are also there.⁶ It is fair to say the quality of teachers in rural China determines the development of the nation's basic education as a whole. To implement free normal education will produce great batches of excellent teachers to support basic education in rural areas. It is the key link to improving education quality in rural China and promoting education equality. It is the important guarantee for balanced development between urban and rural areas and the building of socialist new countryside. It is also the strategic choice of building a human resources power and maintaining long-term stability.

5.3 Best Practices and Exemplary Significance of Implementing Free Normal Education Policy

Practices over the past 4 years have shown that free normal education was piloted successfully and exerted exemplary roles. Four main aspects are as follows:

First, great batches of promising students have been attracted to apply for normal universities. Six Ministry of Education affiliated normal universities have altogether recruited 46,000 students over the past 4 years. Applicants are abundant. The number of applicants is several fold that of Universities have planned to recruit. The applicants are also very excellent. The average score of recruiting normal education students is at least 40 points higher than the entrance level for key universities in that province. Applicants are well distributed. 90 % applicants are from central and western part of China. 60 % are from rural China.⁷

Second, normal education has been reformed and innovated. The central government earmarked 500 million yuan to carry out the establishment plan of normal education innovation platform, which utilized the prime education resources to cultivate would-be teachers for free. The six Ministry of Education affiliated normal universities have further strengthened their schooling characteristics. Innovation and exploration have been made in normal education curriculum setting, cultivation plans, schooling conditions and the establishment of internship bases. High-level

⁶Liu Huarong, the Quality of China's Teachers Being Improved Constantly[N], China Education Paper, September 7th, 2011.

⁷The source of data: Normal Education Department with Ministry of Education, internal material, 2011.

professors and excellent primary and middle school teachers are selected to teach the normal education classes. A dual tutoring system has been established accordingly. More than 80 normal education innovation experiment zones have been founded. The first batch of normal education students have been organized to serve as interns in 908 primary and middle schools for one whole semester.⁸

Third, successful job settlement. In 2011, the first batch of normal education students fulfilled their employment agreement. More than 90 % of graduates went to central and western China to teach in primary and middle schools. Among them, almost 40 % went to teach in schools at the county level or below. For example, Beijing Normal University's 40 normal education graduates coming from Guangxi Zhuang Autonomous Region went back to Guangxi's prefecture cities such as Nanning and Liuzhou, to teach. In the past, very few normal education graduates went back to Guangxi to teach. This not only demonstrates the high sense of responsibility and mission of the first batch of normal education graduates to honor their commitment and to contribute to China's education cause, but also promotes education fairness and balanced development significantly.

Fourth, to pilot free normal education has played important exemplary role. At present, the six normal universities within Xinjiang Uyghur Autonomous Region offer free normal education to students. From 2010 to 2013, 6,000 normal education students are recruited each year. In Hebei, Jiangsu, Shanghai, Hubei, Sichuan and Yunnan, some normal universities are piloting free normal education. Jiangxi and Hunan provinces are carrying out free cultivation of rural teachers whose employers have already been set before the training sets in. In Guangdong and Gansu provinces, universities graduates could get their tuition back if they go to rural areas to teach. Hainan province cooperates with Tianjin University of Technology and Education to train medium-level teachers for vocational schools, free of charge. Inner Mongolia Autonomous Regions carries out free normal education which is taught in Mongolian. The free normal education is rolling out nationwide step by step.

5.4 Valuable Experience got from Piloting Free Normal Education

Over the past 4 years, valuable experience has been accumulated from piloting free normal education.

- (I) The build-up of teachers' team is taken as the most important basic work to focus on in education development. The exemplary decision to implement free normal education fully demonstrates the importance attached by the

⁸Normal Education Department with Ministry of Education, The Key of kindness is teaching which relies on the quality teachers – Survey on the build-up of teachers' team in rural China[N], Guangming Daily, September 7th, 2011.

Chinese government to the build-up of teachers' team, further makes it clear that teachers' team building and normal education is a state cause and government's responsibility. It also prompts local governments to highlight the build-up of teachers' team. The role of the team building as the most essential guarantee for the scientific development of education cause has been greatly highlighted.

- (II) Favorable policies are in place to attract excellent graduates to teach in rural China. Rural education is the important area but yet a weak link of China's education. The quality of teachers in rural areas concerns the development of education there. To improve the quality of teachers in rural areas is a pressing issue for now and years to come. The exemplary decision of implementing free normal education reflects the central government tilts policies to support the build-up of teachers' team in rural China. Policies are mapped out to encourage talents to work in the education front for a long term or throughout their lifetime. Young talents are encouraged to make their contributions in rural areas and financially-strapped places. It is a sure path to promoting education equality and improving the quality of education.
- (III) Press ahead with the innovation of normal education, relentlessly. In the market economy, to implement free normal education is a major innovation in China's normal education system, against the background of cost-sharing and tuition-charging higher education. Through running the pilot, we make exploration and take stock of what we've got, so as to better the related policies concerning recruitment, training, job settlement and majors' development of normal education. This pilot has led the six Ministry-affiliated normal universities to press ahead with the normal education reform, innovate the teacher training formats, build a new curriculum system which better meets the needs of basic education, and strengthen teachers' behavioral education. All these have laid a solid foundation for training excellent teachers and educators.
- (IV) Stick to the working mechanism of multi-party cooperation. To pilot free normal education is a systematic project which needs the collaboration and support of various departments to generate synergy. Practices have shown only when education, finance, human resources and social security and commission for public sector reform at various levels give the full play to their own advantages and develop close cooperation working mechanism can we ensure the successful running of the pilot.

5.5 Suggestions to Better Free Normal Education Policy

Considering the new requirements and tasks to comprehensively follow the education plans and outlines, free normal education is still facing difficulties and problems. They are mainly as follows: the majors offered by the normal universities and the number do not well match the demand in different localities. The incentives for normal education students need to be improved further. Related policies need to be

better designed to encourage graduates to teach in rural China. Policies need to be further refined concerning the post-graduate study. These new issues should arouse close attention and receive proper handling.

- (I) To improve the top-level system design. Free normal education is a systematic project, concerning series of key links such as cultivation, training, management and compensation. It needs corresponding policies to follow up. First, to refine recruitment and admission mechanism. While sticking to the policy of recruiting normal education students ahead of the general public after going through the College Entrance Exam, we should empower universities to recruit students independently, encourage them to spend more time in interviewing students, so as to observe the students' thoughts and faith in career development and their capabilities. We should also emphasize the re-selection after admission. Policies related to transfer conditions and handling procedures need to be made clearer. By doing so, excellent students who are willing and suitable for teaching are able to be transferred to normal education majors. Second, to raise the standards of teachers' training and improve the teachers' qualification recognition system. Free normal education targets at cultivating excellent teachers and potential educators, so we must strengthen the basic education curriculum, research capabilities, skills and professionalism of normal education students. Efforts should be made to continue implementing the plan of normal education innovation platform, to make platforms of those Ministry affiliated universities famous brands and unique features. It is important to facilitate the establishment of innovation experiment zones of normal education. We can rely on the experiment zone to develop cooperative partnership among normal universities, local governments and primary and middle schools. Therefore, a new mechanism of jointly fostering normal education students could be formed, to better communication in areas of recruitment plans, personnel training, internship, employment arrangement. Third, to establish phasing-out and exit mechanism. For the current normal education students who are unwilling or unfit to work as teachers, they are allowed to exit from the normal education when going through some procedures.
- (II) To put in place long-standing incentives. To implement free normal education aims at attracting outstanding students to learn normal education and encouraging them to work as teachers for a long term. In short, it is a policy to incentivize excellent students to teach. In implementing the policy, incentives should be further strengthened. First, to shorten the agreed tenure. Based on the experience home and abroad, balance between rights and duties, the purposes of attracting more talents to teach, we suggest that the tenure during which graduates promise to teach upon graduation should be shortened to around 5 years. Second, to formulate related favorable policies to better encourage graduates to teach in rural areas upon graduation. In terms of the compensation, we need to improve the salary guarantee mechanism for teachers

in rural China, refine systems related to their bonus and subsidies, beef up the construction of temporary housing, and better social security such as medical insurance and pensions for teachers in rural areas. In terms of majors' development, on-the-job education should be strengthened. Normal education graduates are allowed to pursue their master's degree regarding the primary and middle school education, as full-time students. They have the privilege to attend dedicated training plans for free normal education students, overseas study and research plans and seize opportunities to pursue their doctoral degrees. Third, to map out methods to reward excellent students. We should increase the fiscal input to raise the level of average education funding and subsistence subsidies for free normal education students. It is essential to create a dedicated scholarship fund. Meanwhile, we should encourage the civil society to funnel more funding in normal education.

- (III) To strengthen the responsibility of local governments and hold them accountable. Based on China's situation, in regard of employment management of free normal education students, provincial governments could make the overall coordination and plans, while governments at prefecture level are guiding the work and governments at city or county level are responsible for the execution. Local governments should strengthen the collaboration and balanced plans among departments, define personnel roles and responsibilities, to keep the consistency of policy implementation in various localities. Meanwhile, the central government should tighten their guidance and monitoring on the policy implementation of local governments, to ensure the fairness of policy implementation.
- (IV) To establish multi-level free normal education system. Given the differences in the capabilities, characteristics, regional distribution of the normal universities and the students' structure, to increase the quality of basic education as a whole and meet the target of balanced development of basic education cannot only rely on free normal education provided by the six Ministry affiliated normal universities. Official statistics suggest in 2010, 359,000 normal education bachelors were recruited nationwide. Among them, 11,000 were recruited by the six Ministry affiliated normal universities, only accounting for 3.1 % of the total recruited nationwide.⁹ Therefore, while defining the training target of the six Ministry affiliated normal universities, we should quicken our steps to develop multi-tier training system of free normal education. We should encourage any enterprising exploration such as refunding the tuition fees, getting the tuition subsidized by the central government, to attract more graduates to teach in rural China, so as to form an effective mechanism of supplementing teachers for rural China.

⁹The source of data: Normal Education Department of Ministry of Education, internal material, 2011.

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Part II
Preparing Teachers and Teacher
Educators Globally and Locally

Chapter 6

Discussion of the Reconstruction of Rural Teacher Training Configuration in China

Xudong Zhu

Abstract The reconstruction of the rural teacher training program is the main task in the ongoing campaign to develop the teaching force in China. On the basis of the current status of the teaching force, this article indicates the urgent need for rural teacher training in China and clearly identifies the problems with the rural teacher training system and model, including the institutions and mechanism associated with it. The article describes how to reconfigure and modernize the system and thereby indicates how to solve the problems plaguing the rural teaching force, including the issue of teacher training.

Keywords Rural teacher • Training configuration

6.1 Introduction

Rural teacher training is essential to the development of the rural teaching force and provides an important external support system for professional development among teachers. Thus, it has become necessary for academics to pay special attention to this issue. The relevant concepts such as the composition of the teaching force and the content of the current rural teacher training program will be clarified in the end.

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Meanwhile, the relevant theoretical frameworks will also be identified and discussed as well. In this article, the development of the teaching force is regarded as a political goal. In today's mainstream political discourse, it is acknowledged that the goal of the government is to construct a professional teaching force with noble morality, excellent skills, reasonable structure, full vigor and high quality. However, we must consider whether scientific research can use this type of political discourse as the basis for our understanding of how the teaching force should be developed. In reality, although terms such as "noble morality", "reasonable structure" and "professional" may have the same meaning in scientific research and political discourse, concepts such as "excellent skills" and "full vigor" may not be understood in the same way in both areas. The key question is whether these concepts together indicate what it means to "develop the teaching force". The latter endeavor is closely connected with teachers' status, identity, social management, school management, human resource management and other related factors. Therefore, in developing the teaching force, teachers' income (i.e., salaries, allowances, bonuses, and subvention for poor areas), their rights and interests (i.e., benefits, medical insurance, housing, and vacation time), and mentoring should also be put into consideration. We must also consider the qualifications necessary for teachers, how personnel are recruited and chosen, how they are assigned to their posts, how they should be assessed and promoted, and how retention, teacher exchanges, and resignations should be addressed. Finally, we must consider the question of teacher integrity. This paper mainly considers the issue of "teacher training" as a necessary component of the campaign to develop the teaching force. The problem of teacher training is both a political and an academic issue; as such, training creates an important external support system for professional development among teachers. Thus, this issue requires special attention, and the problem of rural teacher training is especially urgent. To properly address the issue of rural teacher training, we must consider the following questions: What are the challenges of rural teacher training at present? How can we change the rural teacher training program? More specifically, who should train the teachers in this program? Where the training program should be held? What should the teachers learn, and how should they be trained? These questions, in turn lead to further questions: How can we change the national and regional systems of rural teacher training in particular? How can we change the style of training used to educate rural teachers and the various tools used during the training program? How can we train teachers using the HIDD method¹? How can we make rural teachers into teacher leaders? These questions will be discussed in this article.

¹HIDD is the combination of the initials of heuristic, inquiry, discussion and dialogue. Interestingly, the national plan specially proposes that "we should unify learning and thinking, encourage heuristic, inquiry, discussion and dialogue methods of teaching, and help students learn how to learn." These concepts are unusual in a grand national plan. The question is why such requirements have been proposed? Who will finally implement the requirements, and how? These are the questions that should be answered by teacher training.

However, before discussing these questions, we must consider how to define the concept of the rural teacher and determine the components of the system in which these teachers work. In this article, rural teachers are teachers in schools in towns and villages, and the system in which they work is an interrelated whole that includes their teaching style, the institutions in which they teach and the mechanisms at work in those institutions.

6.2 Existing Problems in Rural Teacher Training System in China

Because the rural schools in which rural teachers work are diverse, these teachers require different training. The various rural school environments include mountainous areas and reservoir and lake areas. There are schools in remote and poor areas and schools that serve minority communities. The teacher training in these various rural areas will present different challenges. The characteristics of rural teachers also tend to vary, although generally, rural teachers are more likely to be older and male than younger and female. The distribution of teachers across subject areas is a concern, as there are very few teachers in subject areas such as English, music, the arts and P.E. In addition, teachers who are not government employees and substitute teachers make up the majority of the teaching force in these areas. Thus, the problems with the training system, the styles of training used, and the institutions and mechanisms involved will be discussed based on the varied types of rural teachers.

6.2.1 Challenges of the Rural Teacher Training System

The traditional rural teacher training system includes three levels: the provincial regional and county levels. The provincial, regional and county colleges of education and the training schools form the unitary system of the rural teacher training. The provincial colleges of education aim to improve the educational level of rural teachers, especially secondary school teachers, and provide provincial-level training for rural teachers. In fact, the training of all rural teachers occurs in the regional colleges of education and the training schools. This rural teacher training system is not suitable for all rural teachers and is an unfair teacher training system in some respects. With the continuous improvement of teachers' educational levels, more and more highly educated teachers have entered rural schools, and the regional college of education and the training schools can no longer fulfill the training needs of teachers. In addition, many teachers in regional colleges of education and training schools are transferred from primary and secondary schools, and in the teacher training system, there is no institution that provides special training for these teachers. As a result, they do not specialize by learning the relevant theory or through

practical training. This dynamic creates additional problems. For example, the knowledge that these teachers possess is out-of-date, such teachers have insufficient abilities, they are all trained in the same way, and the content of their training is utilitarian and exam-oriented. These conditions have made the rural teacher training system ineffective. Moreover, rural primary and secondary schools now use the “one-charge system”, in which the students pay their fees for textbooks, exercise books and so on only once at the beginning of every semester according to the standard of the government, and rural education management organizations have been shut down, which has destroyed the old rural teacher training network. More importantly, the channels through which urban areas might support rural areas in terms of education have not yet been established, and therefore, rural teachers do not have the opportunity to learn advanced educational philosophies or obtain professional knowledge as urban teachers do. For this reason, the reconstruction of rural teacher training system is an urgent task.

6.2.2 Issues with the Training Style Employed with Rural Teachers

A good model of teacher training is the key to high-quality teacher training. The model of teacher training includes the design of the training program, its implementation and management and the modes of assessment that are used during the program. These aspects of the program, as well as the approach and methods used, should all be selected according to the training needs of the teachers. These aspects of the program determine its effectiveness. However, the current model of rural teacher training is problematic in some respects. For instance, the rural teacher training program has failed to create one training system that can meet the various professional development needs of rural teachers. Every kind of teacher training has the same requirements, or uniformity; however, due to the different student backgrounds, teaching environments and conditions (e.g., scarce resources) that rural teachers encounter and because of their own professional development levels, rural teachers require training programs that are suitable for them and that can meet their respective needs. Hence, each teacher requires a specialized, unique method of rural teacher training that takes into account the location of his or her teaching placement. For example, how do rural teachers develop individual student’s cognitive abilities in a multiple-layer class given the particular resources that are available to them? Thus, rural teachers must improve their ability to develop students’ cognitive abilities using their particular resources in rural environments, and it is unclear who will help them to do so. Can they improve their own abilities, or must they be trained by others? This requirement necessitates a special mode of teacher training. The problem is that the present method of rural teacher training cannot help teachers to improve in this capacity. Essentially, the most significant problem with the present model of rural teacher

training is that it does not provide personalized training that takes into account the professional development needs of individual rural teachers and the environments in which they will be teaching.

6.2.3 Issues with the Rural Teacher Training Institutions

The issues with the rural teacher training institutions are as follows. First, there is no advanced academic institution that provides teacher training. This problem is related to the question of whether teacher education is an academic discipline. Teaching has long been regarded as a technical skill rather than an academic or professional area of study; therefore, teacher training activities have always been seen as instrumental, operations oriented, and utilitarian rather than as professional activities based on academic study. Teacher training in teacher training schools and regional or provincial colleges of education² has been excluded from academia because there is no high-level academic institution that conducts teacher training. Because of this deficiency, teacher training is not seen as an advanced academic discipline even in the teacher colleges, and within the discipline of education, there is no special research field for teacher training. As a result, teacher trainers do not have any disciplinary support, and their professional titles are not consistent with their academic majors or degrees. These problems gravely affect rural teacher training, which must be improved in this respect.

Second, there is no professional management institution for teacher training. The administrative management of teacher training has been the main feature of teacher training in China for a long time. Such administrative management is mainly a product of the planned economy, and its function is the top-down implementation of teacher training policies; there are no institutions for training professional managerial personnel or trainers and no professional programs in this area. Meanwhile, the policies governing teacher training programs are not based on relevant laws, rules or standards of teacher training. There are no standards used to accredit teacher training organizations, no standards for teacher training courses and no quality standards for use in evaluating teacher training. School-based training is popular in kindergartens and primary and secondary schools, but there are no relevant institutions or standards governing them. Consequently, changing the model of teacher training alone will not ensure that rural teachers receive high-quality training.

²Most provincial schools of education have merged with universities or changed their names because high-quality teacher training is necessary and provincial colleges of education do not have academic support. Once these schools become part of universities, they can obtain access to relevant disciplinary resources. It can be expected that if the remaining schools of education and training schools do not have this type of academic foundation, they will meet with the same fate.

6.2.4 *Problems with the Mechanisms of Rural Teacher Training*

The mechanisms of rural teacher training represent a complicated management issue that has been widely discussed in academic circles. The related issues are one of the most important reasons why the current rural teacher training system is inadequate. For example, there is no mechanism through which rural teachers can obtain access to high-quality resources. Thus, the urban-rural social dichotomy creates the same dialectic between the schools in these environments, which, in turn, fractures teacher training in the same way. Urban schools are rich in high-quality resources, whereas rural schools have relatively few resources (and particularly few excellent teachers). Nevertheless, during the long-term development of rural teacher training programs, the high-quality resources that are available in urban schools have not been used in rural teacher training, with only a few exceptions.

The most significant problem with the mechanisms governing the rural teacher training is the apportionment of expenses. Although “The National Training Program for Primary and Secondary School Teachers” has established an effective mechanism for special financial investment for rural teacher training, supporting programs like key teacher training, practice teaching and distant training, the shortage of funds for rural teacher training is an objective fact. One of most significant reasons for this dearth of funding is the absence of a sound means of apportioning rural teacher training resources, including funds for training expenses.

Moreover, multilateral cooperation, multi-agent quality evaluation and other mechanisms that would be useful in rural teacher training have not yet been established.

6.3 Reconstruction of the Rural Teacher Training System

Having discussed the issues affecting rural teacher training, we will next investigate the system and style of rural teacher training and the institutions and mechanisms involved. First, let us consider how the system should be reformed:

1. Rebuild the teacher training system as part of normal colleges and universities, through special schools for teacher training, and establish the higher-educationalized and universitized teacher training system

The idea that colleges and universities should take part in teacher training, including rural teacher training, has become a focus of teacher training in China. Normal colleges and universities have begun to consider teacher training as a major component of basic education. However, as normal colleges and universities have

become comprehensive universities, they have gradually formed a governance structure that includes several professional schools. Therefore, the schools and centers of continuing education for primary and secondary school teachers that rely on government management must be transformed into specialized regional/national teacher training schools that work together with the system of normal colleges and universities. Specialized teacher training is also needed.

At the same time, a network must also be developed that can connect these specialized teacher training schools, making them relatively independent and able to support one another. National teacher training schools have been founded in the six primary normal universities directly under the guidance of the Ministry of Education and in one key normal university in every province. In normal universities, teacher training is separate from the school of continuing education, and specialized teacher training schools or regional teacher training schools could be founded by the school or department of education at each university.

Overall, establishing specialized teacher training schools affiliated with colleges and universities will make it possible to form a higher education- or university-based system of teacher training.

2. Reconstruct the system of regional colleges of education and teacher training schools at the regional and county levels; found educational colleges and universities

The regional teacher training system in China is mainly composed of regional colleges of education and teacher training schools at the region and county levels. As is discussed above, these organizations are in the midst of a crisis due to the improvement in teachers' education levels, the rapidly occurring process of education reform and the insufficient ability of training organizations. Enhancing the ability of these organizations to train teachers has become essential. The only way to do this, however, is to thoroughly transform or reconstruct these organizations by promoting them to the university or college level. Where possible, regional colleges of education can be merged with local universities, which can found specialized teacher training schools. We might appropriate the method of establishing normal universities used by the Japanese after WWII, in which comprehensive universities were merged with normal colleges and faculties of education were founded – and, in areas where there were no universities, normal colleges were developed into educational universities. If the aim is to further develop the rural teacher training system in China, it will be necessary to reform our regional colleges of education and teacher training schools. Regional colleges of education and teacher training schools are the major training organizations for teachers undergoing compulsory education or basic education. Due to the irreplaceable function of these organizations in rural teacher training, regional educational universities or college should be positioned as the center of the rural teacher training system. Educational universities should be founded in regions and counties, and

training schools should be converted into “educational universities/colleges”³. The current training schools are the product of the planned economy era. To ensure professionalization, training schools should be replaced with educational universities or colleges that will indicate the specialized level of teacher training that educators receive. The establishment of educational universities or colleges in particular regions and counties can help teacher training in China to reach the university level. When there is a university-level specialized teacher training organization in every region and every county, this will signal that China has a strong education system, and it will also facilitate the management of these programs by higher departments.

3. Establish a system for rural teacher training

In reforming the teacher training system and establishing specialized teacher training schools, we must consider how these specialized schools currently provide training for rural teachers. In addition to the aforementioned issues with the rural teacher training system, there are a few additional problems plaguing rural teacher training: (1) the incompatibility between teachers’ salaries and the high cost of the teacher training (including degree programs, training for professional certifications, training in basic skills (e.g., English and computer skills), and continuing education); (2) the mismatch between teachers’ education and training and the demands of their particular teaching assignments; (3) the conflict between training time and work time; (4) the shortage of teachers in schools and the shortage of teachers trained; and (5) the conflict between the need for high-quality teacher training and the insufficient capacity of the existing teacher training schools at the regional and county levels. As a result of these five issues, the cost of training is much higher for rural teachers than for urban teachers. For example, teachers may spend a great deal of money on their secondary education as well as their college or university education, and even teacher training at the region or county or in national training programs takes a great deal of time and energy. Meanwhile, because these academic programs and training opportunities are not well-suited to the real teaching that these individuals will do and do little to improve their teaching abilities, rural teachers are not very interested in such training. Moreover, the shortage of teachers in rural schools makes it more difficult to send teachers to training programs. If these five conflicts are not resolved, then the quality and the effectiveness of rural teacher

³The *Outline of China’s National Plan for Medium and Long-term Education Reform and Development (2010–2020)* has reformed the system of professional titles for teachers. It is noteworthy that in the future, there will be “professors” in kindergartens and primary and secondary schools. If teachers are awarded this title, the question will clearly arise regarding whether the teachers’ academic achievements merit their being referred to as such. This issue will need further discussion. The authors would suggest that now that teachers are to be given the title of “professor”, their academic training should reflect this change to some extent. In other words, if the teacher training organizations at which teachers receive their education are not at the “professor” level, then this system of professional titles will be challenged or will pose a challenge to teacher training schools or colleges of education.

training will never adequately improve. Thus, we must construct a unique training system for rural teachers in which they are sent to specialized teacher training schools. In this system, it is essential to consider the question of how the teacher training schools at normal colleges and universities can effectively provide training to rural teachers in the rural areas. The instructors at these schools will not provide training to rural teachers in the rural area unconditionally; however, training from normal colleges and universities is greatly needed in rural areas. In light of this conflict, the government should change the value orientation of the educational science project and establish a fair view of the project. Rural teachers do not need to propose research issues for the project, but the project should emphasize that educational science research should be action-oriented. At the least, in clarifying the requirements for research proposals, the project should encourage action plans for rural teacher training in the proposed programs, or there should be research organizations in rural schools, and the focus of the research should be shifted to rural teacher training. This shift would allow teachers at normal colleges and universities to do research under the educational science project and contribute to rural teacher training, giving the research conducted under the educational science project two types of value and finally encouraging a fair view of the project.

4. Build up a two-way school-based training system for rural teachers

For a long time, the main function of the teacher training system has been to train key teachers and disciplinary leaders at their own level. For example, provincial and municipal training organizations train mainly key teachers and disciplinary leaders at the municipal level, and the same is true of region- or county-level organizations. Although the government has set the annual hours and credits required for continuing education for teachers, and although training organizations have provided training for all teachers, there has been no significant effect. Thus, a two-way school-based training system for rural teachers should be constructed during the reform of the teacher training system. The concept of “school-based” training is used in the field of basic education, and ideas related to school-based teaching and research have been widely employed. The use of these concepts has helped to create an effective system of rural teacher training. This is especially true of the school-based teaching research and teacher training that is held jointly by schools in particular areas, usually central township schools that supervise rural schools in the area. The idea of improving the qualifications of rural teachers by promoting school-based training in rural schools is often discussed in academic journals, and it is felt that a life-long education system for rural teachers will require school-based training. For example, the “study-practice-test-ranking”, “ranking-research and training-teacher instruction-orientation”, and “orientation-specialization-creation-development” school-based training models used in Shiyan City, Hubei Province are different models that can be used in training rural teachers. In the author’s opinion, school-based teaching, research and training are obviously effective in enhancing the professional development of rural teachers, and to introduce more excellent intellectual resources for rural teacher training is essential; at present, the capacity and level

of school-based training by rural schools are limited. Therefore, a two-way school-based training system for rural teachers should be established in which urban teachers train teachers at rural schools and rural teachers go to urban schools to study⁴. This strategy could allow rural teachers access to excellent teacher training resources.

Moreover, during the reconstruction of the rural teacher training system, the distance training system also needs to be reformed. The TV University, education television, the Internet, the study and research network for teachers and the continuing education network for teachers together form a virtual distance training system for rural teachers. In fact, this system is now the main resource used in rural teacher training. In addition, the non-governmental teacher training programs require guidance and support. These programs have made an effort, but they require educational management authorities to set standards that can support and guide them.

All in all, the reconstruction of the rural teacher training system must reflect the principle of educational equality: that every teacher has the right to receive high-quality training. At the present time, disadvantaged teachers should be compensated for their lack of resources via preferential training policies and support for their professional development. Taking this step will communicate a commitment to educational equality⁵.

6.4 Reconstruct the Model of Rural Teacher Training

Large-scale training is often used in rural teacher training. Such training has played a positive role, however, it is often conducted using the Internet or CD-ROM and often involves, large-scale reports, the self-study of training materials, or meetings and competitions. The model of training used to train rural teachers must change, and the changes are different from those that need to occur in teacher training overall⁶. This change should involve the design of rural teacher training programs that address the various needs of teachers at different developmental stages and of teachers with different roles and characteristics. During the design process, the methods and approaches used in training should be redesigned, which will truly allow the model of teacher training to be reformed.

⁴The “Rural Teacher Research and Training Workstation” in Beijing is a typical resource for rural teachers who wish to study in cities.

⁵Fang, Z. & Bai, Y. 2008. Thinking and practicing of large-scale effective rural teacher training (In Chinese). *Primary and Middle School Management*, 2, pp. 11. (方中雄,白永潇,对农村教师进行大规模有效培训的思考与实践,《中小学管理》2008年第2期。)

⁶The teacher training mode can establish “time modes” based on academic degrees and diplomas, such as “4+X”: “4+2”, “4+3”, “2+2”, “3+1” and so on.

6.4.1 A Rural Teacher Training Model that can Change Teachers' Beliefs

It is widely believed that “rural teachers’ educational and teaching beliefs are outmoded”. This common view is rooted in many facts about rural teachers: for example, rural teachers are not young (most are over 40); they often are not highly educated (most graduated from middle normal schools); they are neither very active in pursuing learning opportunities nor are they able to engage in autonomous learning (especially in the composite teaching system, teachers’ heavy workload leaves them almost no time for such activities); and rural schools will not hire new teachers because they wish to limit their total expenditure on salaries and to reduce government public expenditure (which keeps new teachers who have received modern educational and hold modern views of teaching from entering the system). Furthermore, substitute teachers are also hired, especially in primary schools, where they make up a large proportion of the teaching staff. Nevertheless, the crux of the problem is the long-term absence of training programs that could help rural teachers to update their views. The key problem is that rural teachers’ beliefs are outmoded; they misunderstand the nature of teaching, as the transmission of knowledge and the knowledge as the content of textbooks and syllabi. Meanwhile, content used to train rural teachers at regional colleges of education and teacher training schools in the various regions and counties has not helped to update the beliefs of teachers. Therefore, a model of training is needed to reconstruct that will serve this function by capitalizing on rural teachers’ cognitive characteristics, replacing old beliefs with new ones and internalizing new beliefs into behavior.

6.4.2 A Rural Teacher Training Model that will Improve Teachers' Disciplinary Literacy

Whatever kind of training is offered, one of the ultimate goals of the program must be to improve the disciplinary skills of teachers. Such literacy (which include Chinese literacy, mathematics literacy, scientific literacy, and other such literacies) are an essential part of disciplinary training. A teacher should possess the appropriate knowledge and literacy in his/her discipline. The former can be acquired through reading. As long as the teacher has sufficient reading time, s/he can develop disciplinary knowledge. In contrast, improving a teacher’s disciplinary literacy requires training. Hence, in designing teacher training programs, we must consider how to improve teachers’ disciplinary literacy, as in real teacher training programs, this aspect of the training process is often neglected. This is a more urgent problem for rural teachers, who are commonly believed to have limited disciplinary knowledge and literacy.

6.4.3 A Rural Teacher Training Model that can Improve the Professional Competence

In teacher training, the concept of professional development is commonly stressed. Professional development includes professional knowledge, professional competence, and professional ethics, which are the three elements of teachers' professional development. Due to the special characteristics of rural teachers, we must design a model of training that can be used to improve their professional competence. Most importantly, the training programs should encourage rural teachers to read and help them to do so. Reading should become a way of life for rural teachers, as reading can help rural teachers to improve their professional autonomy. When choosing reading materials, rural teachers should first choose texts from fields related to child development, including the development of cognitive abilities, morality, social abilities, health-related abilities and aesthetic sensibilities. Such reading will help teachers to develop an understanding of children's overall development.

6.4.4 A Rural Teacher Training Model that will Promote Situational Experience

Teacher training programs may develop the knowledge and competence of teachers using different approaches and methods. Usually, however, the development of new beliefs is the ultimate result. To truly improve the competence of teachers requires practical situational experience. The "Five Lessons" (preparing lessons, talking through lessons, giving lessons, observing lessons, evaluating lessons) in teaching and research activities represent a set of competence, and rural teacher training programs that can help teachers to acquire these competence through practice and situational experience must be designed. Hence, we must create a method of rural teacher training that encourages situational experience.

6.4.5 A Rural Teacher Training Model that will Enable the Sharing of Lessons and Resources (Thus Improving School-Based Teaching and Research Ability)

In the current teacher training process, experts, scholars and famous teachers at primary and secondary schools used different training approaches and methods in class, but it is rarely seen that university experts and famous primary and secondary teachers work together with the same resources in the same classroom. The most urgent problem needs to be resolved in teacher training is the question of the

relationship between theory and practice, which is also a global problem. If university experts, scholars and primary and secondary school teachers can construct lessons together during the training process, this will greatly help enhance the professional development of teachers. Therefore, we should try to develop a new model of rural teacher training in this respect.

6.4.6 A Rural Teacher Training Model that will Promote Teacher Leadership

The hierarchical system within teaching, which is based on the professional status of teachers, is the main professional developmental system for teachers in China. Qualified teachers, key teachers at the school, district, county, municipal, provincial level, disciplinary leaders in those same contexts, superior-ranking teachers and famous teachers are all part of the institutional hierarchy for teaching and professional development. However, no matter their level, teachers can be viewed as leaders. The concept of teachers leaders has attracted significant attention in the present international academic circles devoted to teacher education. Rural teachers need teacher-leaders to help shape their development. Thus, a training model for such leadership needs to be integrated into rural teacher training.

6.4.7 A P-Q-Based HIDD Training Model

As has been previously discussed, the *Outline of China's National Plan for Medium and Long-term Education Reform and Development (2010–2020)* has explicitly proposed four methods that can play an extraordinary role in improving classroom teaching, but there is no training style that has adopted the four methods as its core principles. We must design training programs that train teachers to use the four methods. The HIDD training approach based on P-Q⁷ has been designed for this purpose – as a means of exposing teachers to the four methods during the training process⁸.

⁷P-Q stands for the English words “problem” and “question”, both of which can be translated as “wenti” in Chinese, but in context, they have very different meanings that determine the orientation of “wenti”. It is a given that human beings can develop using the P-Q mode. The “P-Q” concept is addressed here because the four methods cannot be employed without problems and questions. It is crucial to foster teachers’ awareness of P-Q and train them in P-Q.

⁸Interestingly, an instructor may lecture on “the dialogue method”, using only the lecture method during the training process. This type of “idle theorizing” is a universal phenomenon. Lecturing can certainly have some benefits during the training process, but it would be better if the teachers could experience the teaching method in person during the training process.

6.5 Reforming Institutional Involvement in Rural Teacher Training

The institution of teacher training provides a code of conduct to be used in such training. Thus, rules from the qualifications and professional standards that teacher training organizations must hold to the relevant laws are all an essential part of teacher training.

Because rural teacher training is a special field, the government needs to create new laws for rural teacher training such as the *Rural Teacher Training Act* and regulations such as the *Rural Teacher Training Regulations*. Such initiatives will help to further develop the rules, norms and standards associated with rural teacher training. Here, the case of one particular nation is presented to illustrate the importance of this facet of teacher training.

Since the start of the new century, the US federal government, which considers itself advanced with regard to education, has inaugurated programs for rural teachers. For example, the *No Child Left Behind Act*, issued in 2001 by the US Department of Education, created “the Rural Education Achievement Program”, which was intended to fund high-needs, rural areas with very few resources (e.g., human resources) whose needs thus could not be met with regular funds. Although the program is not mainly designed for rural teachers, the largest proportion of the funding is spent on training and professional development for US rural teachers. In 2003, the US Congress passed the *Rural Teacher Housing Act of 2003* proposed by the Indian Affairs Committee of the Senate. The act chiefly targets rural areas whose population is not less than one million or in which Native American or Alaska native children are concentrated. It provides housing security for teachers and staff (e.g., librarians, guidance counselors, service staff, and managerial staff) in public primary and secondary schools in those rural areas. The federal government also issued the similar *Rural Teacher Housing Act of 2004* and *Rural Teacher Housing Act of 2005*. In 2005, the US Congress passed the *Rural Teacher Retention Act of 2005*, which was proposed by the Health, Education, Labor and Pensions committee of the senate. The act came into force in 2006. It provided extra compensation for teachers who already worked in rural schools or who were willing to work in rural schools after the act was issued. The program based on this act was implemented for 3 years. In 2007, the US Department of Labor allocated three million dollars to Western Governors University and AACTE as compensation for their work developing the US rural teacher training program, which is intended to develop a form of rural teacher training that can be used across the nation. Since 2007, the program has trained more than 1,000 federally qualified math and science teachers who will teach in rural areas.

The above case demonstrates that there is no reason for us not to develop special laws, regulations and rules governing rural teacher training. These types of regulations need to be reformed to establish qualifications for teacher training organizations, teacher training teams, instructors in teacher training programs, and the like.

Here, it is important to recognize that teacher education requires teacher training. We should establish teacher education as a legitimate discipline in colleges and universities; academic degrees should be conferred in teacher education, and there should be courses, academic journals and academic research associations⁹ focused on teacher education, as well as professional titles for those who specialize in this area. At the same time, teacher training should also be made an indispensable component of such programs, creating a solid academic foundation for teacher training and establishing a system of knowledge for teacher training programs. This initiative will help us to meet the diverse needs of teachers in training.

6.6 Reforming the System of Rural Teacher Training

The use of particular training system safeguards the system, the training model and the regulations governing the system. The reform of these system is thus an important condition for rural teacher training. Organization and management, support and incentives, and supervision and assessment in rural teacher training must be reformed. In reforming the organization and management system within the rural teacher training system, resource distribution, evaluation and assessment, and organization and cooperation must be the focal points.

6.6.1 Reconstructing the Resource Allocation Mechanism Within Rural Teacher Training

Resource allocation is an important component of rural teacher training. It allows the effective implementation of the rural teacher training system and the effective use of particular training model and regulations. A mechanism facilitates the interaction between the different elements of a system; thus, resource allocation within rural teacher training facilitates the interaction between all of the elements of the system, including human resources, financial resources and material resources. If we understand a system as combining the relevant regulations and methods, then we can see the resource allocation system in rural teacher training programs as an institutionalized method of allocating resources. In rural teacher training, human resource allocation is the allocation of trainers, training managers, teams, volunteers, evaluators and other relevant individuals. The instructors who train the teachers are particularly

⁹The academic associations focused on teacher education should enhance the academic orientation of teacher education based on the guidelines of the higher normal education council and the teacher education institute rather than only being discussed in work reports by the presidents of the normal colleges and universities or the reports by teacher training business. In other words, they should not exist in name only. Toward this end, teacher education must be established as a discipline, and the reporting on academic meetings must change.

important; they include university teachers, excellent teachers and researchers in urban primary and secondary schools and teachers from regional colleges of education and district or county teacher training schools. The allocation of financial resources is the most crucial type of resource allocation. The greatest obstacle to the effective implementation of the rural teacher training system and the associated training methods and regulations is the allocation of financial resources; there is a serious shortage of teacher training funds. The universal difficulty of rural teacher training of the funding shortages is caused by the financial challenges of particular regions or counties. Thus, the government should coordinate at all levels to establish a means of allocating financial resources to rural teacher training. By founding special teacher training schools or educational universities, the government should form management institutions directly under the central government or provincial governments, thereby establishing a mode of allocating resources to diverse areas that involves both levels of government. This initiative should supplement “The National Training Program for Primary and Secondary School Teachers”. Material resource allocation in this context mainly involves providing access to resource materials for distance learning for teachers in training. The available Internet education and distance education facilities are insufficient, as is the teaching software (in terms of both volume and quality), and the channels through which educational information can be communicated are inadequate. These problems are universal within distance learning for rural teachers in training. Therefore, we should modernize these types of resource allocation to ensure the professionalization of rural teachers.

6.6.2 Reforming the Evaluation and Assessment System Within Rural Teacher Training

The evaluation and assessment system within rural teacher training plays an important role in guaranteeing training quality. The evaluation and assessment system at the different levels of the rural teacher training system must be reformed. Training organizations in different rural teacher training systems need guidance and assessments; evaluation and assessment mechanisms for training programs for teachers at different levels of professional development should be formed; and the main actors in teacher training (i.e., teachers in training, trainers, training managers and others) should be evaluated and assessed. In summary, a well-designed evaluation and assessment mechanism for rural teacher training is crucial to the rural teacher training system.

6.6.3 Organization and Cooperation Mechanism

To effectively implement the overall system for training rural teachers and the two-way school-based training system for rural teachers, the organization and cooperation mechanism must balance urban and rural development by encouraging

cooperation and teacher communication. To effectively provide training to rural teachers requires effective cooperation between different departments. Thus, cooperation between different departments is required. For rural teachers to be able to make use of the high-quality resources of urban schools in the two-way school-based training system, a cooperation mechanism for professional development for teachers such as that created in the 1980s in the US needs to be developed.

6.7 Conclusion

The reform of the rural teacher training system, the model of teacher training, and the regulations and mechanisms involved in the training process cannot occur without the material modernization of rural teachers' professional development. Such modernization will improve the status of rural teachers by increasing their salary and bonus levels to those of urban teachers and will also provide rural teachers with awards and funding that will modernize their income. Second, it guarantees that teachers will enjoy the benefits of China's modernization, including employment benefits, medical insurance, housing allowances and vacations. Moreover, it will help to modernize the management of hiring, appointments, recruitment, assessment and promotion, and it will let rural teachers enjoy the use of modern technology and bright, clean, modern classrooms. (Indeed, the teaching facilities and environment and even the sports equipment should be as modern as in urban schools). This reform, in turn, will allow promotion, retention and teacher exchanges and prevent attrition. Modernization is an inevitable form of social development. However, the modernization of ideologies and regulations must be based on material modernization. In rural teacher training, such material modernization will provide the foundation for and encourage the modernization of the ideologies and institutions associated with professional development for teachers. Honor or spiritual enlightenment alone cannot arouse rural teachers' enthusiasm for professional development or form the cultural environment that will encourage such professional development: an environment that emphasizes respect and values, cooperation and sharing and effective incentives for and assessments of professional development among rural teachers.

Chapter 7

The International Terrain of Teaching and Teacher Education: How can Teacher Educators Prepare Teachers for a World We Cannot Envision

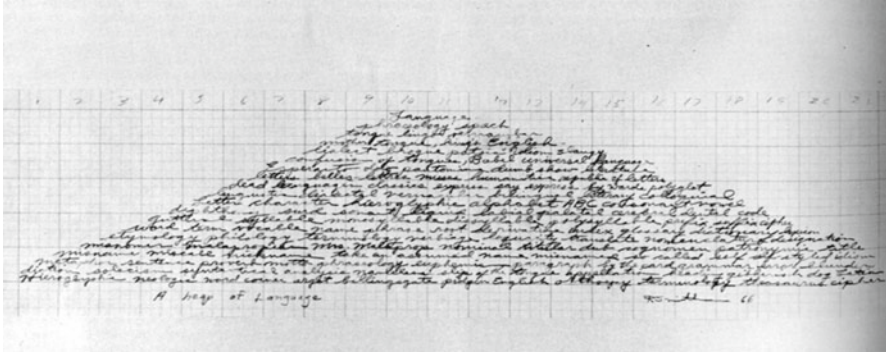
Mary Lynn Hamilton and Stefinee Pinnegar

Abstract In this paper we attempt to describe a global research terrain of teaching and teacher education. In situating a discussion of this work across an international terrain, we question whether local discourse can be anchored to universal assertions. We ask how considering teaching and teacher education from a global perspective can, as Maxine Greene (Greene M (1995) *Releasing the imagination: essays on education, the arts, and social change*. Jossey-Bass, San Francisco) argues, release the imagination as we work to improve the experiences of children and youth in school through the education of their teachers. We start with our observation that regardless of country of origin, authors most frequently cite American authors. Using Greene's notion of seeing large, seeing small across the terrain of teaching and teacher education we came to realize that we must take seriously the approaches to globalization that allow us to see generalize yet particularize the terrain because used alone we may miss crucial insights. We also see that it is not enough to cite the work or works of scholars from other countries. Rather, we must come to see and understand how those ideas fit within the local context and, in turn, how it can inform the global community.

Keywords International approaches • Teaching and teacher education • Teacher preparation

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In the illusory labels of language, an artist might advance specifically to get lost, and to intoxicate [her/] himself in dizzying syntaxes, seeking odd intersections of meaning, strange corridors of history, unexpected echoes, unknown humors, or voids of knowledge... but this quest is risky, full of bottomless fictions and endless architectures and counter-architectures... at the end, if there is an end, are perhaps only meaningless reverberations.

(Robert Smithson, 1968, p. 21)

While there has been dramatic movement socially and politically around the world in the past 10 years, it seems that when the conversation turns to a focus on the terrain of teaching and teacher education the discussion, though loud and static and the map of concerns shows little differentiation or extension. Perhaps the problem is a focus on local knowledge and research findings that lead to a different question: Looking globally, what can we learn about the terrain of teaching and teacher education and its related research? In this paper, using prominent international publications as resources, we describe the global research terrain of teaching and teacher education: we mark similarities, differences, absences and presence in research of ideas that surface and/or resurface. In situating a discussion of this work across an international terrain, we question whether, in fact, the local discourse is anchored in a universality of issues. Just as importantly we ask how considering teaching and teacher education from a global perspective allows us to reconsider more thoughtfully how attention to contextual issues from which the research emerged can, as Maxine Greene (1995) argues, release the imagination as we work to improve the experiences of children and youth in school through the education of their teachers.

We began our paper with a simple interest – to explore how we might inform and encourage authors to make international connections in conversations about research and issues related to teaching and teacher education – and a simple question – why do authors, regardless of where they live, most often cite and even ground their work in the works of American¹ authors.

¹While we note that the term American may include a North American, Central American or South American, in this paper we use the term American to represent nationality and the term United States to represent country.

We wonder why that happens. Since the Journal *Teaching and Teacher Education* (*TATE*) – its editors, editorial board, and reviewers – intends to publish studies that offer readers possible ways to guide scholars in their consideration of the preparation of teacher educators and, in turn, future teachers for the twenty-first century, we wondered about the research base used to support these studies.

7.1 Titles and Topics

As our work for this paper began, this desire and this question seemed simple enough. Initially, we turned to *TATE* and reviewed recent volumes (2009–2011) of the Journal, scanning titles to identify the key topics being addressed and accepted by the Journal, to see if our perceptions about the recursive nature of the discourse could be substantiated. (See Fig. 7.1.)

In our examination of the titles, we discovered that the themes presented in Fig. 7.1 emerged most often. Using Wordle as a tool, we constructed this image wherein the words appearing most often are largest. From our perspective, we saw nothing surprising here. We could see nothing that would distinguish the local from the global terrain. We wondered what might happen if we looked in another way to consider collectively shared and distinctive items.

7.2 Keywords

With our curiosity aroused, we decided to collect the author-selected keywords from all issues from 2011. (See Fig. 7.2.) We realized that the shared list of keywords may or may not be the same words/concepts authors identified in their titles. First we noted similarities between the word pictures as well as differences. The two depictions of the terrain of international teacher education raised questions about



Fig. 7.1 Please note: the larger the word in the picture, the more frequently the word appeared in titles



Fig. 7.2 Again please note: the larger the word in the picture, the more frequently the word appeared in titles

the contrast. Only in Fig. 7.2 are countries mentioned eight times – each country mentioned once.

We noticed that author-created titles that inform Fig. 7.1 differ from the author-identified list of keywords. Looking at both Figures, while the word TEACHER appears on both lists, it is much larger in Fig. 7.1 and in the Fig. 7.1 teacher education does not appear at all. Professional development has more prominence in Fig. 7.2. Words like diversity may be connected to and represented as work on social justice in the keyword list, but the word social justice does not appear in titles. Words like “management”, “assessment”, “literacy-technology,” which potentially might be related to discussions of practice, suggest that authors are more likely to include references to practice in their titles than they are to select “practice” as a key word. Words related to methodology, supervision, and theory show up on the keyword list but are absent on the title list.

Since these two lists of concepts seemed so different from each other, we wondered about the possibility that there might be differences in language understanding, in perspectives, and in literatures that emerge from the researchers’ conceptions on the terrain of teaching and teacher education. At this point, beyond topic and title differences we wondered about the diversity and international nature of our 2011 authors.

7.3 Authors, Countries and Universities

To organize the information we gathered, we decided to follow suggestions offered by Gingras and Mosbah-Natanson (2010) in their study of publications in the social sciences. Rather than count every country, they organized countries into regions, including Europe, North America (the USA and Canada), Latin America (including Mexico and the Caribbean countries), Africa, Asia (including the Middle Eastern countries), and Oceania (Australia, New Zealand and the surrounding islands) (pp. 149–150). Doing this allowed us to aggregate countries and consider the terrain from a variety of viewpoints.

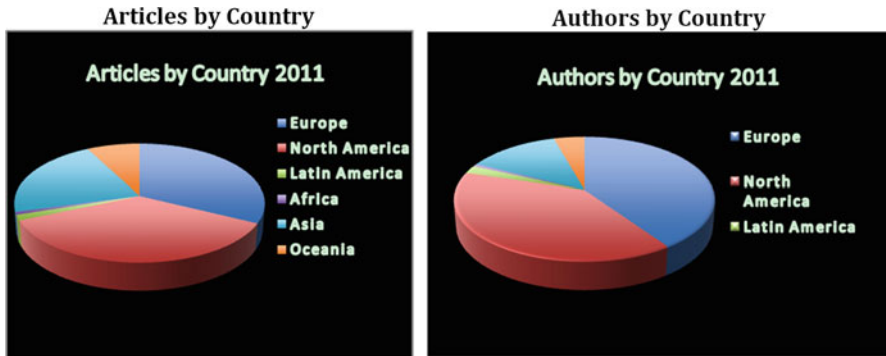


Chart 7.1 (a, b) Please note that to make our point *and* provide a clear representation of ideas we used countries/continents as distinctions. We use *country* name if the author count was greater than five. We used *continent* if the count fell below that point. We applied this rationale to each chart

We looked at authorship in two ways: first the country location by university of each author and then the location of the university affiliation declared by the first author alone. Chart 7.1a demonstrates the distribution of authors from our first analysis and Chart 7.1b reveals the distribution of the affiliation of first authors alone. Who are these authors that contribute to this terrain, we asked.

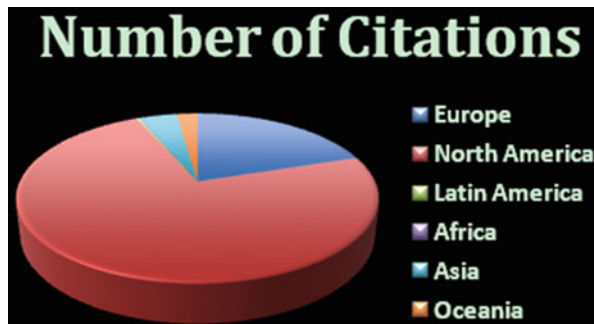
Here we learned that some countries (like The Netherlands) do more collaboration and some countries simply submit more manuscripts. We also learned that American authors represent a simple majority in our publications. Turning back to the simple questions that initiated our study, we began to wonder again about the universal nature of words in the research discourse about teacher education and whether the meaning of research findings and concepts can be shared across borders. Are these contexts different? Or do our authors share understandings?

7.4 Citations and Reference Lists

This brought us to the reference lists used by the authors in issues within the 2011 volume of *TATE* and examined citations used to support these published studies. Specifically, given the international mix of authors, we questioned which citations from which countries were referenced most often, if researchers only or predominantly cited works of authors from their own countries or language group, or if, as we intuitively imagined, regardless of nationality mostly American works were cited and thus Americans formed the dominant conceptual terrain for research on teaching and teacher education. (See Chart 7.2.)

While, to our pleasant surprise citations were not overwhelmingly American, these citations did dominate the list. Certainly, Americans most often cited Americans and authors from elsewhere also frequently cited American authors. As we reviewed the work, we wondered whether there was a universal context for

Chart 7.2



teacher education that would make it reasonable to assume similarity across the terrains of teaching and teacher education. Therefore we chose to explore whether when we labeled someone a student teacher it meant the same thing regardless of country or context. We also wondered if inquiry about teachers or students in Spain could be really be informed and supported by studies framed within the context of American education. Could we compare problematic teaching situations cross-culturally, or must we, in our inquiry, carefully consider the country or contextual origin of research cited by attending to similarities and differences? This brought us to the question of whether or not topics of inquiry into the teaching and teacher education terrain are the same in the journals published outside the United States?

7.5 Journals Related to Teacher Education

To answer this question, we turned to current volumes of journals related to teacher education around the world. While we were not able to find every journal, we selected twenty journals that emerged from a Google Scholar search. (See Table 7.1.)

Looking across the most recent issues of the most current volume of each journal and at the keywords (if any) identified by authors, we found similar topics to those listed in our Figs. 7.1 and 7.2. However, once again when we turned to the reference lists, we found American authors cited, although not with the same frequency as they were in the *TATE* Journal. From our perspective, these differences and similarities still raised questions about culture, comparability, and issues related to universality. In what ways do universals inform local contexts? The terrain kept shifting.

In a conversation with Geert Kelchtermanns (2011, August, personal communication) about this work, he politely pointed out that we had looked only at journals published in English. He asked kindly, “If you are reading articles in the country’s home language, might you find the same or different citations?” Immediately struck by our ethnocentricity, we turned to journals published and written in the dominant language of particular countries and/or areas. Given our own lack of language skills and weak translation software, we selected just ten journals to explore. (See Table 7.1.)

Table 7.1 A listing of international journals related to teaching and teacher education

International journals related to teacher education	International journals related to teacher education and written in the dominant language of countries
Africa Education Review	Indian Educational Review
African Journal of Technology Education	Journal of Indian Education (National Council of Educational research and training)
Asia-Pacific Journal of Teacher Education	Journal of South Africa
British Educational Research Association	Journal of Southeast Asian Education and Advancement
Canadian Journal of Education	La Piragua: Revista Latinoamericana de Educación y Política (CEAAL)
Canadian Journal of Learning and Technology	La Revista Electrónica de Investigación Educativa (REDIE)
European Journal of Teacher Education	Revista Electrónica de Investigación y Evaluación Educativa
Indian Educational Review	Revista Interamericana de Educación de Adultos, CREFAL
International Education	Revista Lationamericana de Educación y Politica
International Education and Intercultural education	South African Journal of Education
International Journal of Research in Teacher Education	
International Research in Teacher Education	
Journal of Education for Teaching	
Journal of Indian Education	
Journal of South Africa	
Journal of Southeast Asian Education and Advancement	
Learning & Instruction Journal	
South African Journal of Education	
Teachers & Teaching	

Not surprisingly, we found that Kelchtermanns offered us a critical insight – we identified far fewer citations of American authors and many more citations of articles published in the home language. Inspired by his prodding, we turned toward globalization, world culture theory, world systems theory, cosmopolitanism and other ways to explore issues related to the terrain of teaching and teacher education in the twenty-first century. We decided to look beyond our current understandings of the terrain to consider whether or not we can simply draw our notions of teacher education from one literature. Indeed must we focus on the research discourse of an individual nation? Can we base our own research in the United States on the works of those scholars in Belgium? Is it theoretically legitimate for scholars in Turkey or Norway or elsewhere to ground their studies in the works of American scholars? Can American researchers build on research from the United States and then uncritically take up findings from research based in American studies but conducted in Iceland or Chile?

We think that many times the meaning of concepts and research findings presented as universal for teaching and teacher education actually vary from country to country. The central purpose of teacher education may focus on the preparation of students for the profession of teaching. Yet, context of shared understanding may matter. What is true in Brazil about teacher education may not be true in The Netherlands, may not be true in the United States and so on. To explore the terrain of teaching and teacher education we must explore it with a twenty-first century sensibility and consider we will construct the knowledge base for those teachers and teacher educators on the terrain.

7.6 Gaze

We wondered further about the terrain of teacher education from an international perspective and how we could engage in a research discourse about teaching and teacher education and asked how we might focus our gaze. Where do we turn? How might we begin to contextualize our understanding of teaching and teacher education? Then we remembered the work of Maxine Greene and her text *Releasing the Imagination* (1995). In this particular text, basing her thinking on the writings of Thomas Mann, Greene describes seeing large, seeing small. When seeing small we can distance things and ideas from ourselves. Greene suggests that the, “vision that sees things small looks at schooling through the lenses of a system – a vantage point of power or existing ideologies – taking a primarily technical point of view (p. 11).” To see things large allows us to hold things closely and see the detail of what stands before us (p. 10). When seeing large one must, “see from the point of view of the participant in the midst of what is happening if one is to be privy to the plans people make, the initiatives they take, the uncertainties they face (p.10).” Using Greene’s ideas we could see small and see if some distanced, universal way of considering teaching and teacher education might help us understand the terrain. And then we could see large and consider if an exploration of the particular strengthened our understanding of this terrain.

7.7 Seeing Small

To see small we visited UNESCO, OECD, and other published reports (e.g. OECD 2004, 2005, 2010a, b; UNESCO 2004, 2005, 2008, 2010) along with numerous journal articles and chapters in texts focused on comparative studies of teaching and teacher education (e.g. Bray and Qin 2001; Alexander 2000; Chistolini 2010; Czerniawski 2009; Ingersoll 2007; McDonald 2007). We were interested to see that across the globe, there has been considerable work on who prepares teachers and how teachers are prepared. There have been studies that focus generally on teachers (Wang et al. 2003; Stanat and Christensen 2006; Stoel and Thant 2002) and studies that focus more specifically on content areas (Akiba et al. 2007; Stigler and Hiebert 1999).

7.8 Preparing Teachers in Different Countries

From the various reports we found general information that allows us an opportunity to compare and often generalize about similarity among countries. The tables below describe the requirements to become an elementary teacher (Table 7.2) and a secondary teacher (Table 7.3) in some countries around the world.

We prepared these tables from various sources to offer examples and selected countries based on the availability of information.

There are other tables in other reports that address teachers' lives and salaries and safety and classrooms and more, however, given the focus of this paper, we think these tables provide a sense of similarity and difference. As we attempt to see small across this terrain, we see not the lives of particular cultures and teachers but a homogenous grouping. Looking at the tables we can see the potential for similarity, generalizability, and the expression of universality. For example, we were interested in how often it appears that teachers, whether elementary or secondary, can become teachers by only gaining a university degree. Yet we wonder if what appeared to be universal or typical across country really help us understand the terrain.

7.9 What is Teacher Education Like in Various Countries?

Seeing small across the terrain for teacher educators, we had less success finding sources but had our own current experience and understanding as teacher educators. Teacher educators are less the focus of studies sponsored by international organizations causing us to wonder about this absence on the terrain. We do know, however, that the term teacher educator can be defined in many ways across a variety of contexts.

Several years ago during a visit to Vrije Universiteit in Amsterdam, one of us worked with Mieke Lunenberg and talked about the lives of teacher educators. These conversations continued for 2 weeks face-to-face and via email for several months before we realized that who we labeled as teacher educators, what we identified as their roles and what we asked them to do was quite different even when the words or definitions appeared similar, often we often talked using the same words and come to discover the existence of differences. To help us think about it we created a simple Table to identify the differences and similarities. (See Table 7.4.)

To that Table we added Brazil and Australia to broaden our understanding (Hamilton et al. 2009). Seeing small allows us to see difference in the ways countries generally consider teacher educators. Recently we were reminded of this desire to universalize the role of teacher education and teacher educators while reviewing a manuscript from a European author. In the well-written and well-presented text, the author continuously made claims about teacher educators as if all teacher educators had similar backgrounds and preparations. The focus of the work centered on

Table 7.2 Becoming elementary TEACHERS gathered from UNESCO and other reports

Elementary	Academic qualifications	Course of study	Practice teaching	Preservice exam	Induction for teachers
United States	Uni Degree + credential	Basic studies & pedagogy	1 semester (12 weeks)	Yes	New teacher induction programs (Varies)
China	High School Diploma	Basic studies & pedagogy	Field experience including classroom teaching 8–10 weeks	No	Organized by individual professional bodies
Korea	Uni degree	Content Area knowledge and pedagogy	4–6 weeks	Yes	No program
Japan	Junior college or uni degree	Content Area knowledge and pedagogy	3–4 weeks	Prefectural certification	Compulsory 1 year for all new teachers
Australia	3-year diploma in teaching	Integrated subject matter & pedagogy	3 in-school practicums (16 weeks)	No	Required
The Netherlands	Bachelor's in Content area	Culture, science, and pedagogy	48–72 weeks	No	No programs
Portugal	3 years of Uni degree		yes	No	Mandated by law but no real work with teachers to support PD
Germany	Uni degree	One or more subject areas, plus pedagogy & didactics	2 years	2 state exams	18–24 month introduction practice, including seminars
France	Uni degree	3 year degree in general studies	Some teaching duty during the 2nd year at national teacher training institution	Competitive national recruitment exam	New teachers monitored by senior teachers during their first 2 years
UK	Uni degree	Math, English, Tech & Pedagogy	Assessed classroom teaching 24 weeks	No	Individualized for new teachers based on government standards

Table 7.3 Becoming secondary TEACHERS gathered from UNESCO and other reports

Secondary	Academic qualifications	Course of study	Practice teaching	Preservice exam
United States	Uni degree & credential	Subject specific and pedagogy	One semester	State cert exam
Hong Kong	Uni degree + cert in ed	Subject specific and pedagogy	8 weeks	No
China	Lower – Associate Degree Higher – Uni Degree	Subject specific and pedagogy		Yes
Japan	Uni degree	Subject specific and pedagogy	3–4 weeks	Prefectural exam
Australia	4 year. Uni degree	Major discipline and pedagogy	3 sessions of several weeks duration	No
Portugal	Uni degree	2 subject areas	490–750 h	No
Germany	Grad uni degree	2 or more subject areas plus pedagogy	8 weeks	No
France	Uni degree	3 year focus on a discipline followed by 2 year subject area study at national teacher training institution	Some teaching during second year at national teacher training institution	Competitive national exam on specific fields
UK	Uni degree	Subject specific	Assessed classroom teaching	No

strong preparation for teacher educators, a worthy goal, yet the lack of recognition of contextual differences is problematic.

We recognize that the use of categories allows readers to look across the differences along our terrain as we attempt to understand our world. As we do, similarities emerge, among content areas, political positioning, and some characteristics of the teachers and/or teacher educators. In turn, we consider the ease with which we could universalize understandings and overlook differences. For example, in elementary programs where we have a stronger sense of the developmental process for children and what adults need to do in relation to those children, it seems easy to generalize. As those students progress in their schooling and develop into adolescents, comparisons can be more difficult. Still, seeing small across our terrain of teaching and teacher education, we see that context matters.

While the questions about the teachers of children and teachers who educate our teachers are important, they fall beyond the constraints of this paper. As we return to the question of preparing teacher educators who prepare the teachers and the

Table 7.4 Ways to define teacher educators adapted from the work of Lunenberg and Hamilton (2008)

	School-based teacher educators (Cooperating teachers, teachers who support students during practice)	Teacher educators for students preparing to be primary school and junior high teachers	Teacher educators for students preparing to be senior high teachers
United States	Teaching certification, teaching experience, coursework beyond certification They have expertise as a teacher but little if any preparation as a teacher educator	Teaching certification with teaching experience, usually in public schools, and a doctorate – general teacher education or specific content-teaching area. (In the United States there are a variety of institutions that prepare teachers, some are research-extensive institutions, some institutions focus more on teaching.)	
The Netherlands	Experienced teachers; limited (often not compulsory) training as teacher educators.	Mostly experienced, excellent teachers with a master degree in a specific subject; seldom involved in research. (They work at institutes for Higher Vocational Education. That is, institutions that prepares only teachers and offer bachelor degrees. These institutions do not prepare teachers for careers in academia.)	Mostly experienced, excellent teachers with a master degree in a specific subject or a doctorate; some of these teacher educators may be expected to fulfill research tasks. (They work at universities.)
Brazil	The majority of teacher educators have Master’s level degrees. However, when teacher educators teach at the university level they have doctorates in education or in related areas.		
Australia	The traditional route to being a teacher educator was that an experienced successful teacher moved into teacher education as a curriculum method lecturer from which part-time enrollment in a doctorate might follow in order to pursue an academic career..		

work that informs the knowledge base issues of citation and publication seem critical to examine. For example, in a recent special issue on globalization in a prominent journal, we see the points we make here reinforced. While the articles are interesting and 50 % of the authors are international, American authors and citations still dominate the issue. We do note, however, that the international authors, in comparison to the American authors, are far more likely to cite text published outside the United States. According to Gingras and Mosbah-Natanson (2010) this represents imbalance and identifies those authors who are/are not European or

North American dependent. We wonder that if we prepare teacher educators to prepare teachers based mostly, if not solely, on the works found within a single country, are we preparing our teachers and teacher educators in a way that blinds them to the twenty-first century world and hinders their ability to even envision this world.

7.10 Globalization

Truly our world is no longer isolated polities unaffected by outside influences. Almost 20 years ago Robertson (1992) defined globalization as a concept that, “refers both to the compression of the world and the intensification of consciousness of the world as a whole (p. 8).” At that time, he saw porous, “boundaries between societies...subject to ‘interference and constraint’ from outside.... international affairs [that] are themselves increasingly complicated and oriented to the outside by a variety of factors, including greater consciousness of other societies, allegiances to groups within other societies, economic penetration and the ‘internationals’ of national economies (p. 5).” Robertson saw that encouraging a, “global ‘whole’ also means that we need to see where individual and constructions of the individual, as well as humankind, fit (p. 6).” As he proposed it, globalization represents a neutral term that, “recognizes the pressures on societies, civilizations, and representatives of traditions, including both ‘hidden’ and ‘invented’ traditions, to sift the global-cultural scene for ideas and symbols considered to be relevant to their own identities (p. 46).” In other words globalization emerges where we reach across cultures to embrace ideas and symbols. These links do not negate the complexity, and therefore diversity from place to place, found in the world.

7.11 Theories

In seeing small and at a distance, we discover some researchers have identified different ways to explore these issues. As summarized by Spring (2008), Anderson-Levitt (2003a, 2003b) and others, there are (at least) four theoretical approaches to understand globalization. While we will define the four approaches, we focus on World Culture approach and the Local Variability approach for this paper.

Scholars who embrace the *World Culture* approach suggest that all cultures are slowly integrating into a single global culture. Sometimes called neo-institutionalists, these scholars believe that countries look to this world culture when planning schooling and other institutions (Spring 2008). Furthermore, they argue that not only has the model of modern mass education spread from a common source, but that schools around the world are becoming more similar over time (Anderson-Levitt 2008). While the, “world culture approach is a grand sociological theory about modern nation-states...[its] theorists argue that a single global model of schooling has spread around the world as part of the diffusion of a more general

cultural model of the modern nation-state... (Anderson-Levitt, 2003a, p. 2).” Some authors examining the TIMSS research (Stigler et al. 1999; Stigler et al. 2000) use the findings to support this theoretical approach (Baker and LeTendre 2005, for example). Although these theorists recognize the social construction of culture as a foundation, they also see convergence. They are therefore proposing a process similar to that expressed by Robertson concerning globalization where individuals embrace ideas and symbols from other cultures that will work in their own cultures around the world take up similar ideas and symbols particularly around public institutions world culture theorists argue that convergence occurs and a global culture emerges.

World Systems theorists see the world integrating into one culture but recognize major unequal zones whose countries dominate other nations. They argue that this is a process to legitimize the actions of rich nations. Anderson-Levitt (2008) explains that the World Systems view emphasizes conflict and power not program and that the global connections have been imposed by political and/or economic power of dominant states. If world culture is converging it is because of the interests of the powerful. From this view, the global culture that emerges will not grow out of natural processes of the social construction of culture but through the application of power by those who have it (p. 350).

Scholars who adopt the *Postcolonialist* approach articulate globalization as an effort to impose particular economic and political agendas on the global society that will benefit rich nations to the detriment of poor nations (Anderson-Levitt 2008; Apple et al. 2005). The Postcolonialists emphasize cultural variations and the borrowing and lending of educational ideas within a global context (Anderson-Levitt 2003a; Steiner-Khamsi 2004). Moreover, they concur with world systems scholars about the importance of ideas but they emphasize the importance of power relations. They notice that ideas flow asymmetrically, from the rich and powerful to the poor and marginal (Anderson-Levitt 2003b). Thus, they suggest that the culture of the rich and powerful regardless of nation and particularly in powerful and wealthy nations will be similar but that variation in culture is more likely to be evident among the poor of a nation and across poor nations.

Local Variability approach emphasizes cultural variations and the borrowing and learning of educational ideas within a global context. These scholars reject what they consider to be a simplistic view from world cultural theorists – the view that national elites select the best model of schooling from a world culture of education and incorporate it into the local culture thus changing cultures to increase similarity. They also question the ideas about globalization emerging from both world systems and postcolonial approaches – that models of schooling are simply imposed on local cultures (Spring 2008; Anderson-Levitt 2003a, 2008). Local Variability theorists assert that local participants may borrow from multiple global models but this action does not necessarily lead a universal culture. In fact, Local variability theorists stress the existence of different knowledges and different ways of seeing and knowing the world (Spring 2008). Postcolonial and local variability theorists may share similar perspectives on the multiplicity of knowledges and the concerning the existence of multiple knowledges and the suppression of some ideas by others, but;

however local variability theorists do not necessarily agree that more powerful actors appropriate culture and impose it by themselves (Anderson-Levitt 2002).

Turning toward the terrain that includes both world culture and local variability theorists, we can see the possibility that if a scholar (in Maxine Greene's terms) sees small, the sources of citations and context would be of little import because there is a converging world. Anderson-Levitt (2008) points out that world culture theorists, "claim that nations freely adopt common ideas not because the ideas are truly better, but simply because leaders perceive them as modern and better. [This approach] emphasizes the social construction of reality rather than material cultures [and] downplays power relations (p. 350)."

When defining globalization, Boli and Thomas (1999a) start with, "the universalistic (transnational, global) level of cultural and organizational formation that operates as a constitutive and directive environment for states..." but avoid defining, "modern actors not as cultural dopes but as creative innovators who are the one and only source of change, adaptation, and restricting in response to situational contingencies (p. 4)." As defined by Boli and Thomas (1999a), "the world has been conceptualized as a unitary social system, increasingly integrated by networks of exchange, competition, and cooperation, such that actors have found it "natural" to view the whole world as their arena of action and discourse (p. 14)." They do find that

culture lies at the heart of world development... cultural conceptions do more than orient action; they also constitute actors. People draw on worldwide cultural principles that define actors as individuals having inherent needs, emotions and capacities and they act in accordance with such principles. Worldwide constructs provide social identities, roles, and subjective selves by which individuals rationally organize to pursue their interests. (1999b, p. 17)

However, they find that, "culture is global because it is held to be applicable everywhere in the world. World-cultural models are presumed to be universally valid usually by functional-imperative reasoning (p. 18)...with humans everywhere seen as having similar needs and desires (p. 35)." Akiba et al. (2007), for example, state that, "globally, the US appears to be one of many countries instituting higher standards and certification for teachers (see Steiner-Khamsi 2004) (p. 371)" and from their study they find that it, "is clear that for highly structured subjects such as math, teachers around the world can readily recognize (and critique) course curriculum concepts and instructional strategies across a wide range of nations (Stigler and Hiebert 1999) (p. 372)." World Culture theorists look at the TIMSS data along with student improvement in learning, attraction of new teachers and feel they have identified a global cultural dynamics (OECD 2004, 2005, UNESCO Institute to Statistics, 2006). They also echo Wang et al. (2003) when they assert that similar structure and content of undergraduate teacher education programs exist across the countries, including courses in subject content and pedagogy and field experience observing and teaching students. Taking this idea one step further, Spring (2008) and Baker and LeTendre (2005) suggest that a standardized world curriculum with related measures for assessment may occur in the near future. These researchers present strong and cogent arguments that convergence is happening throughout the world with most countries looking toward the west as a model and, in fact, from our reading, they do a convincing job of arguing their case.

7.12 Seeing Large

As Anderson-Levitt (2002) suggests we should not be deceived by a common vocabulary for curriculum and pedagogy, since these terms may have different definitions in different places. As Greene (1995) points out, in seeing large involves seeing people and places in the midst of their lives. Local variability theorists, “emphasize national variation, not to mention variation from district to district and from classroom to classroom. From their point of view, the nearly 200 national school systems in the world today represent some 200 different and diverging cultures of schooling (Anderson-Levitt 2003a, p. 1).” Anderson-Levitt and colleagues (2003b) challenge world culture theory, showing for example, that inside the local terrain of teaching and teacher education terms and processes differ and similar terms do not always equal similar practices as our earlier discussion of what it means to be a teacher educator indicates.

With this approach, policy is much less homogenous than world culture theory might imply with teachers and other local actors sometimes resisting and always transforming the official models they are given. Nonetheless, Anderson-Levitt (2003a) reminds us that, by looking at the whole world at once, we might see something we might miss when we focus on the local. In fact, ideas about education do appear to cross cultures and a global view does point to models of dominance and power that affect educators in local situations.

Anderson-Levitt (2008) explains that countries around the world do share a roughly converging curriculum and can engage in similar sounding dialogues about how curriculum should be reformed. Indeed, she indicates that educators from a wide range of cultures and countries tend to agree/disagree about the same set of issues. Although reforms in different parts of the world claim allegiance to the same educational philosophers, interpretation of the works can vary dramatically. In other words while John Dewey and Lev Vygotsky may be used as the philosophical basis for curriculum decisions and design in a wide variety of countries the actual practices will often look very different from each other. What happens in the classrooms vary widely (Alexander 2000). There are wide disparities in resources leading to disparities in classrooms and schools. Additionally, even when patterns exist across countries such as TIMSS national patterns, it is also clear that those patterns take place within the local culture and are impacted by it.

In a fine example of bringing together seeing small, seeing large, Stigler and Hiebert (1999) suggest, in a study comparing the teaching of math in three countries, “Looking across cultures is one of the best ways to see beyond the blinkers and sharpen our view of ourselves.(p. x).” They state that their, “point is that these differences, which appear so [small] within our culture, are [overwhelmed] by the gap in general methods of teaching that exist across cultures. We are not talking about a gap in teachers’ competence but about a gap in teaching methods. These cross-cultural differences in methods are instructive because they allow us to see ourselves in new ways” (p. 10).

Stigler and Hiebert (1999) suggest that American mathematics teaching is extremely limited, focused for the most part on a very narrow band of procedural skills, spending time acquiring isolated skills through repeated practice. In contrast, Japanese mathematics teaching looks at teaching mathematics for conceptual understanding with students spending time solving challenging problems and discussing mathematical concepts. When a colleague attempted to summarize their findings, the summary included:

I believe I can summarize the many differences among the teaching styles of the three countriesIn Japanese lessons, there is the mathematics on one hand and the student on the other. The students engaged with the mathematics and the teacher mediates the relationship between the two. In Germany, there is the mathematics as well, the teachers owns the mathematics and parcels it out to student as he [/she] sees fit, giving facts and explanations at just the right time. In U.S. lessons, there are the students and there is the teacher. I have trouble finding the mathematics; I just see interactions between students and teachers. (Stigler and Hiebert 1999, p. 25)

Stigler and Hiebert agreed with the colleague arguing that culture has an influence on everything. For them even,

Family dinner is a cultural activity. Cultural activities are represented in cultural scripts, generalized knowledge about an event that resides in the heads of participants. These scripts guide behavior and also tell participants what to expect. With a culture, these scripts are widely shared, and therefore they are hard to see. (Stigler and Hiebert 1999, p. 85)

Teaching, in our view, is a cultural activity. Scripts for teachers in teaching potentially rest on tacit beliefs and vary from country to country.

The research literature that informs teacher education appears to be dominated by ideas from American researchers and therefore the language and concepts and ideas about teaching and teacher education that are taken up by other countries and cultures and appear in the discourse of teacher education within those other countries and cultures. However, meanings vary and shift and become part of the discourse about teacher education within that culture. Clearly, other international communities produce relevant and interesting research that is potentially applicable to the education context within the United States. However, American researchers do not routinely take up the concepts and ideas that emerge from such research and therefore it does not become part of the discourse on teaching and teacher education within the United States. Indeed, accountability and reform movements so visible currently in the language and terrain of teaching and teacher education within the United States context may be informed by research from other countries (e.g., Day 2010), but the way in which those ideas are taken up will be specific to the United States context. This becomes even more evident when there are language differences. Language translation in addition to cultural understandings and contextual differences can impact how research from other countries enters the United States discourse and how ideas from the United States enters and influences the teacher education research community in other countries.

7.13 Ways to Think About the Process of Educational Globalization: Cosmopolitanism

As Boli and Thomas (1999b) point out, world citizenship is strongly egalitarian where, “everyone is an individual endowed with certain rights and subject to certain obligations; everyone is capable of voluntaristic action seeking rational solutions to social problems; everyone has the right and obligation to participate in the grand human project; everyone is, therefore, a citizen of the world polity (p. 39)” is a part of globalization. In the twenty-first century world where we can reach almost anywhere via computer and phone, we must think beyond simple putting-up-with people and toward open communication where inclusion is a given (Hamilton and Clandinin 2010). Nussbaum (1997) along with other philosophers, suggests seeing ourselves as Kosmopolites – world citizens or cosmopolitans. She, and others, suggests that taking a cosmopolitan view goes beyond a diverse or a multicultural approach. Hansen (2008) asserts that cosmopolitanism, “differs from multiculturalism and pluralism because, unlike the latter, the cosmopolitan does not privilege already formed communities. It seeks to defend emerging spaces for new cultural and social configurations reflective of the intensifying intermingling of people, ideas, and activities the world over. However, cosmopolitanism does not automatically privilege the latter (p. 294).” On the other hand, Banks and Banks (2009) suggest that global education can promote a homogeneous globalization as its advocates are often first world whites and often scholars in multicultural education are of color. Hansen (2009) agrees that globalization can be homogenizing and suggests that cosmopolitanism offers an alternative.

Nussbaum (1997) asserts that, “the task of world citizenship requires the would-be world citizen to become a sensitive and empathetic interpreter (p. 63)” yet does not, and should not, “require that we suspend criticism toward other individuals and cultures... The world citizen may be very critical of unjust actions or policies and of the character of people who promote them (p. 65).” In turn, Appiah (2007) argues, that one may be intensely loyal to a particular nation or group without forgetting that one’s primary moral loyalty is to “the human future.” As an example, describes his father urging him to be a citizen of the world, “Wherever you are, he urged, you should ask how the world has become better through your efforts” (p. 149). For Wisler (2009) as citizens we must have the, “ability to see oneself as not simply a citizen of a local region... we are inescapably international (p. 132).” So it seems that, in a way, cosmopolitanism addresses civic responsibility along with seeing small and seeing large (Greene 1995).

Citizens of the world can both recognize similarities and honor difference. From an educational perspective, Anderson-Levitt reminds us that administrators, teachers and students can have different lived experiences within a roughly common structure (Anderson-Levitt 2002, p. 18). As Anderson-Levitt (2003a) points out about culture and Hansen (2010) points out about cosmopolitanism, experiences “on the ground” differ between the theoretical understanding and practical applications. If we take seriously both local variability and world culture theory, we recognize that on its own each perspective misses something crucial (Anderson-Levitt 2003a).

7.14 Dysconscious Globalization

If we consider seeing large/seeing small together with this notion of “on the ground,” we can see the possibility of the assumed, yet unconscious nature of the asserted universality. Indeed we can see the works of international others going unacknowledged. Here we think that King’s work (1991) exploring cultural diversity can help. King (1991) introduced the term dysconscious to define, “an uncritical habit of mind (including perceptions, attitudes, assumptions, and beliefs) that justifies inequity and exploitation by accepting the existing order of things as given (p. 135).” Building on the work of Heaney (1984), she suggests that dysconsciousness allows individuals to uncritically accept what occurs around them (p. 135). That is, they do not recognize absence and presence in critical ways. Gonsalves (2008) develops this notion further when he states that, “Dysconscious...isn’t the absence of consciousness but rather a form of impaired consciousness...similar to mindlessness as defined by Ellen Langer (1997, p. 4) ...[it is] a form of thought characterized by entrapment in old categories, by automatic behavior that precludes attending to new signals; by action that operates from a single perspective (p. 18).”

When we look across the terrain of teaching and teacher education, we think we see dysconscious globalization, an unrecognized focus on the large or small view without an attempt to look critically at these views. In response we think a recognition of seeing small/seeing large and cosmopolitanism on the ground can break open ways to prepare teachers and teacher educators for a world we cannot now envision. We see that seeing small and large across the terrain of teaching and teacher education can provide a developed sense of the world, a recognized understanding of the universals and the particularities of the world that will be critical to positive changes in our world. Becoming conscious of our actions and our ideas means that we look beyond the terrains upon which we live to the terrains beyond our boundaries – and back again.

7.15 Queries Across the Terrain

What can be discovered as we look across the terrain of teaching and teacher education? In this paper, we explored literature on the terrain that is taken up in both the teaching and teacher education and we examined how international researchers produce relevant, interesting research but only few studies enter into the American research base. We note the existence of promising research from other countries that would inform researchers in the United States and other countries. There are promising results about teaching and teacher education from England, Canada, Cyprus, and Belgium along with interesting findings in works from New Zealand, China, Spain, Scandinavia, and Israel. Ideas from the U.S. flow out to other countries, but do not seem to flow in as readily from other countries. We see attempts to universalize aspects of education and a lack of recognition that shared language and understanding may or may not exist.

A principle of uncertainty exists on this terrain (Hamilton and Clandinin 2011) where questions, ideas, findings, and implications may seem steady and easily understood in one context, can transmute quickly in another: the same, yet different. Are these universal experiences and themes or themes found on one continent or another, one school or another? Global or local? How do issues become topics on the terrain of research on teacher education? We can see that teaching is not only about achievement and that teaching and teacher education is more complex than we imagined.

We started with our observation that regardless of country, most often cite the works of American authors. Even with *TATE*'s push for international connections, we often see mostly citations of American authors. This is not a critique of the authors' works, but a critique of the vision that limits work to only one country and one place. It is not enough to say England or cite Christopher Day, or write Canada and cite Jean Clandinin or enough to establish a context for a particular study for the work to be done on the terrain of teaching and teacher education in the twenty-first century. We must see large and see small. Scholars must understand potential universals and look again to see and understand how those ideas inform the work of the country within which they live and the people with whom they work as well as the works and world to others.

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Chapter 8

Exploring the Interaction of Global and Local in Teacher Education: Circulating Notions of What Preparing a Good Teacher Entails

Lynn Paine

Abstract In this chapter, I explore the current moment of global discourse and its challenges for teacher education. I begin by making the case that, at an ideational level, there is indeed a global conversation of teacher education, one supported by cross-national studies, the role of national scholars and policymakers, and the emergence of global consulting (perhaps a new player in a new role). I then examine, through analysis of curriculum and teacher education student learning, how the practices of teacher education, when viewed comparatively, suggest a far more local, or regional, conversation. Finally, I consider the role of research in supporting what I see as an interaction of global and local discourses. Throughout, I am drawing on ideas of externalization (Schriewer 2000; Steiner-Khamsi 2004) and an understanding of teacher education as existing in both discursive and structural levels.

Keywords Global and local discourses • Teacher education

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8.1 Introduction

Nations no longer have the freedom to formulate their educational policies in isolation. The rise, rapid expansion, and institutionalization of cross-national educational tests (e.g., TIMSS, PISA, and Progress in International Reading Literacy Study [PIRLS]) have created educational competition that affects all nations (Baker and LeTendre, 2005; Lauder, Brown, Dillabough, and Halsey 2006; Tatto 2007). While everyone is aware of how international economic competition, free-trade zones, and global exchanges have dramatically altered the nature of the world we live in, we rarely think about public schooling as affected by global trends.... Now, these cross-national studies of school achievement have become common, even mandatory in the sense that more and more nations feel compelled to participate in order to ‘benchmark’ their educational achievements against other nations (Akiba and LeTendre 2009, pp. 6–7).

Akiba and LeTendre, two U.S.-based researchers, begin their recent book on “Improving teacher quality” with this argument. TIMSS, PISA and other international assessments have indeed contributed to national debates about domestic educational reform of curriculum and teaching. (see Takayama 2010 for an example of this process in Japan.) In many ways, one might claim that teacher education has become the most recent recipient, focus, or object of this cross-national gaze. The 2011 convening in Beijing of a global summit on teacher education is one of many indicators that teacher education, long a very local, even provincial, part of a nation’s education sector, is now part of a global conversation.

In this chapter, I explore the current moment of global discourse and its challenges for teacher education. I begin by making the case that, at an ideational level, there is indeed a global conversation of teacher education, one supported by cross-national studies, the role of national scholars and policymakers, and the emergence of global consulting (perhaps a new player in a new role). I then examine, through analysis of curriculum and teacher education student learning, how the practices of teacher education, when viewed comparatively, suggest a far more local, or regional, conversation. Finally, I consider the role of research in supporting what I see as an interaction of global and local discourses. Throughout, I am drawing on ideas of externalization (Schriewer 2000; Steiner-Khamsi 2004) and an understanding of teacher education as existing in both discursive and structural levels.

8.2 Global Circulation, Shared Concerns, Shared Conversation of Teacher Education

“Notwithstanding their origins, commonalities and differences, all systems of teacher preparation have to rethink their core assumptions and processes in the new global context” (Gopinathan et al. 2008, p. 14). So states a report of teacher education researchers from nine countries that argues that, despite differences across countries, all teacher education at this moment in time is challenged by the need to develop a “high-quality teacher force” as a way of improving student learning and “educational quality”. (p. 14) That report on “Transforming Teacher Education”

points to changes wrought by globalization that both alters the skills needed for the next generation and introduces economic and market pressures on teacher education as an institutional practice. The result is a set of new expectations for schools and teachers' teaching, as well as new accountability demands and fiscal constraints placed on teacher education programs.

The surface similarity is striking, as familiar elements of the argument are made in quite different contexts. For example, China's new Guidelines of the National Programs for Medium- and Long-term Educational Reform and Development (2010) argues:

The world today is witnessing massive economic development as well as disturbances. The inevitable trends of multi-polarizations in the world economic and political order, and globalization in economic development, coupled with the rapid development of technology, has increasingly intensified the competition of human resources and talents. Our country is now at a critical stage in reform and development. We are moving steadily on reform and development in the economic, cultural, politics, and social areas. With the development of industry, information technology, urbanization, marketization, and internationalization, we now face huge challenges from its vast population, limited natural resources and the environment, and the shift in mode of economic development, all of which highlight the importance and urgency of improving the quality of our people and raising a new generation of creative talents. Human resources are the key to China's future economic development and the rejuvenation of our nation, and education is the answer. (Ministry of Education, People's Republic of China 2010)

The argument's rationale, couched in terms of economic changes and globalization, is not unique to the Chinese reform plan, nor is the claim that the solution is to be found in human resource development, as carried out through "quality education". In 2011, the U.S. Department of Education convened the first International Summit on Teaching. As Linda Darling-Hammond writes, "It was the first time the United States invited other nations to our shores to learn from them about how to improve schools, taking a first step beyond the parochialism that had held us back while others have surged ahead educationally" (2011). As part of that discussion, government officials, educators, and union leaders discussed the role of teacher preparation in building "a high-performing teacher profession" (Darling-Hammond 2011).

Whether in China, the U.S. or elsewhere, the link between educational quality and teacher quality has become a drumbeat for reform. In my own country, there is now an unquestioned assumption that improving education requires improving teachers. A crux of the current argument is what that means for teacher preparation.

Teacher quality as a widely used refrain. This equation of quality schooling relying on strong teachers, I argue, has come to act as a kind of mantra in the circulating conversations about teacher education. Like a mantra, its power comes from frequent invocation. Its support comes in part from external references to the experiences of other countries (see, for example, Darling-Hammond and Lieberman 2012). The 2011 International Summit on Teaching is just one recent example, but many policy documents and reform proposals today utilize this process of referencing other countries or benchmarking practices or plans against some

purported international standard (see as the more recent example Schleicher 2012). Drawing on the ideas of externalization explored in works by Steiner-Khamsi (2004), Schriewer (2000), Schriewer and Martinez (2004) and Takayama (2010), I explore the role of such references, as well as the problems they pose. In this section, I sketch the influence of key logics of teacher education discussion, now circulating across countries, and raise the question about the ways in which these terms are shared or simply appropriated for local/national debates.¹

Many have made the argument that teacher quality is the key to educational quality: Barber and Mourshed (2007) in their study of top-performing schools; Hanushek and Wolfmann (2007) in a World Bank analysis; the OECD (2005, 2009) in studying member nation education; and Darling-Hammond (2000, 2010), Haycock (2001), Sanders and Rivers (1996) focusing on the U.S. --all provide evidence of the importance of teacher quality.

How this idea circulates. The McKinsey report on “*How the world’s best-performing schools come out on top*” (Barber and Mourshed 2007) had impressive uptake in media and policy discussions in many countries. As a report that came not from a single country’s ministry, nor a university, it reached audiences through mainstream media not specifically focused on education, such as *The Economist*, as well as many education outlets. The report claimed that “the quality of an education system cannot exceed the quality of its teachers” (p. 13). Ministries from the UK to Singapore to South Africa, state departments of education in the U.S., and many professional organizations around the world cited it.²

Within this larger argument lies the push for improved teacher preparation. That is, the logic treats the reform of teacher education as a part of the way to achieve teacher quality. In many cases, the initial McKinsey report, and in some cases the related subsequent report on “*Closing the talent gap*” (Auguste et al. 2010), have been used to identify, advocate, or justify national reforms. South Africa’s Strategic Planning Framework for Teacher Education and Development, for example, cites the report as pointing towards the key issues that reforms in South African teacher education need to address and as justifying the integrated approach to teacher education advocated by the Ministry.³ The Bahamas Employers Confederation uses the report to argue for the restructuring of teacher education.⁴ A search for references to the McKinsey report creates a map that is breathtaking

¹In this paper, I use the term “local” in large part to contrast with the term “global”. It is beyond the scope of this paper to interrogate the important complications and complexities of what constitutes “local”. Here, I use it to refer to national or sub-national policies, demographic and economic conditions, social expectations, cultural assumptions and educational systems or traditions.

²See as examples: Department of Education (UK) (2010); Ministry of Education (2010); Department of Basic Education (South Africa) (2011); http://www.oecd.org/document/4/0,3746,en_2649_39263231_41829700_1_1_1_1,00.html; Caldwell 2007; Commonwealth of Virginia Department of Education 2010; American Association of School Administrators (2011), <http://www.aasa.org/uploadedFiles/Newsroom/AFT-AASA-Framework-Prologue-042311.pdf>.

³See www.info.gov.za/speech/DynamicAction?pageid=461&sid=17598&tid=31552 for details.

⁴See <http://www.bahamasemployers.org/documents/coalitionforeducation/0807educationpolicystudy.pdf> for the Bahamian example.

for its reach across the globe: India, Singapore, Malaysia, Australia, Kenya, South Africa, the UK, Hungary, Ireland, the US, Cuba, Cayman Islands, the OECD and the European Association of Labor Economists and more appear as part of a long list of ministries, education commentators, and regional organizations that cite the report. (Educational initiatives blog 2008; Ministry of Education (2010); Ming 2007; Caldwell 2007; de Grauwe and Lugaz 2011; Department of Basic Education 2011; Department for Education 2010; Karpati 2009; Irish Business and Employers Confederation 2011; U.S. Department of Education 2011; Ministry of Education, Training, & Employment 2011; OECD 2011; Dolton and Marcenaro-Gutierrez 2011)

McKinsey's follow-on study (Auguste et al. 2010) is intriguing both by what it does in terms of addressing the question of teacher education and what it doesn't do. In "*Closing the talent gap*", the authors ground the discussion of improving the teaching profession in the larger argument about achieving high performance (of schools and systems). Yet far more of the report aims at issues around entry to teaching (recruiting the right people) and far less on what preparation actually should entail. A key thrust of the 2010 McKinsey report is that the "top third +" strategy is worthy of emulation, as top-performing countries (Singapore, Finland, and South Korea, as the cases highlighted in the report) use this approach. There is a relative lack of discussion of the content of initial teacher education, and no substantial interrogation of what rigorous teacher preparation entails.

In the more recent OECD background paper (2011), we note the reflection of this argument and a similar pattern of emphasis in framing the issues: The skewed discussion of "recruitment and initial preparation of teachers", combined and linked as a single unit in the 2011 OECD background paper, reflects the McKinsey orientation that considers teacher education within the larger treatment of improving the teaching profession, yet provides little focused discussion.⁵ Thus, of the OECD's 70 paged paper (including several blank pages), only nine pages of text compose the section on recruitment and teacher preparation. Of these nine, only two focus on initial teacher education, and one of these two is a full-page textbox entitled "Preparing teachers to lead improvement in China", focusing on teachers learning to become action researchers (OECD 2011, p. 15).

In the circulating discussions, one notes a pattern of frequent referencing of the same examples: Finnish teachers and Singaporean teachers, for example, are widely referred to, even when the McKinsey report is not directly named. In the Background Report for the International Summit on the Teaching Profession, prepared by OECD (2011), Finland and Shanghai are the two cases specifically highlighted in discussions of initial teacher education. One notes the cross-referencing of these ideas (for example, the link between teacher quality and education quality) and some reform proposals (such as the "top third" idea of the 2010 McKinsey report). PISA, TIMSS, TALIS, as well as the McKinsey report, become frequent reference points. Little detailed information is needed about how evidence is

⁵One notes a parallel to the business advice that the same McKinsey company gave to Enron about "get the brightest into the room". See Gladwell (2002) for more.

gathered, what it reflects, and how measures are determined, as readers are often assumed to be familiar with these.

In this process, the consulting group clearly plays a role, but so too does the mass media as well as the movement of scholars as consultants, presenters at international conferences, or in study and exchange. All these remind us of the tight connections made possible by the linkages of globalization (Stromquist 2002).

The limits of wide circulation. Alexander (2010) argues that “The phrase ‘world class’ has become both a linguistic adjunct to globalization and the stated aspiration of national governments worldwide” (p. 811). Certainly, some of the circulating ideas – for example, about high-performing schools – encourage or draw on an idea of ‘world class.’ But in teacher education, I would argue, the important aspects of the circulation is the ways in which international examples are used to justify domestic policies, with the examples tending to be seen as legitimate because they are, as Alexander puts it, “defined in relation to measurable educational outputs” (2010, p. 811). Many, including Alexander, lament the constraining effects of measures of quality that focus entirely on “student performance in international achievement surveys such as TIMSS, PISA and PIRLS.” (p. 811) For teacher education, a significant problem is that we do not at present have an agreed on measure of the quality of the outcomes of teacher education, so teacher education quality is measured by proxy and too often assumed to be understood in terms of student achievement. (see Kennedy 2010 for discussion of the problems of such measurement and attribution.)

The image of good teachers that thus circulates, and propels some of the global conversation about teacher education, assumes that “good teachers are those who produce good student performance in standardized tests. This is an assumption that global accountability discourses buttress and reinforce, and this assumption is rarely questioned in the mainstream discussions on notions of good teachers (especially in policy-oriented circles)” (Ham, Personal Communication).

The purported global conversation comes to frame the discussion at one level. This framing persists even when critics challenge the McKinsey report. One cannot help but notice how Alexander (2010), thinking comparatively and about his native UK educational system, criticizes the report, but in doing so takes up and uses the report’s terms. Similarly, Diane Ravitch (2009) draws attention to it and uses it to advance her own claims. She criticized the way some U.S. politicians (in this case, then NY schools chancellor Klein) make “political use of the McKinsey study” to justify their own positions:

This study offered Chancellor Klein the opportunity to argue yet again...that schools alone can close the achievement gap, and that such things as poverty and social disadvantage are merely excuses for those unwilling to accept the challenge.

Actually, the report doesn’t say this...It does say that low-income students are likely to get less experienced, less qualified teachers, and that schools in poor neighborhoods have less money for education than those in affluent districts. Anyone of any ideology or political persuasion should be unsettled by these wide disparities between students from different economic backgrounds (Ravitch 2009).

In short, these reports and international studies frame the discussion: they give us terms and categories (“world class,” “top-performing”, “top third”) that get taken up and used in different contexts. They offer metrics for evaluating and distinguishing.

They offer benchmarks and reference points. Consider how Barack Obama makes such reference even in his annual State of the Union address to the joint session of Congress and a national television audience: “Let’s also remember that after parents, the biggest impact on a child’s success comes from the man or woman at the front of the classroom. In South Korea, teachers are known as ‘nation builders.’ Here in America, it’s time we treated the people who educate our children with the same level of respect.” (Obama 2011)

But in fact countries use these terms to mean many different things. “Alison Wolf (2002) comments that ‘In recent years, the term ‘world class...’ has become a political and marketing slogan, with little attempt to define its meaning’” (Alexander 2010, p. 803).

Is the notion of good teacher a globally shared one? And how does that notion – or any shared notion of good teaching – affect teacher education and the ways in which teacher education discourse occurs in a context of global exchange, referencing, and externalization?

Global convergence in teacher education? In the discourse of teacher education, globally circulating framing is less prominent (and perhaps less developed) than in the case of K-12 schooling, where TIMSS and PISA have had years of influence. Yet there is nonetheless much of the externalization process at play as policymakers and reformers argue for the reform of teacher education. While there is much referencing and cross-referencing, on close examination we see that those using the terms, frames, or reports/data do not necessarily mean or refer to the same thing. Take, for example, the presence of the McKinsey report(s) in the context of arguments about teacher education reform and change. The gist of the report, summarized, is high-performing systems achieve their success because:

they have produced a system that is more effective in doing three things: getting more talented people to become teachers, developing these teachers into better instructors, and in ensuring that these instructors deliver consistently for every child in the system. (...)

The quality of an education system cannot exceed the quality of its teachers
(Barber and Mourshed 2007, p. 40).

A Hungarian author (Karpati 2009) citing this document suggests that this calls for a focus on teacher competencies, and to consider competencies as defined in Hungary in relation to those of EU documents, leading to the need for a “new professional profile ... to be created for teacher training” (Karpati 2009, p. 204). He further uses international references (to the EU and other, unnamed reference points) to suggest many things, including the ideas that the curriculum of teacher education needs to change to incorporate some “modern methods,” that the delivery of teacher education needs to involve professional development schools, and that teacher education needs a closer link between the teaching of subject knowledge and foundations. He uses international reports to speak about the governance and control of teacher education and the development of teacher researchers, among other topics (Karpati 2009).

In contrast, in Ireland, the Irish Business and Employers Confederation use the report to argue for the various aspects in the continuum of teacher education (2011). For their discussion of initial teacher education, they take as the main

insight from the international studies the need to recruit top students into teacher preparation:

we would highlight the references in the Teaching Council's own background document *Teacher Education in Ireland and Internationally* that the top performing education systems limit the number of places on teacher training courses, so that supply matches demand. This means that teacher training is not an option for those with few other options. The experience in leading top-performing systems such as Finland would suggest that making teaching selective in this manner enhances its attraction to high performers. (2011, p. 2)

In the UAE presentation "Abu Dhabi's Initiatives Relating to the Best Practice", the author cites the McKinsey report to make particular arguments for teacher education reforms: On the same "page" of the powerpoint highlighting the McKinsey claim that "The quality of an education system cannot exceed the quality of its teachers," three implications for UAE are listed. In addition to one related to developing principals for school leadership are:

- "Improving the quality of all teachers by equipping them with the skills they need to deliver the curricula – this will include raising qualification standards and English proficiency of teachers. Native English Teachers will help ADEC's drive for improvement."
- "Increasing the share of Nationals in the teacher workforce by partnering with the Emiratization Council and promoting education as a worthy career" (Eltigani 2011)

In Australia, Caldwell proposes, that in order to transform schools in Australia:

- "every teacher entering the profession should have a Master's degree – as in top-performing Finland;
- there should be incentives to attract outstanding graduate practitioners from fields other than education in disciplines of high priority in schools" (Caldwell 2007)

The comparisons could go on. But these four instances – from Hungary, Ireland, UAE and Australia, which reflect countries with very different economic and political contexts, educational traditions, and system arrangements – illustrate two things: (1) claims about and evidence from other countries are frequently used as justification for current or proposed national reforms in teacher education and (2) the interpretations of international experience varies. The external reference is used very differently in each case, with divergent (and local) interpretations of the "implications" of international experience. In other words, there is much variation in what advocates see a particular "fact" as justifying. In short, the reform of teacher education at some ideational level appears to have common chords, but it also reflects the contextualized debates and structures of each nation. There is little interrogation of the terms and frames of such highly referenced claims.

As Schriewer and Martinez (2004) argue, externalization as a process is one that involves advocates turning to external experience to validate one's position. Thus, globally circulating ideas can be ideas that get taken up and referred to by many, but what those ideas mean in the context of the particular advocacy, what the writer says they show, illustrate or support, may be quite different. Like the Japanese (Takayama

2010), many US commentators and reformers of education now use the Finnish example to support quite different, sometimes conflicting, positions. For example, some can use the case of Finland to argue that the key lesson from international experience is that to improve teaching we need to recruit more selectively the academic “cream of the crop” into teaching (Friedman 2010). This argument has been one domestically that resonates with the alternative pathways, especially Teach for America, that suggest that who enters teaching is the foremost question, and that a sustained program of teacher preparation is not needed. Yet others turn to Finland to point out the rigorous, long program of initial teacher education that is seen as essential (Ravitch 2011; Tucker 2011).

When we look at teacher preparation, we see that in fact, despite some discourse that uses language that appears to have wide and growing currency – such as the “imperative” for reform of teacher education, and the importance of “quality”, “reflective”, “active learning” or “constructivist”, the programs and opportunities to learn themselves suggest a tension between global and local. Indeed, whether looking at the curricular structures, opportunities to learn, or the actual learning of preservice teachers, recent international comparative studies suggest that teacher education remains a practice that continues to reflect local traditions, orientations, and contexts.

8.3 Teacher Education as the Enactment of Local Conversations

I consider below three recent studies, as well as anecdotal reports, that illustrate the power of “the local” as a centripetal force that works on teacher education. I do not discount the presence of international exchange, tightened links between individuals or institutions across countries, or increasingly familiar internationally “shared” terms and frames that now enter national-level debates. Yet these studies suggest that what could be seen as the semantically decontextualized dimensions of teacher education exist within culturally contextualized practices (Kim et al. 2011).

Curriculum of teacher education: Different ways to turn the kaleidoscope. In a recent editorial in the leading US journal that focuses on teacher education (*Journal of Teacher Education*), the editors compare the construction of teacher education to working a kaleidoscope:

The kaleidoscope viewer puts one end of the tube to her eye, points the other toward a light source, then rotates the tube, producing colorful symmetrical patterns formed by the tiny, tumbling objects inside. Beautiful though they are, these patterns are evanescent, disappearing with the twist of the wrist. The kaleidoscope maker cannot predict what patterns might emerge from the individual bits of colored glass, beads, or stones placed inside the tube. We believe that it is not too great a stretch to suggest that teacher educators are similar to kaleidoscope makers. Teacher educators put together programs of course work and experiences with the goal of educating teachers whose knowledge, skills, and habits of mind will intermingle to create pleasing patterns of practice called *quality teaching*. (emphasis in the original) (Wang et al. 2011, p. 331)

If we think of the curriculum of teacher education as such kaleidoscope work, examining how teacher education is organized in different national, institutional and programmatic contexts suggests that the kaleidoscope viewer – in this case, the architects of teacher education programs of study – have very different views in mind.

It would seem that the building blocks of teacher education curricula – what we might see as the largest glass pieces within the kaleidoscope – are remarkably similar across countries. It is indeed noteworthy that, despite enormous differences in economic, historical, and other contexts, the 17 countries engaged in the IEA's TEDS-M study or the six countries in the smaller MT21 study could reasonably agree that teacher education curriculum for the intending teacher of mathematics includes coursework and experiences in content (mathematics), content pedagogy, and general pedagogy (Tatto et al. 2012; Schmidt et al. 2011). Similarly, in ways that we should not underestimate, it is significant that across these countries, one finds teacher education in each place includes some attention to “theoretical knowledge” and some to “practical knowledge”, and that attending to these requires in each nation's preservice teacher education curricula at least some learning in an institution of higher education and some organized and involved in schools. At the largest level of curricular arrangement, then, there appear to be striking similarities across countries.

On closer examination, however, curricular expectations across countries indicate that countries do not share a “collective image or epistemic mode of the ‘ideal teacher’” (Kim et al. 2011, p. 48). In a comparative analysis of U.S. and South Korean mathematics teacher education, my colleagues Rae-Young Kim, Seung-Hwan Ham and I examined the meanings embedded in the program expectations (in formal teacher education documents developed by teacher education programs).⁶ At the level of key ideas, we found some strong similarities across programs in both countries. (See Table 8.1.)

On the one hand, it seems that there is no doubt about the importance of mathematics teacher knowledge in both countries in terms of discursive practices expressed in official educational aims of secondary mathematics teacher preparation institutions. At least about one-fifth or more of the institutions in both countries appear to have educational aims that refer to the importance of each of the following: a wide range of disciplinary knowledge, deep content knowledge, knowledge about instructional methods, and knowledge gained from situated experiences. In particular, a striking agreement exists between the two countries in terms of the teacher preparation institutions' mention of the importance of teachers' knowledge about instructional methods; that is, about three-fifths of the institutions in both countries mentioned it in their official educational aims. (Kim et al. 2011, p. 55)

⁶Our study considered 28 US and 21 South Korean institutions that reflected a purposive sample of nationally accredited mathematics teacher education programs from each country that reflected variations in institutional prestige and geographic location. To understand formal expectations and educational aims, we analyzed such documents as the teacher education program or department handbook and website, especially the introductions that provide overviews of goals and orientations. For more on the thinking behind this analysis as well as the sample, see Kim et al. 2011.

Table 8.1 Some key ideas about teacher knowledge that are embedded in official educational aims of secondary teacher preparation programs

Ideas about teacher knowledge	Key quotes
Wide range of disciplinary knowledge	A wide variety of general education courses; Interdisciplinary nature of educational inquiry; Comprehensive studies in general education
Deep content knowledge	Rigorous studies in mathematics; Professional expertise in the content area; Profound understanding of mathematical principles and concepts
Knowledge about instructional methods	Effective instructional methods; A variety of strategies to enhance student learning; Creativity in teaching; Appropriate assessment and evaluation
Knowledge about how to deal with student diversity/equity issues	Understanding of human diversity; Diverse learners; Cultural and linguistic diversity; Students' special needs; Promoting both equity and excellence
Knowledge gained from situated experiences	Field experiences; Student teaching; Practicum; Internship in schools; Clinical experiences

(from Kim et al. 2011, p. 54)

While there appears somewhat striking similarity at one level in terms of official educational aims, the relative emphasis given the different ideas in programs varied greatly by country, as Fig. 8.1 illustrates. These data suggest the influence of culture, history and social epistemologies on the images of good teaching and the models of teacher knowledge expressed in the official educational aims of secondary teacher preparation programs (Kim et al. 2011, p. 55). For instance, we found that statements about the importance of deep content knowledge were more than three times more frequent in materials from the South Korean programs than the U.S. ones. One possible explanation is that the South Korean programs reflect and draw on the traditional societal expectations for “scholar teachers” (Leung 2001), that is, teachers possessing deep and rigorous knowledge of their subject. Interestingly, over three-fifths of the U.S. programs articulated the importance of knowledge gained from situated experience; this may reflect an assumption that “prospective teachers need to be provided with sufficient opportunities to learn in school settings where they can make connections between theory and practice. This contrasts with South Korea, where less than one-quarter of the programs mentioned something about situated experiences.” (Kim et al., p. 55).

Furthermore, when we moved beyond looking at formal statements of expectations and instead examined expectations as expressed through curricular arrangements, we saw additional differences by country. As Tables 8.2 and 8.3 suggest, there were some similarities but also strong contrasts in the models of teacher education present in the curriculum requirements in the two countries. There were similarities in terms of a requirement that future teachers take some

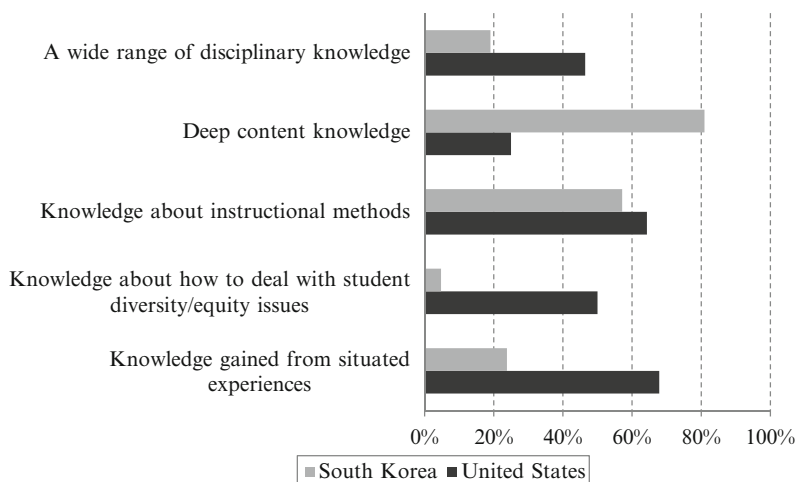


Fig. 8.1 Percentages of secondary teacher preparation programs whose official educational aims mention different key ideas about teacher knowledge (from Kim et al. 2011, p. 55)

of each of what we saw as five types of courses.⁷ Another pattern of similarity was that the majority of student course-taking hours, representing about two-thirds of coursework, came from just two of these categories – general knowledge and content knowledge. We believe that “such similar curricular structures between the two countries demonstrate a certain degree of consensus on the ratio of general and non-pedagogy knowledge to pedagogy-related knowledge around which curricular requirements are organized in secondary mathematics teacher preparation programs.” (Kim et al., p. 55)

Despite these similarities, we note what appear to be national patterns, ones that parallel the pattern of key ideas embedded in official statements. In terms of the relative emphasis of types of knowledge and in where and how one learns to teach, the country differences in terms of curriculum requirements mirror those found in formal program goals. As shown in Table 8.2, the most emphasized area in the South Korean programs’ curricular requirements is content knowledge, while general knowledge takes precedence in the U.S. programs.⁸ Our findings, similar to what prior research has suggested, indicate an assumption in the U.S. that mathematics teacher knowledge develops through exposure to a range of disciplines (Roth 1999), while in South Korean programs there appears to be an assumption that teacher knowledge is

⁷These were content knowledge, pedagogical content knowledge, pedagogical knowledge, general knowledge, and field experience. For more details, see Kim et al. 2011, p. 54.

⁸“In terms of credit requirements, 45 % of credits are allocated to CK courses in South Korea, which is the largest proportion of the five types of courses in the country. In the United States, however, the credit requirement for CK courses is only 26 %, which is lower than the credit requirement for GK courses by 13 %” (Kim et al. 2011).

Table 8.2 Percentages of credit requirements allocated to different types of teacher knowledge in secondary mathematics teacher preparation programs

	South Korea ($n=21$)		United States ($n=28$)		t	p -value (2-tailed)
	Mean	SD	Mean	SD		
GK	23.03	9.13	39.38	15.81	-4.55 ^a	<0.001
CK	45.29	10.60	26.33	10.36	6.26	<0.001
PCK	16.35	6.04	8.90	6.65	4.03	<0.001
PK	12.94	3.87	12.66	10.10	0.14	0.893
FLD	2.40	1.84	12.73	6.91	-7.56 ^b	<0.001

Note: The sum of the means of all five curricular components equals 100 within each country. Independent-samples t -tests were conducted using either Student's t -test or Welch's t -test, depending on the statistical significance of Levene's test for equality of variances; Student's t -test was used unless Levene's test was significant at the $p < 0.05$ level

^aWelch's t -test statistic

^bWelch's t -test statistic.

From Kim et al. 2011, p. 56

Table 8.3 Percentages of credit requirements allocated to content-related (CK+PCK) and pedagogy-related (PK+PCK+FLD) components in secondary mathematics teacher preparation programs

	South Korea ($n=21$)		United States ($n=28$)		t	p -value (2-tailed)
	Mean	SD	Mean	SD		
Content	61.64	10.08	35.23	11.42	8.42	<0.001
Pedagogy	31.69	7.05	34.29	12.93	-0.83	0.409

From Kim et al. 2011, p. 56

centered in academic expertise in mathematics (Kwon 2004; Pang 2003). As Table 8.3 indicates, only slightly more than a third of credit requirements in the U.S. programs involve content-related components (CK+PCK), a proportion which is significantly low in comparison to South Korea. Similarly, we see national differences in terms of the thinking behind the importance and approach to situated knowledge. Knowledge developed from situated experiences gets considerably more emphasis in the United States programs than in South Korean ones (see Table 8.3). Credit requirements allocated to field-based experiences represent less than 3 % of the total coursework in the South Korean programs, while they represent 13 % in those in the United States.⁹ Interestingly, the emphasis on pedagogy-related components overall was quite similar for the South Korean and U.S. programs, yet where these components were located (and what they involved) differed: the South Korean programs tend to organize opportunities to learn this domain in on-campus coursework, while the US programs located these in field-based experiences.

⁹Even though there was a larger standard deviation among U.S. programs than among South Korean ones in our data, the difference in curricular emphasis given to field-based experiences between the two countries is statistically significant.

Lest one think these contrasts reflect unique differences between US and South Korea, it is noteworthy that in a larger study (MT21), one finds similarly large differences in expectations, as reflected in curricular arrangements, among six countries (Bulgaria, Germany, Mexico, South Korea, Taiwan, and US). (Schmidt et al. 2011)

In considering the comparative case of South Korea and the U.S., we argue that:

The data presented here show that there are common qualification systems and considerable agreements on the integral components of teacher preparation programs that shape pre-service teachers' knowledge for teaching in both countries. In terms of knowledge expectations expressed in official educational aims of teacher preparation programs, prospective teachers in both countries are expected to have competence in both theory and practice as fundamental bases for teaching. As many studies suggest, it seems that there are some common international models of teacher quality and teacher qualifications that have been rationalized through professional discourses at an international level (Akiba, LeTendre, and Scribner 2007; Cha 2002). (Kim et al. 2011, p. 57)

Nevertheless, we observe clear differences between the two countries in terms of curricular emphasis as well as in many aspects of the educational aims of teacher preparation programs. Despite within-country variation, there appear to be some general national patterns in how to organize teacher preparation. We note, for example, how the vision of the United States as a pluralist and democratic society has led teacher education programs to emphasize diversity and equity issues. There is broad agreement that teachers need a wide range of cultural, social and professional knowledge and experience in classrooms to be able to deal with the diversity of learners in U.S. classrooms. In contrast, South Korea has less cultural diversity and societal expectations for teachers "lead to the assumption that teachers should have rigorous content knowledge to improve students' cognitive achievement. Teachers are expected to be 'scholar teachers' (Leung 2001) with high academic competence in mathematics" (Kim et al. 2011, p. 57). In the South Korean social, economic and historical context, in which education has long been viewed as the sole route towards social mobility (Bae 1991; Robinson 1994; Sorenson 1994), these high expectations of teachers may not be surprising. (Kim et al. 2011, p. 57)

As comparison of the curriculum and formal expectations of mathematics teacher preparation in the U.S. and Korea suggests, societal, cultural and historical factors within each country weigh heavily on the present debates and current framing of what teachers should learn. In that sense, despite US and South Korean policies being directed towards strengthening teacher education quality, how they interpret quality differs significantly. We can only understand the difference by understanding the role of local (that is, national) debates and pressures. Regardless of what may be perceived as global agreement about aims of teacher education, national histories and situations seem to play a powerful role in shaping the specific turns of the teacher education curricular kaleidoscope.

Opportunities to learn as they reflect "local" images of good teaching. As a window onto notions of preparing the good teacher, and using the framework of the intended, enacted and achieved curriculum, I argue that it is important to consider not only the expectations formally written in curriculum, but also what curriculum is enacted. Analysis from the six-country MT21 study demonstrates that subject

matter differences internationally include differences in the opportunities students (future teachers) have to learn particular topics within the subject area.

For example, when asked about their opportunities to study topics related to what MT21 called Advanced Mathematics (including topics of “abstract algebra, calculus, multivariate calculus, differential equations, functional analysis (including the theory of real functions), the theory of complex functions, differential geometry, and topology”), the typical future teacher sampled in each country ranged from studying 86 % of the topics (in Korea) to only around 25 % (in Mexico) (Schmidt et al. 2007, p. 28). In terms of topics within Algebra and within Analysis, “the Taiwanese, Korean and Bulgarian future teachers all covered around 80 % or more of the possible topics, while Germany covered around 60 %–70 %” (Schmidt et al. 2007, p. 6). Future teachers in the U.S. and Mexico experience a very different set of opportunities to learn mathematics than their colleagues in these countries. In fact, Mexican and U.S. teacher education students surveyed reported covering less than half the topics in Analysis, and for the U.S. students, 56 % of the Algebra topics (with Mexican students covering even less than half).

Many might argue that such sharp disparities in the amount of mathematics content and the topic emphasis within that subject preparation reflects national differences in decisions about the relative balance of attention to subject matter/content knowledge and pedagogical knowledge. Just as assumptions about what “content knowledge” is part of good teacher preparation varies, so too we see that there is not a uniform view as to what “pedagogical knowledge” is required for preparing some image of the good teacher. We found teacher preparation programs have significant variation in the emphasis on general pedagogy and content-specific pedagogy. Whereas Italian teacher candidates for middle school mathematics teaching would divide their pedagogy-related training time evenly between subject matter pedagogy (20 % of their full course time) and general pedagogy (also 20 % of their full course time), their counterparts in Bulgaria spend 30 % of their teacher preparation program on subject matter pedagogy and only 7 % on general pedagogy.¹⁰ Even with the broad field defined as general pedagogy,¹¹ the variation by country in what students have an opportunity to learn about theories related to educational psychology, student diversity, planning for classroom instruction, and so on. The typical U.S. future teacher in the study reportedly had opportunities to learn 55 % (more than eight topics) of the 13 possible topics that made the collective set of general pedagogy topics studied in MT21, while their counterpart in Bulgaria only studied around four (Schmidt et al. 2011, p. 101). What each country thinks makes a competent teacher in terms of their knowledge of pedagogy and instruction is clearly very different. It is therefore dangerous, in international discussions, to assume we know what it means to talk about being qualified in terms of knowledge of

¹⁰In the planning phase of MT21, colleagues from Italy and the UK also participated. Here and elsewhere in the paper, references to practices in these two settings come from personal communications during this planning phase of MT21 work.

¹¹See Schmidt et al. 2011, p. 100f for discussion of this.

“pedagogy.” It is also inaccurate to suggest that, in terms of enacted curriculum, teacher preparation globally shares the same assumption about what knowledge makes for a competent beginning teacher.

Our studies suggest that, much like in the examination of mathematics competence above, there is much variation across countries in what preparing a good teacher entails in terms of learning pedagogy – both subject-specific and general pedagogy (Bloemeke and Paine 2008; Schmidt et al. 2007). And, as we found for mathematics preparation for future teachers, it is important that we recognize the issues of competence are not simply ones answered by how much coursework in the area a future teacher takes. Rather, our comparative work demonstrates that within mathematics pedagogy, there were quite different views by country in terms of what mathematics pedagogical knowledge entails. For example, mathematics pedagogy in Germany’s teacher education is an academic discipline. During their first phase of teacher preparation (at the university, before a second, field-based phase), German students are:

exposed to and expected to develop competence in theories and concepts about pupils’ learning of mathematics at school as well as about its teaching. The future teachers acquire knowledge about the contribution of mathematics to the development of children, about the structure and different philosophies of mathematics curriculum, the history of mathematics at school, about methods and media in teaching mathematics, the cognitive demands of mathematical problems and students’ difficulties with these as well as results of instructional research on mathematics learning. The conception of knowledge of math pedagogy appears very similar in Taiwan and Korea where future mathematics teachers participate in extensive theoretical work related to pedagogical aspects of mathematics, though they place significantly less emphasis on a subsequent practical training than does Germany. In Taiwan, a student will have 26 credits for math pedagogy and pedagogy, with both required and elective courses in subject-specific pedagogy, such as the psychology of mathematics learning (Bloemeke and Paine 2008, p. 2033).

This scholarly and academic orientation to what constitutes math pedagogy contrasts with a conceptualization of mathematics pedagogical knowledge as being chiefly practical knowledge. In this approach, one we often find in U.S. teacher education programs,¹² teacher education coursework in math pedagogy focuses the intending teacher on gaining exposure to a menu of skills and techniques as well as developing a repertoire of instructional approaches. It is quite common that coursework in this area is closely linked to practice and may even involve some field placement where students can observe and try out approaches. Such contrasts reflect long traditions of schooling and intellectual orientations, which, while not necessarily unique to a single country, connect to particular contexts.

¹²Certainly some U.S. researchers and teacher education practitioners, like many European counterparts, conceptualize mathematic pedagogy as a scholarly area of inquiry and see knowledge of it as including theorized understandings. Shulman (1987) and others identify pedagogical content knowledge as a knowledge which includes theoretical understandings about the teaching of subject matter. I suggest that the presence of the U.S. discourse on pedagogical content knowledge, which entered the U.S. field only 20 years ago, in fact reflects the persistence of a longstanding approach which deems the knowledge of subject teaching to be primarily a practically-oriented one. For more, see Bloemeke and Paine 2008.

Table 8.4 Profiles of teachers

Type	Country					
	USA	GER	MX	BG	TW	SK
Teacher at risk	20 %	–	2 %	28 %	1 %	3 %
Pedagogue	25 %	31 %	30 %	50 %	37 %	36 %
Instructor	–	9 %	4 %	3 %	30 %	21 %
Competent teacher	31 %	58 %	63 %	19 %	32 %	40 %
Social worker	24 %	3 %	–	–	–	–

From Bloemeke et al. 2011

Across countries, in a analysis of the opportunities to learn (OTL) in the six-country MT21 data, Bloemeke (2011) conducted a latent class analysis to describe patterns of the envisioned teacher competencies that teacher education students' opportunities to learn reflected. Together OTL offered future teachers chances to develop cognitive abilities (i.e., learn content knowledge, pedagogical content knowledge, and general pedagogical knowledge), and develop affective-motivational characteristics (beliefs about mathematics, teaching and learning, as well as motivations and self-efficacy).

As Table 8.4 suggests, Bloemeke found that there were two types of teacher profiles that appeared to exist at a reasonable level (approximately 20 % or higher) across all the countries studied. One she terms the “pedagogue” (with “strong beliefs, high self-efficacy, and medium” mathematics pedagogical knowledge) and the other the “competent teachers” (who are student- and process-oriented, with high content and pedagogical content knowledge). But she did not find persuasive evidence of a single shared image of good teaching.

Overall she found five distinct types, with variability within and across countries. Differential selectivity and license differences, both highly contextual factors, explain part of the variation. She found patterns of variation that suggest the power of cultural and philosophical traditions. For example, the two East Asian countries involved in the study were distinctive in their orientation towards an image of teaching that she termed “instructor” (with medium levels of content and pedagogical content knowledge but less pronounced beliefs).

The findings of the larger 17 country TEDS-M study of the preparation of elementary and secondary mathematics teachers echoes and reinforces the patterns identified in MT21. In exploring the question of whether there is a “curriculum of teacher education accepted world-wide?”, Bloemeke, Suhl and Kaiser (2011) found that in terms of future teachers' opportunities to learn (OTL), “a few content topics and teaching methods were common across all TEDS-M participants – no matter in which country they were trained or whether they were aimed at teaching mathematics up to grade 10 only or above grade 10. These common...topics and methods may represent an inherent logic of mathematics teaching and therefore circulate globally and widely independent of educational traditions or the developmental state of a country.” (p. 1) But the researchers found a great deal of heterogeneity. A worldwide set of OTL “neither existed in mathematics nor with respect to teaching methods experienced.” (Blömeke et al. 2011)

With latent class analysis, the researchers were able to develop profiles which could be explained in part as the result of “cultural or professional characteristics”. In the mathematics content OTL in 12 of the participating countries, there was a salient profile, with 50 % of the future teachers falling into a single profile/class, a finding Bloemke et al. describe as a cultural effect. In OTL related to kinds of mathematics content and disciplinary orientation, there were regional differences: all the non-Western (including Eastern European) countries participating were oriented towards what the researchers categorized as advanced or traditional university mathematics profiles, while they felt the relative absence of this orientation in the Western countries’ data reflect the view that the benefit of advanced content is currently controversial in these countries.

What teachers learn as a reflection of local expectations of the good teacher.

Finally, in terms of what teacher education students learn through their teacher preparation, results from both MT21 and TEDS-M show national differences that seem to be reflections of variations in assumptions of the good teacher and how one learns to teach (Schmidt et al. 2011; Konig et al. 2011). In the analysis of general pedagogical knowledge (GPK) that was conducted as a sub-study within TEDS-M, involving only Germany, Taiwan and the U.S., future teachers were assessed in terms of knowledge of four dimensions of GPK: teaching structure (i.e., preparing, structuring and evaluating lessons); motivation and classroom management; adaptivity (knowledge and skill in dealing with heterogeneous learners in classrooms); and assessment. Both their declarative and procedural knowledge were assessed. The results show significant country differences: U.S. future middle school teachers’ overall test scores were significantly lower than those of Taiwan and Germany. On the GPK topic subscales, the U.S. teacher education students were relatively equal on structure, motivation and assessment but relatively weak in terms of adaptivity (knowledge and skill in dealing with heterogeneous learners), while Taiwan and Germany were relatively high on these. In terms of cognitive subscales, the US appeared to be relatively strong in their knowledge related to generating classroom strategies but weak in recalling knowledge and analyzing problems. “Future teachers from Germany showed a contrary profile, whereas the profile from Taiwan was balanced” (Konig et al. 2011, p. 197).

This study’s effort to recognize that images of the good teacher involve both knowledge of topics/content and cognitive skills. Describing this complex knowledge is of course a new and developing area. But this inaugural comparative study of teacher education provides more evidence for the claim that teacher education reflects its context.

8.4 Concluding Thoughts

This chapter ends with what might be mistaken for mere ambiguity. I have argued that there are indeed notions influencing debates about teacher education that have now gained widespread, perhaps even global reach. Certain frames have become

widely shared: notions of teaching quality as the driver of teacher education reform, ideas of rigorous teacher preparation, claims about the importance of teacher research and inquiry to the preparation of teachers.

I have claimed that these circulating notions have gained currency in part through a process of referencing and cross-referencing, and they allow a process of externalization of internal debates, as proponents within one country turn to the experience of other countries to advocate for particular reforms. Yet I also have suggested that much of this global debate of teacher education operates on an ideational level, with terms, categories and data introduced that are then interpreted in ways that reflect the interests of those using them. This means that even those so-called global ideas do not represent a single, shared vision.

At the same time, I have reviewed recent studies that provide preliminary evidence of differences across countries in the expectations held for what future teachers should learn and come to know, the opportunities they have to do that, and what in fact they do learn. This evidence suggests that some of the explanation for the variation (though not all) reflects the press of local/national traditions, assumptions, and debates.

How do these “local” and “global” visions of the good teacher interact within teacher education? To what extent do they exist at different levels – one at the program level and one at the policy level? Or do they simply coexist within programmatic practices?

We know that today, given accountability and marketing forces at work within institutions of higher education, national ministries of education, and the profession of teaching, certain frames – especially of the need to account for the “value added” of teacher education – have come into play. The need for accountability in teacher education is now a resonating theme experienced within many countries and within institutions. As U.S. teacher education programs feel pressed by state legislatures or by national accrediting organizations to provide accounts of the impact of their education for their future teachers, we see this pressure. As historically “normal” institutions in China now are in competition for students with universities who were historically “comprehensive”, we see a different version of this pressure. Yet as this example suggests, even the so-called global process of marketization works itself out in unique ways within each context. In that regard, trying to understand both the influence of global processes and local pressures is an important endeavor for all who care about teacher education today.

Such pressures create a space and a need for critical research. As Looney (2010) argues in considering “teacher professional identity” in the context of the EU, “while no one would challenge the value of aspiring to ‘high quality teaching’ and ‘adequate initial teacher education’, much could be made of the assumptions underlying these phrases given their location within the framework [of EU documents] and the apparent absence of any contestation around their meaning and implications” (p. 73). In examining the way forward in building strong teacher education within any one location, researchers need to interrogate the discourses beyond the local that impinge of these debates. We need to unpack the frames that circulate at a global level. We also need to examine the

sources for and influences on local practices which affect the possibilities for recreating teacher education. Only by taking into account both global and local can we begin to address the demands of schooling, teaching and learning in a period of globalization.

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Chapter 9

Worldly Critical Theorizing in Euro-American Centered Teacher Education? Preparing Bilingual Teacher-Researcher Theorists for the Twenty-First Century

Michael Singh

Abstract Can Australian teacher education programs which continue to invest heavily in Euro-American theories produce educators for the twenty-first century, one which is increasingly Asia-centred and China-focused? It is possible to undertake an extensive critique of Australia's Euro-American centred teacher education programs without privilege, and thereby reproducing this agenda. Moving beyond the limitations of this negative moment, this chapter presents a positive move in critique through a meta-analysis of the educational principles and pedagogies for preparing bilingual teacher-researcher theorists for making *worldly linguistic connectivities* and *critical theorizing*. The focus is on doing so here and now; not deferring it into the distant future. The review of the research literature, that is the historical developments in this field, indicates that despite assertions to the contrary, there is little evidence of the joining together of Western and non-Western critical theorizing in Australian teacher education. For this reason the methodology of *educational research for critique* is employed in this meta-analysis of the educational principles and pedagogies of Research Oriented School-based Eurasian Teacher Education (ROSETE) Partnership. The educational principles proposed in this chapter include *intellectual equality*, *declassifying* the theory/data divide that privileges Euro-American critical theorizing over the rest; the *presupposition of intellectual equality*, and the *verification of intellectual equality*. Pedagogies for *worldly linguistic connectivities* and *critical theorizing* concern what teacher-researchers from China *can do*, *can say*, and *can be* in Australia.

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Keywords Cross-linguistic bridgeheads • Declassifying the theory/data divide
• Educational research for critique • Intellectual equality • Theoretical contact zone

9.1 Introduction

Despite Australian universities having policies for internationalising education, there continue to be pedagogical difficulties and uncertainties with this agenda. In its glossy marketing brochure, one Australian university declared that when developing its teacher education programs, it “undertook extensive research into the changing environment not only in Australia, but also Europe and North America, to produce the best educators of today and the future” (University of Western Education 2012, p. 5).¹ Apparently there is little interest in using non-Western critical theoretical resources to see what new questions these might stimulate.

When he drew on concepts from his South Asian intellectual heritage, Nobel Laureate, human development scholar, Amartya Sen (2009) felt his book, *The Idea of Justice*, vulnerable to the misfortunes of writing for readers such as Australia’s best educators who are schooled in Euro-American theories. Accordingly, Amartya Sen slipped in a qualification that revealed his consciousness of the reluctance among just such Australian educators to engage with anything but Euro-American theoretical tools. Sen (2009, pp. xiii–xiv) wrote, ‘one of the unusual – some will probably say eccentric – features of this book compared with others writing on the theory of justice is the extensive use that I have made of ideas from non-Western societies.’ Not only does Sen use theoretical ideas from ‘non-Western societies,’ but in doing so suggests the possibilities of there being ‘non-Western languages and theories.’

Sen’s presumption of a separation between Western, Southern or Eastern theorizing falls prey to the charge of creating binaries. Those with the power and privilege of Western intellectual hegemony would dare him to speak of an inseparable, multiple, overlapping hybridity. It may be the case that national cultural – economic boundaries are becoming fuzzier and permeable due to transnational flows of people and ideas. However, there is no evidence that this has generated significant flows of non-Western languages and critical theoretical tools via non-Western students into Australian teacher education at the University of Western Education, or Australia more generally (for an exception see Singh 2009). Australian teacher education privileges and reproduces the global hegemony of Euro-American theories and values Euro-American methods of knowledge production, while marginalising alternative funds of critical theories, how they might be accessed, and how these might be critiqued.

My research is working to redistribute the sense and sensibilities of Australian teacher education. The unidirectional theoretical currents in this field have informed

¹The name ‘University of Western Education’ is a pseudonym.

my interventionist critiques of Australia's privileging of Euro-American theories. This has led me to develop approaches to the education of bilingual teacher-researchers that create opportunities for them to use their linguistic repertoire to engage in critically theorizing Australian education (Singh 2010). My research focuses on what can be achieved by making the internationalisation of Australian teacher education a two-way learning process that begins by ignoring intellectual inequality (Singh 2009). This means ignoring various claims to inequality. These claims include the belief that non-Western students are incapable of critique; that criticality exists solely in the West, and that non-Western students can only learn critique from Western sources. Two-way learning calls for international students from China (and other students proficient in Han Chinese) to critically examine the diverse array of critical assets in twenty-first century China. These include contemporary, traditional, foreign and local (Ryan 2011). 'This means bringing this intellectual capital to bear in the production and flow of research-based knowledge as much as the dialogic education of transnational educational researchers' (Singh 2009, p. 187). Overall, this research addresses the recognised need Australian teacher education has for new paradigms and mindsets for critical theorizing.

This chapter develops a critique that argues for Anglo-Australian teacher education to extend beyond the Euro-American theories it currently privileges to make non-Western language and theoretical assets count as valid knowledge in teacher education research, research education and teacher education programs. The research question addressed in this chapter is what educational principles and pedagogies might inform the work of teacher educators in Australia interested in creating conditions permitting what I call *worldly*² *critical theorizing* in Australian teacher education.³ To explore this question further, it is necessary to clarify several key terms, none of which have uncontested unitary definitions.

First, the idea of *worldly critical theorizing* keeps open the problem of defining a bounded category of 'participants'. For our purposes here the participants in these *worldly critical theorizing* are those whose theoretical assets have had no part in Australia's Euro-American teacher education, but who claim that these tools do count. In Rancière's (2007) terms, *worldly critical theorizing* can be thought of as 'the continual renewal of the [intellectual] actors and of the forms of their [theoretical] actions, the ever-open possibility of the fresh emergence of [new parties]' (p. 61). Thus, the concept *worldly critical theorizing* creates the expectation that teacher-researchers will engage in the multidirectional exchange of critical theoretical tools.

²The notion of "worldly" echoes Said's (1993, p. 312) concept of "worldliness." However, as Ahmad (1994) notes, Said's (1978) seminal work, *Orientalism*, did not give detailed scrutiny to non-Western theories; instead he provided informed readings of scores of Western canonical theorists. Here, 'worldly theoretical interactions' means the restoration of theoretical works and interpretative tools which have been neglected or rendered secondary in the global linguistic and theoretical hierarchy, "a restoration that can only be accomplished by an appreciation of not some tiny, defensively constituted corner of the world [such as a given country] but of the large, many-windowed house of human [intellectual] culture as a whole" (Said 1993, p. 312).

³In this specific instance, on-campus modes of delivery.

This situates the internationalisation of Australia's Euro-American teacher education in relation to the boundaries and terrain that both inhibit and inspire the redistribution of the sense and sensibilities for internationalising teacher education.

Second, the internationalisation of Australian teacher education is defined as extending and deepening the capabilities of bilingual teacher-researchers from non-Western countries to use theoretical tools from their homelands in their studies of Australian teaching and learning⁴ (Juffs 1996; Pinker 1989). *This moves beyond advocacy for deferring the realisation of equality into the future. The educational starting point begins with recognising that international students can access ideas that may be given a theoretical sense for use in scholarly arguments as analytical tools. Here the educational investment is in creating intellectual contexts for the transnational exchange and understanding of worldly theoretical tools.* This definition includes worldly theoretical tools – metaphors, conceptual categories and images (Turner 2010) – and positions *worldly critical theorizing* as a normal feature of Australian teacher education.

Third, for the purposes of this study educational principles and pedagogies are conceived of as a matter of informed professional reasoning about the many uncertainties associated with planning, enacting, monitoring and reflecting on the challenging opportunities for internationalising Australian teacher education through *worldly critical theorizing*. Conceiving of educational principles and pedagogies in this way resonates with Ranciere's (1991) lessons concerning the uncertainties experienced by a French teacher who had to teach Flemish students although neither party knew the other's language or potential theoretical assets. The lesson being that while monolingual Anglophone teacher educators in Australia may not know the languages or have knowledge of the theoretical assets of their non-Western students, beginning with the assumption of intellectual equality provides a useful starting point for engaging these teacher-researchers in using non-Western theoretical tools⁵ in their analyses of evidence of Australian teaching and learning (Singh 2010).

The study reported in this chapter is part of an Australian Research Council Project investigating the potential for new approaches to Australian teacher education that prepare bilingual teacher-researchers for *worldly critical theorizing*.

⁴Pavlenko and Lantolf (2000) argue for a shift from linguistic issues of language structure, to a focus on the contextual and interactional dimensions of students' second language learning.

⁵I have many difficulties of speaking confidently of the theoretical category of 'Chinese theoretical tools.' These troubles arise from its homogenisation of diverse intellectual assets within the insignia of nationalism (Chen 2010). Also, I know fully well there is no such coherent, discrete or unitary category given that theoretical assets everywhere exceed the boundaries set by nation-states and the associated complex historical processes for the cross-fertilization of ideas (Clarke 1997; Hobson 2004). Further, I have concerns about privileging elite theoretical formations associated with classical scholasticism (Ahmad 1994). What troubles me most are the advocates of hybridity, transnational knowledge flows and global imaginary who can only understand 'Chinese knowledge' as referring to ancient Confucianism, and not, say, Chinese Marxism or Chinese people's everyday contemporary tactics of critique, or who can only understand 'Indian knowledge' as referring to ancient Hindu or Moslem scriptures and not Indian Marxism or Indian people's everyday twenty first century public engagement in critical reasoning.

It focuses on the intellectual uses of non-Western theoretical tools by international students from China for analysing Australian teaching and education. They can position themselves as bilingual, intellectual agents engaged in the progressive internationalisation of Australian teacher education, while securing their participation in the world's multilingual knowledge societies. The power of involving *worldly critical theorizing* in initial teacher education resides in engaging the intellectual assets of these students and turning these into analytical tools – concepts, metaphors and diagrams – for their studies of Australian students' learning. This research is testing the potency of the argument that intellectual equality in teacher education begins with the assumption that students from continental Asia – specifically in this study international students from China – are capable of scholarly argumentation and, that non-Western intellectual assets provide them with the theoretical tools for doing so. Informed by Rancière's (1991) argument this research has taken intellectual equality as a point of departure for the education of these student teacher-researchers, rather than an end or goal.

The aims of this chapter are twofold. First, to report on the development of a novel analytical framework for crafting educational principles to inform *worldly critical theorizing* for the internationalisation of Anglo-Australian teacher education, as a basis for further developments in East/West, South/North, East/South theoretical interactions. Second, to identify key analytical concepts that can inform pedagogies for research-oriented, school-based Eurasian teacher education so as to makes intellectual use of the worldly critical theoretical tools possessed or accessible by students.

9.2 Redistributing the Sense and Sensibilities of Critical Educational Theorizing

The Euro-American theory that is privileged in Australian teacher education now contends with issues concerning the place of *worldly critical theorizing* in preparing teacher-researchers for the twenty-first century, which sees the revitalisation of China as a leading global player. Australia's carefully crafted teacher education programs are well-bounded by nation-centred regulatory mechanisms (Marginson 2002). They are largely dependent on Euro-American theories of education as mediating epistemic tools. The increasing ethno-linguistic diversity among students is not evident in the ethno-demographic features of the teaching workforce which has remained stable. However, labour shortages and mismatches are leading to gradual changes in the ethno-linguistic profile of teacher educators.

Preparing bilingual teacher-researchers for *worldly critical theorizing* is not without problems. In part, this is due to the vague and contradictory agenda for internationalising higher education (Adams 2004; Major 2005). More than this, a driving premise for the internationalisation of teacher education in Australia is that this means bringing Western, Anglophone knowledge to the intellectual life of the world (Kettle 2005; Scheyvens et al. 2003; Skyrme 2007). In this context,

progressing Australia's national priority for increased research-based *worldly critical theorizing* with Asia invites contempt from cosmopolitan teacher educators in Australia (Andrews 2007; Arkoudis 2007; Bullen and Kenway 2003; Hasrati; 2005; Kim 2007; McClure 2007). A key problem for Australia is that its nationally regulated, nation-centred teacher education system is ill-equipped to engage in *worldly critical theorizing*. Moreover, there are few research education programs that provide teacher-researchers with long-term, large scale rationale for serious-minded engagement with international students from Asia in enabling such *worldly critical theorizing*.

The premise that the internationalisation of teacher education in Australia means bringing Euro-American, Anglophone knowledge to the intellectual life of the world is contested (Singh and Han 2010). Approaches to the internationalisation of teacher education in Australia that reproduce Asian academic dependency (Alatas 2006) are being contested by Anglophone and bilingual teacher educators through pedagogies for the production of knowledge through *worldly theoretical interactions* (Singh 2009, 2011). For instance, in the face of the nationalised regulation, Arber (2009), a Jewish-Australian teacher educator, argues the internationalisation of Australian teacher education “require[s] new cross-cultural and linguistic skills and knowledges [that] bring into play new cross-national, intercultural and cross-racial complexities” (p. 175). For this, the most basic Australian notions of teacher education are being challenged. Minimally, this means building the capabilities of teacher-researchers in Australia to make an original contribution to knowledge through *worldly critical theorizing* that engage Western and Eastern, Northern and Southern languages and theories. In Australia bilingual teacher educators such as Takayama (2011) invite student-teachers from the “non-Western, non-English-speaking ‘peripheries’ to challenge the unquestioned ‘universality’ of knowledge produced in the Western academic centres so the process of academic knowledge production and circulation can be altered” (pp. 2–3).

Thus, an alternative premise explored in this chapter is that the internationalisation of teacher education in Australia – as elsewhere – entails bringing knowledge to life through East/West, South/North, East/South theoretical interactions.⁶ There are, of course, a range of socio-political factors, structural constraints and

⁶There are sociologists (Alatas 2006; Chen 2010; Connell 2007) in the East and the West, the South and the North who are interested in the internationalisation of intellectual life through *worldly theoretical interactions*. Likewise, historians have shown that at different times the Middle East (Freely 2011; Lyons 2009), South and South East Asia (Cook 2007; Sen 2006) and East Asia (Clarke 1997; Hobson 2004) have been world leaders in knowledge production. Eurasian civilisations have produced sophisticated knowledge which has been communicated from one to another, with the exchange of knowledge occurring in and through products, services, and intellectual interactions with each other (Goody 2010). However, many of these historical and sociological studies which seek to account for global knowledge flows do not actually use theoretical tools from the multiple participants which provide the focus of their work. This undermines the relevance of such accounts for internationalising Australian teacher education.

motivational problems affecting the portability of theoretical ideas from one national field of production to another. This applies as much to the flow of Bourdieu's (1999) ideas from France to the USA and Australia as it does to the flow of theoretical tools from China to Australia (Singh and Huang 2013). Various studies have explored whether and how teachers use the knowledge students can access through their intellectual community in order to improve their academic achievements. For example, differences between teachers and students in terms of their ethnicity and class meant that teachers lacked the professional capabilities for linking academic knowledge with students' funds of community knowledge (Martin-Jones and Saxena 2003). This lack of professional expertise is reflected in cases where bilingual teacher-aides are employed to use their students' home language to access funds of community knowledge to improve the students' reading. Further, Monzó and Rueda (2003) ascertained that teachers' ethno-linguistic commitment to their own language and knowledge militated against the students' learning a second language, and the teachers developing pedagogies for using languages *othered* by English. Moreover, in each case, where such community knowledge was engaged, the focus tended to be at the level of data about the community rather than the community's theoretical tools.

Why focus on international students from China? There are several reasons for selecting international students from China studying in Australia to be teacher-researchers as participants in this research program. First, studying Australian teacher education's intellectual engagement and theoretical interactions with China is integral to Australia's national research priority which aims to better understand Asia in a China-focused world. These investigations inform improvements in the educational principles and pedagogies Australian teacher education can employ for *worldly critical theorizing* with non-White, non-Western.

Second, compared with other OECD countries, a "relatively low proportion of Australia's higher degree [research] students are international students" (Bradley 2008, p. 12). The majority of these students are from Asia. In 2007, there were 1,011 students from Asia studying for higher research degrees at either the Masters or Doctoral levels. Of these students, there were 326 research students from China (AEI 2007). In 2010, 152,826 (27.2 %) of Australia's international students (n = 561, 269) were from China, tripling the figure of 48,088 8 years previous (AEI 2010). However, most "international students are concentrated in a narrow range of subject fields, [specifically] 67 % of the Chinese student cohort of 58,588 students [in 2007 were] undertaking degrees [in management and commerce disciplines, while] only 3.6 % [of international students were] undertaking a research higher degree" (Bradley 2008, pp. 12, 92, 93). To date, the 40 Chinese students who have participated in the study reported in this chapter are all researching teacher professional learning and strategies for improving students' learning.

Claims on Kant's Germanic cosmopolitanism promise a future in which rising generations of teachers may yet experience a more liberal and moral Australian

teacher education (Marginson and Sawir 2011). This distant future is inspired by multicultural hybridized people, with multiple cross-border personal affiliations – globally mobile ever-becoming people. However, Marginson and Sawir (2011, pp. 54–55) recall that cosmopolitan theorizing tends to be “culturally essentialist and Western-centric, [a] cosmopolitanism ill equipped to accommodate a plurality of positions.” This cosmopolitanism is ill equipped to accommodate a plurality of worldly critical theorizing that any presupposition of intellectual equality in non-Western thought would verify. Thus, it is “unable to provide a medium for an open dialogue between differing traditions” (Marginson and Sawir 2011, p. 55), that is differing non-Western traditions of cosmopolitan theorizing.

Marginson and Sawir (2011) provide no evidence from Australian teacher education of any steering towards relational cosmopolitan theorizing, towards Western and non-Western theoretical connectivity. There is no evidence of robust capabilities for adapting and reinterpreting foreign imports of non-Western theories of cosmopolitanism. Cosmopolitanism is not a means by which Australian and global educational cultures are mediated, where theoretical dialogues between the West and the non-West are being initiated, where trans-boundary issues of theory production are being resolved by those who claim to see above the Euro-American theoretical parapets.

Others are working within a markedly different framework, one based on the presupposition and verification of intellectual equality, *here and now* (see for example Grant 2010). This means *working with non-Western students already present in Australia's Euro-American centred teacher education programs on pedagogically driven worldly linguistic connectivities and theoretical interactions*. Here the work of teacher educators is forming bilingual teacher-researcher theorists capable of producing empirically informed research-based knowledge that mediates Western and non-Western linguistic and theoretical contact zones. Their research education program and pedagogies enable non-Western and Western student-teachers to enter into direct theoretical and linguistic relations with the different Western perspectives available in English in the context of Australian teacher education to undertake their own formation as bilingual teacher-researcher theorists.

Studies of the interplay of educational principles and pedagogies for engaging *worldly critical theorising* are well-overdue. To investigate this phenomenon, this chapter reports key findings from a case study of Chinese teacher-researchers using Chinese – and Euro-American – theoretical assets to extend and deepen their capabilities for scholarly argumentation through critical theorising. This chapter is part of a larger body of work that engages in a critical examination of the complexities of internationalising Anglophone, Euro-American centred teacher education through engaging in East/West, South/North linguistic and theoretical interactions. The next section explains the developmental, interventionist process of *educational research for critique* used to generate educational principles and pedagogies for internationalising Australian teacher education through theoretical engagement with student teacher-researchers from China.

9.3 Educational Research for Critique

This chapter reports on a longitudinal, large scale research project which is investigating the prospects for *worldly linguistic connectivities and critical theorising* in Australian teacher education (Singh 2005; Singh et al. 2007; Singh and Shrestha 2008). Specifically, this research has focused on building the communal capacity of Australian teacher education for having Chinese teacher-researchers advancing claims of intellectual equality through their linguistic repertoire and capabilities for critical theorising. This has meant developing educational principles and pedagogies for deepening and extending the capabilities of Chinese bilingual teacher-researchers to engage in scholarly argumentation through critical theorising (Singh 2009; Singh 2010; Singh and Han 2010). This has involved studying bilingual teacher-researchers' uses of their linguistic repertoire to elaborate on diverse concepts, metaphors and images as critical theoretical tools so as to make original contributions to knowledge about education, teaching and learning in Australia (Singh 2011; Singh and Cui 2011; Singh and Meng 2011). This research is theoretically ambitious and empirically rigorous in its employment of observational and analytic methodologies as part of a developmental, interventionist research process, namely *educational research for critique* (Singh and Huang 2013). Methodologically, the aim is to create a richer, more robust intellectual enterprise in critical theorising, better able to prepare twenty-first century teacher-researchers for worldly linguistic and theoretical interactions – East/West, South/North, East/South.

This study addresses the difficult problem of making a difference in the educational principles and pedagogies for *worldly critical theorising* in Australian teacher education. The method of *educational research for critique* presupposes that researching the internationalisation of Australian teacher education should be an interactive undertaking, constructed through intellectual encounters and knowledge exchange between Australia's teacher education researchers and bilingual teacher-researcher theorists from China. This method is oriented to making pedagogical changes and curriculum innovations often with the benefit of insightful, challenging critiques (and some quiet resistance and some outright contempt). *Educational research for critique* works against the non-interventionist bias in much critical sociology of education in Australian teacher education. Of course, this method does allow for the use of case study procedures, ethnographic techniques and action research.

Among the multiple change mechanisms employed in this study are a longitudinal tripartite partnership which has woven multiple strands into a mutually beneficial collaboration to explore and meet complementary needs. Since 2006, the New South Wales Department of Education and Communities (Western Sydney Region), the Ningbo Municipal Education Bureau (China), and the University of Western Sydney (Centre for Educational Research) have developed this community capacity building partnership. The Research Oriented, School Engaged Teacher Education

(ROSETE) Partnership⁷ has generated new ways of working based on joint commitment to training volunteers as teacher-researchers to make Chinese learnable for second language learners.

Educational research for critique has its theoretical underpinnings in democratic research dialogue (Toulmin and Gustavsen 1996), development work-team research (Engestrom 2000) and co-operative action-oriented inquiry (Heron and Reason 2006). Methodologically, this project is engaged in an on-going developmental, cooperative research process between Australian teacher educators and teacher-researchers from China. Together, the team made changes in our (weekly) research training workshops whereby the beginning teacher-researchers and researcher educators learnt to engage Chinese theoretical tools in analysing evidence of Australian students' learning. Over time these expanded to provide a basis for reconceptualising the principles and pedagogies for Australian teacher education that engages *worldly critical theorising*.

Studies in the field of internationalising Australian education using the method of *educational research for critique* are limited. However, this method was used because it enables collaborative, *worldly critical theorising*. This made it possible to engage bilingual teacher-researchers from China in making scholarly uses of Chinese theoretical tools in their Australian education through developing their capabilities for *worldly theoretical interactions*. The use of this research method meant that it has been possible to enhance the Chinese beginning teacher-researchers' intellectual agency for engaging in *worldly critical theorising* so that they could pursue educational goals, research objectives and career aspirations that are socially valued and they have reason to value and advance (Sen 2006). It was assumed that as active research agents rather than passive learners these student-teachers could engage the critical theoretical knowledge available in their intellectual communities. The aim was to avoid the tendency to mine these communities for data, and instead to have them engage and elaborate critical theoretical tools of their homeland.

Engaging in research 'with' research higher degree students is a major challenge for Australian teacher education. However, a key aspect of data/theory generation in this study is that these bilingual teacher-researchers are co-researchers and co-authors. Rather than doing research 'on' these teacher-researchers, this research benefitted from their concepts for engaging in *worldly critical theorising*. The investigating teacher educators cooperate as part of the research team with these teacher-researchers to document their developing capabilities for participating in scholarly argumentation using

⁷The teaching/research focus of the ROSETE Partnership is internationalising teacher education through (a) innovations in making Chinese learnable for second language learners, and (b) using metaphors, concepts and images from China as theoretical tools for analysing evidence of learning and teaching in Australia. To do so the Partnership provides a rich and stimulating learning environment for the Chinese student teacher-researchers, including conducting weekly research training workshops, fortnightly research seminars, regular intercultural networking events (e.g. calligraphy, tea ceremony, singing) and Chinese language tutoring for leaders of the Partnership. This structured research education program, which runs for 45 weeks each year includes: research methods training; research and information literacy training; language learnability and intercultural teaching; inter-university video-conferencing; partnership engagement; advanced bilingual literacy training; and teaching in secondary and primary schools.

critical theoretical tools from China. In addition teacher-researchers (n=56) and teacher educators (n=53) at five Australian universities were interviewed, while another 13 students participated in focus groups about their research education. Also as part of this study theses (n=17) by Chinese research students were analysed; these had been submitted to seven of Australian universities (excluding the University of Western Education) in the field of education between 1998 and 2011. They were retrieved from the publicly accessible *Australasian Digital Theses Database*. Further, a purposive sample (n=159) of Australian teacher educators and international research students completed a questionnaire modelled on the Strategy Inventory for Language Learning (Oxford and Burry-Smith 1995).

To frame the design, development and refinement of data collection instruments for this study, Lefebvre's (1991) key ideas of perception, experience and conception were substantially reworked. *Perception* focuses on the teacher-researchers' and teacher educators' presuppositions and advocacy about the dialectical interaction between the routines of their daily realities, and their deciphering of projected career trajectories, labour migration routes and knowledge networks. *Experience* refers to the participants' use and inhabiting of the complex and distinctive layers of their scholarly life. *Conception* refers to intellectually worked out categories, metaphors and images, such as symbols and schematics (Turner 2010) that were spoken and/or written about by the teacher-researchers and teacher educators. *Conception* is the dominant focus of research-based knowledge production in modern societies, whether it is China or Australia. It was assumed that taken together, the participants' concepts may not constitute a coherent whole, but depending upon circumstances, would be sufficiently interconnected for the participants to move from consideration of one to another without confusion. Thus, an individual's perceptions may or may not be logical and cohesively conceptualised, and thus not critiqued on these grounds.

This research has provided accounts of alternative ways of engaging in *worldly critical theorising* in Australian teacher education by making scholarly uses of Chinese theoretical tools – categories, metaphors and images. For instance, Meng (2011) has analysed evidence of the possibilities for teacher-researchers from China to use their intellectual assets for critically theorising their evidence of Australian education, and explored what might be achieved if Australian teacher education operated under a presupposition of intellectual e/quality.

The next two sections of this chapter reports the outcomes of a meta-analysis of findings to date from this research. It seeks to answer the question: what *educational principles* and *pedagogies* might promote worldly theoretical interactions in Australian teacher education.

9.4 Intellectual E/quality as a Key Principle for Australian Teacher Education

The meta-analysis presented in this section focuses on the concept of intellectual equality as a key educational principle for the redistribution of the sense and sensibilities of Australian teacher education. It elaborates on the goals for Australian

teacher education of declassifying data/theory divides; taking as the educational starting point the presupposition of intellectual equality, and making a key educational task the verification of intellectual equality.

9.4.1 *Teacher Education Goal: Declassifying the Theory/Data Divide*

By putting intellectual equality at the beginning, a goal for Australian teacher education is to enable teacher-researchers from non-Western countries to *escape from their marginalised intellectual status as data sources. To do so they must prove that they belong to, and can use critical theoretical tools from non-Western countries for analytical purposes.* That is to say the goal of preparing bilingual teacher-researcher theorists for worldly theoretic-linguistic interactions is to declassify the theory/data divide between the West and the East. This involves working with them to critique taken-for-granted presumptions of intellectual inequality that position Europe and North America as the rightful source of theory and non-Western countries as sites for data mining.

Declassification means that the circumstances of non-Western teacher-researchers' lives do not necessarily stop them from scholarly argumentation or critical theorising. That they are from China does not stop them from using the critical theoretical tools from their homelands for engaging in scholarly disputation – having these concepts subjected to international critique. Declassification means that differences in educational cultures and intellectual assets are not regarded as depriving teacher-researchers from China of the capabilities required for critical theorising. To realise the goal of declassifying theory/data divide – West as the source of critical theory, and the non-West as resource for data mining (Alatas 2006; Chen 2010; Connell 2007) – means putting teacher-researchers from Australia's neighbouring region on the road to the *worldly critical theorizing*. This means they must generate *evidence* and *theoretically informed arguments*. Scholarly arguments in teacher education are grounded in values that lay claim to intellectual equality. This means making non-Western critical theorizing count. Participation in international scholarly debates is necessary to having non-Western ideas subjected to critique, as much as persuading others that they too value and engage in *worldly critical theorizing*.

9.4.2 *Teacher Education Starting Point: Presupposition of Intellectual e/quality*

Here the goal of internationalising Australian teacher education is to declassify the divide between Western critical theory and the non-West as data mining sites through *worldly critical theorizing*. Therefore, then a useful starting point is the

presupposition that teacher-researchers from China have the linguistic repertoire and argumentative capabilities, and that China have critical theoretical assets for contributing to this undertaking. What then is meant by this idea of “presupposition of intellectual equality”?

First, it is important to note what is *not* meant by this concept. The concept of “intellectual equality” does *not* involve proving that all students are of equal intelligence. Thus, intellectual equality has nothing to do with presuming that students from China are able to achieve the same test results as those from Western, Anglophone nations. The “presupposition of intellectual equality” assumes that within China – and every other non-Western country – there are present critical theoretical tools (categories, metaphors and diagrams), and that people there possess the capabilities for using these in scholarly arguments.⁸

The presupposition is that non-Western countries have critical theoretical tools – and their peoples have the capabilities for critique. Given the research literature on international students from Asia, this might be thought as rather a romantic notion (Chan et al. 2011; Tian and Low 2011). Australian universities “insist that critical thinking is a requirement of quality academic work while academics bemoan the lack of a critical approach to study by international students in general, and Asian students in particular” (Egege and Kutieleh 2004, p. 75).

However, evidence from Africa for instance (Akiwowo 1990; Horton 1971; Lawuyi and Taiwo 1990; Makinde 1990) shows that non-Western intellectuals do elaborate and use critical theoretical tools for engaging in scholarly disputation. Studies such as these indicate that non-Western countries are bereft of critical theoretical assets or argumentative capabilities, or that such intellectual assets and capabilities are the preserve of Western countries (also see Alatas 2006; Chen 2010; Sen 2006). On the contrary, the evidence indicates that functionally similar critical theoretical tools and argumentative capabilities are put into practice in Western and non-Western educational cultures and intellectual communities.

9.4.3 *Teacher Education Task: Verification of Intellectual Equality*

Now we have two key educational principles. First, the goal of internationalising Australian teacher education is to declassify the divide between Western critical theory and the non-West as data mining sites through *worldly critical theorising*.

⁸This involves four key presumptions, namely that: 1. non-Western countries produce potential valuable intellectual assets; 2. there are students from non-Western countries who use their higher order intellectual capabilities for theorising; 3. the participation of non-Western teacher-researchers in theoretically engaging partnerships can improve Australian teacher education; and 4. non-Western teacher-researchers extend their capabilities for critique and scholarly argumentation using these theoretical tools.

Second, the starting point for internationalising Australian teacher education is the *presupposition* that non-Western teacher-researchers have the linguistic repertoire and argumentative capabilities, and that non-Western countries have critical theoretical assets for contributing to this undertaking. Together these principles pose an important educational problem for the internationalisation of Australian teacher education. How might Australian teacher educators verify the presuppositions:

1. That non-Western countries have critical theoretical assets;
2. That teacher-researchers from these countries have the argumentative capabilities to use these to create *worldly critical theorising*, and
3. That this will extend and deepen their contributions to knowledge and the internationalisation of Australian teacher education?

As with the concept of *presupposition of intellectual equality* it is important to note what *verification of intellectual equality* does *not* mean. Verification is *not* a matter of checking whether there is any truth to the concept of intellectual equality in any abstract sense. That is to say, the point is *not* to prove, using some intelligence test for instance, that students from non-Western countries are as equally intelligent as those students from Western countries. In contrast, the *verification of intellectual equality* means:

1. Ratifying the presence in non-Western countries of critical theoretical assets and capabilities for scholarly argumentation
2. Testing ways of using non-Western critical theoretical tools to enhance the internationalisation of Australian teacher education and the learning of teacher-researchers.
3. Seeing what teacher-researchers from non-Western countries can achieve based on the presupposition of intellectual equality.

The teacher-researchers from China work with their Australian teacher educators to co-produce evidence of these critical theoretical assets and argumentative capabilities. Together, they develop ways of representing these *worldly critical theorising* in Australian teacher education curriculum, through assessment instruments, pedagogical relations and research reports. A key verification task is public demonstrations of the ways that Australian teacher education is engaging non-Western languages and critical theorising (for example through symposiums and publications), and how these are associated with language learning and knowledge production in teacher education.⁹

⁹Questions for investigation through intellectual partnerships between non-Western teacher-researchers and Australian teacher educators include: What non-Western theoretical assets and multilingual capabilities do you see at work in this teacher education program? How does the Australian teacher education community think about, respond to and engage these – if at all? How does the Australian teacher education community make use these – if at all?

The verification of intellectual equality¹⁰ also interrupts what is taken for granted as being sensible in Australian teacher education; namely the presumed absence of value of non-Western theoretical tools. Verification of intellectual equality is directed towards seeing what teacher-researchers from non-Western countries can achieve by working with non-Western critical theoretical assets and argumentative capabilities. Educational and teaching practices are directed towards developing non-Western teacher-researchers' awareness of the critical assets from their homeland that can be converted in critical theoretical tools. Given their Western oriented education in China, for many teacher-researchers from China this involves Australian teacher educators making known to them what intellectuals from their homeland *can do, say and be* through creating critical theoretical resources that are comparable to those in Australian teacher education. In addition to Chinese Marxism (Knight 2006), Chinese feminism (Xu 2009), Chinese environmentalism (Xie 2011), Tao Xingzhi (Yao 2002) and the art of Chinese-Australian immigrants are useful examples in this regard.

9.5 Pedagogies for Worldly Theoretical Interactions in Australian Teacher Education

The challenge for teacher educators in Australia is to create pedagogical conditions for teacher-researchers from non-Western countries to *verify* the presupposition of intellectual equality. The meta-analysis presented in this focuses on pedagogies for *worldly linguistic connectivities and critical theorising* in Australian teacher education. This section provides an analysis of pedagogies¹¹ of intellectual equality in terms of what teacher-researchers from non-Western countries *can do, can say and can be* in Australia using non-Western critical theoretical assets (Singh and Meng 2011). In the words of Rancière (2009, p. 13), the efforts of the ROSETE Partnership in this regard involve interrupting 'the relations between saying, seeing and doing [which] themselves belong to the structure of domination and subjection.' This research has established that innovations in pedagogies for effecting *worldly critical theorising* in Australian teacher education might usefully address six key concepts.

¹⁰In the ROSETE Partnership the teacher-researchers from China are invited to position themselves as knowers of potentially valuable theoretical knowledge. When students from different educational cultures assume an intellectual equality, the sense and sensibilities governing the theoretical relations between the globally dominant Euro-American theories relative to those of subordinated non-Western theories are redistributed.

¹¹The educational principles underlying these pedagogies of intellectual equality see such learning being available to all students; as applying critical perspectives in order to make sense of the dynamics of internationalising teacher education, and working with complexity without resorting to compensatory teacher education.

These relate to three key questions: What teacher-researchers from China *can do*, *can say* and *can be* in Australia? The answers to these questions identify key concepts for engaging *worldly critical theorising* using the critical theoretical assets and augmentative capabilities represented in the ROSETE Partnership.

9.5.1 *What Teacher-Researchers from China Can do in Australia*

Regarding what teacher-researchers from China *can do* in Australia the meta-analysis here focuses on their *bilingual capabilities* and capacity for *double knowing*.

9.5.1.1 **Bilingual Capabilities**

The status of English as an international language is such that Australian teacher education for international students from Asia privileges an English-only mode of learning (Edwards and Dewaele 2007). The result is that their knowledge in (and of) their first language is reduced to marginalia. Welch et al. (2005) argue that this stunts the growth of Australia's bilingual (or multilingual) capabilities desired in the trans-national labour market. However, bilingualism (and multilingualism) has entered Australian teacher education, albeit without little value and valuing. Its every day presence is audible among the hundreds of thousands of international, immigrant and refugee students on Australian campuses. From Sweden (Airey and Linder 2008) to South Africa (Benson and Plüddemann 2010) *education for bi- or multilingual literacy* is the norm in many universities around the world. Libraries are responding to students' multilingual capabilities with electronic databases which can be searched using a range of languages (Zhuo et al. 2007). International and local students are able to position themselves as successful through their bilingual capabilities when their teacher education programs position bilingualism as educationally valued and valuable (Bartlett 2007).

The ROSETE Partnership through its Western Sydney-Ningbo Volunteers has raised the prospects for measuring the internationalisation of Australian universities by creating what I call a *bilingual capability metric*. For instance, demonstration of bilingual research literacy¹² might now be used in reviewing theses in teacher education as one way of internationalising Australian research education and teacher education. Tactically, the pedagogical actions of the teacher educators in the ROSETE Partnership involve the bilingual making and remaking of research

¹²A key attribute of bilingual research literacy is attending to the communicative needs of monolingual Anglophone scholars who read the teacher-researchers' theses and papers. Key strategies entail the thoughtful selection of Chinese metaphors for translation into English to be given a sense of being theoretical tools; the use of translation strategies that mediate the complexity associated with the socio-historical meaning(s) of Chinese metaphors expressed in English, and ensuring clarity of meaning through analytical application (Couplan et al. 1988).

literacy. This takes place in what I have termed a *theoretical contact zone* along the transgressive transnational intellectual frontiers between Australia and China, between Chinese and Australian students, and across immediate and extended intellectual localities. The trajectories of international teacher-researchers in this particular Australian teacher education program are shaped in part through the recognition and acknowledgment of the Western Sydney-Ningbo Volunteers' bilingual capabilities. The ROSETE Partnership is making bilingualism (and multilingualism) and, Euro-American and Chinese critical theoretical tools (among others) integral to the internationalisation of Australian teacher education, here and now. Intellectual engagement with these international teacher-researchers is directed by the value and valuing of their linguistic capabilities¹³ and critical theoretical assets (Singh and Cui 2011¹⁴).

The ROSETE Partnership has advanced an understanding of these bilingual teacher-researcher theorists as users of a linguistic repertoire which establishes their pedagogical contributions to *worldly critical theorising*. Pedagogically, this ROSETE Partnership has worked to increase the frequency and diversity of their combined uses of Chinese and English to deepen their capabilities for scholarly argumentation and extend their capabilities for making an original contribution to knowledge using critical theoretical assets from China.¹⁵ The critical theoretical assets available to these bilingual students has benefitted from the ROSETE Partnership's learning environment and pedagogies that are supportive of multilingual communicative activities.

9.5.1.2 Double Knowing

The concept of "*double knowing*" (Singh 2005; Singh and Shrestha 2008) explicitly recognises that the teacher-researchers from China studying in Australia's ROSETE

¹³For these teacher-researchers from China, bilingual research literacy entails a cost, namely taking the risk to make intentional theoretical interactions with members of other educational cultures. This involves "continuous attempts to construct new meanings through new discourses that one becomes an equal participant in new discourse spaces (Pavlenko and Lantolf 2000, p. 174). This risk taking is evident in the students' capabilities for, and willingness to step outside their familiar sense of being speakers of English as a foreign language to seeing themselves as bilingual; seeing themselves as capable of using Chinese intellectual assets as theoretical tools, and capable of exploring new ways of engaging in worldly theoretical interactions. Their capability to work through perceived or actual gaps in communicating Chinese theoretical tools in English by adjusting linguistic forms, structures and content is integral to them negotiating of worldly theoretical interactions. Here, internationalising Australian teacher education means developing programs and pedagogies for worldly theoretical interactions.

¹⁴There is little research in teacher education in Australia that has investigated international, migrant or refugee students' uses of their bilingual (or multilingual) capabilities and associated intellectual assets as integral to creating *worldly theoretical interactions* or how this can be facilitated by everyday pedagogical experiences (Hall et al. 2006; Jarratt et al. 2006).

¹⁵Bilingual research literacy is valued for enabling the teacher-researchers to make informed choices from their linguistic repertoires; to imbue their research with meaning, and in some instances to make original contributions to knowledge. This contrasts with, and contests the characterisation of code mixing or switching as a necessary lack of linguistic competence (Coulmas 2005).

Partnership are situated in the intellectual traditions of at least two educational cultures. Double knowing focuses on these teacher-researchers actively taking up and contributing to critical theorising from various sources so they can test and validate it through scholarly argumentation. Pedagogically, double knowing favours critical, collaborative, reciprocal interactions around multiple sources of critical theorising. All these teacher-researchers are understood as existing in intellectual nodes with connections into differing networks of criticality. Links are added to their interlocking chains of critical theorising through the ROSETE Partnership. Double knowing refers to the oscillation between multiple sources of critical theorising, where one may transgress across the other. It provides a scaffold that enables these teacher-researchers to relate what they are learning to what is known in China and in their first language.

Having these students use the idea of double knowing to search for tools of criticality from China takes us all beyond a nation-centred approach to teacher education. This provokes thinking beyond either China or Australia in producing *worldly critical theorising*. Tange and Kastberg (2011) have elaborated on this concept of “double knowing” in the following terms:

the key to successful international learning is to establish relations between the new information that students encounter at their host university and the insight they have obtained previously in other educational settings. In this manner, one can transform students’ indigenous knowledge from a possible barrier to the transmission of Eurocentric wisdom into alternative insights that can be identified and harvested in the classroom. Such inclusiveness works to the benefit of individual learners, who are no longer requested to marginalise earlier acquired theoretical and methodological knowledge when they arrive at a new university. But also *international classes may profit from an awareness of these alternative perspectives, which can provide the cosmopolitan orientation ...* (pp. 3–4, italics added).

Double knowing recognises that teacher-researchers from Asia (and teacher educators) studying and working in Australia have the linguistic and scholarly capabilities to blend critical theoretical constructs from the East or the South with those from the West or the North to further critical theorising. Thereby, they extend the range of participants and resources of criticality that can be brought to bear in Australian teacher education. It is in this context that Takayama (2011) invites non-Western educators

who were trained in Anglo-American centres [to] play a *critical* role in the project of ‘academic decolonization’ because they are equipped with ‘double knowing’ capacities – being able to access and produce knowledge in multiple languages and national contexts. (p. 4, italics added)

Collective, intellectual engagement in *worldly critical theorizing* – theoretical interactions among East/West, South/North, East/South – is a necessary step to move Australian teacher education beyond taken-for-granted concepts of “nation”, “culture”, and “difference.” Many teacher educators in Australia are bi-lingual and thus have the potential to be a source of *worldly critical theorising*. They have the capabilities and resources for opening up Australian teacher education to multitudinous ways of critical theorizing: “As someone who is equipped with ‘double knowing’ capacities, I recognise it as my responsibility to initiate a dialogue” (Takayama 2011, p. 16).

Non-Western international students' experiential and scholastic knowledge; their knowledge producing capabilities and their knowledge networks are part of the structuring of pedagogies for the ROSETE Partnership.¹⁶ The Western Sydney-Ningbo Volunteers are redistributing the sense and sensibilities that define criticality in Australian teacher education, by directly engage their critical theoretical assets through their multilingual networks. By promoting pedagogies of intellectual equality, their multiple sources of critical theoretical assets are rendered visible among the Australian teacher educators who provide their research education, mark their theses, listen to their conference presentations, and review their journal articles.

9.5.2 *What Teacher-Researchers from China Can Say in Australia*

The meta-analysis here focuses on a second key question. If Australia is regarded as a *theoretical contact zone* and a site for engaging in *honourable critiques* what teacher-researchers from China *can say*?

9.5.2.1 Theoretical Contact Zones

Australian teacher education programs are traversed by a diversity of students – local and international; migrant, refugee and Indigenous students, multilingual, bilingual and monolingual, students from the East and the West, the North and the South. The global/national/local determinations of Australian teacher education are tied into low-cost international transport and communication networks. Australian teacher education provides points of intellectual connectivity, and transnational settings for the production of knowledge – *theoretical contact zones*. Australia's ROSETE Partnership does not exist as a single, unified theoretical whole. Nor does it work to bring Euro-American theories into contact with totally distinct, unified Chinese theoretical assets. Rather, this Partnership is a *theoretical contact zone* for fragmented, multiple, contested and contradictory theoretical assets, Western and non-Western alike. This Partnership incites teacher-researchers' theoretical transgressions and the multiplication of theoretical contacts in the face of nation-centred

¹⁶In Australia, preparing bilingual teacher-researchers for *worldly theoretical interactions* involves having international students from Asia (and elsewhere) engaging theoretical tools they possess or can access, having make use of this knowledge and testing its value in international knowledge networks. They enter intellectual relationships as active partners in testing the validation of knowledge they bring with them, or have access to through their first language. This acknowledges international students' capabilities for 'double knowing' (Singh 2005; Singh and Shrestha 2008) can position them as progenitors of a new community of bilingual teacher-researcher theorists. Double knowing carries with it a re-conceptualisation of teacher education based on international students' intellectual agency for combining different languages and theoretical assets.

blockages and policing (both Chinese and Australian¹⁷). The ROSETE Partnership is a site for producing worldly theoretical interactions and theoretically interdependent agents. The latter entails the formation of bilingual teacher-researcher theorists – the new transnational knowledge workers, internationally minded citizens and worldly critical theorists.

The concept of a *theoretical contact zone* suggests continuing intellectual encounters in which students from geographically and historically separated countries come into contact with each other and participate in a teacher education program that sanctions ongoing intellectual relations. However, my concept of *theoretical contact zone*¹⁸ which I use to describe the internationalisation of Australian teacher education is not without problems. Whether it resonates with Australian campuses and programs in Asia is open to further investigation. It is not taken as self-evident that on-campus teacher education programs in Australia have pedagogies for affecting the intellectual co-presence of local and international students.

The concept of *theoretical contact zone* assumes an Australian teacher education program where much that is necessary to forming transnational communities relies on the co-presence of students to bring forth intellectual engagement with different educational cultures, multilingual diversity and the debates forming, informing and transforming *worldly theoretical interactions*. A *theoretical contact zone* speaks to a shared social, spatial and historical learning environment that “directly challenges the way these different but related peoples [are] identified” (Clifford 1997, p. 132). The ROSETE Partnership has been constituted relationally as a *theoretical contact zone* via the displaced presence and disputed existence of ‘Chinese’ theoretical tools.

9.5.2.2 Honourable Critiques

The ROSETE Partnership extends and deepens the teacher-researchers’ disposition to engage in *honourable critiques* through reasoning with counter-evidence, answering rebuttals made by others and engaging in critical self-examination of knowledge claims (Singh and Han 2010). The Partnership draws on contemporary and classical

¹⁷Tactically, the ROSETE Partnership is a contact zone where these teacher-researchers can declassify their identities, (for instance as ‘non-English speakers’), transgressing the divide between Euro-American theory and the rest as sources of data. In these intercultural frontiers, it is to be expected that “stasis and purity are asserted – creatively and violently – against historical forces of movement and contamination” (Clifford 1997, p. 7).

¹⁸A limitation of my idea of ‘theoretical contact zone’ is that it “invokes the spatial and temporal copresence ... [where] trajectories now intersect [and] foregrounds the interactive, improvisational dimensions of [intellectual] encounters ... [where] subjects are constituted in and by their [intellectual] relations to each other. It stresses copresence, interaction, interlocking understandings and practices” ... (Pratt cited in Clifford 1997, p. 192).

studies of China's *intellectual assets in argumentation*¹⁹ (Graham 1986; Liu 1996; Peterson 1979). Chinese scholarly disputation is presided over by a community with rules or conventions governing argumentation and involving protagonists advancing theses defended by adequate and acceptable reasons, inferences and evidence, and their evaluation by antagonists (Graham 1986; Liu 1996). As is now standard practice internationally (Andrews 2007; Clark 2006), the bilingual teacher-researchers in the ROSETE Partnership engage in scholarly debate via seminar presentations, the external examination of their theses, and the blind peer review process involved in producing publications.

Thus, the idea of *worldly critical theorizing* in the Partnership is not an endorsement of epistemological relativism. In contrast, the idea of *worldly critical theorizing* is meant to open up possibilities for an appreciation of functional similarities in theoretical tools from North to South, East to West, East to South (see Horton 1971), and whose inclusion in the research products of this Partnership makes them available for critique. As in India (Sen 2006), this use of critical theoretical tools from China makes this knowledge available for international critical scrutiny. For example, this involves exploring the warrant for heterogeneity and open mindedness in critical theorizing through critiques of instances of ethno-cultural scholarly separatism, intellectual insularity or nation-centred theoretical parochialism. Likewise, there are critiques of educational theorizing in Australian which constructs Chinese education and students as curatorial objects, burdens or exotica. Similarly, scholarly disputation over Chinese *intellectual assets* is directed at the critical analysis of reproducing 'China/other' dichotomies.

Honour is a key stake in the critiques produced by the teacher-researchers in the ROSETE Partnership. They learn that *honourable critiques* are necessary to test their knowledge claims. They are introduced to the concept *nif* which is a three dimensional concept used by the Tamazight speaking Kabyles' (Berbers) of northern Algeria. While Bourdieu (1977) used it as data in his study, I use it to illustrate to the teacher-researchers how non-Western terms might be given life as critical theoretical tools. As defined below, *nif* is used for exploring the idea of *honourable critique*. First, *nif* recognises that an Australian teacher-educator who engages critically with the concepts developed by a Chinese teacher-researcher, and vice versa,

¹⁹These candidates position themselves as bilingual teacher-researcher theorists, engaging in scholarly debates and defending – or amending – their knowledge claims. Here, scholarly argumentation is understood to be grounded in cultural and historical contexts, with the pedagogical roles of disputants and, the acts and ends of disputation understood to have changed (Clark 2006). These *intellectual assets* include dialogue, public reasoning, scepticism and critical openness, as well as rules governing argumentative conventions (which themselves are a focus for debate). Argumentation or disputation is a defining attribute of scholarship in China (Davies 2007) as much as in Britain (Andrews 2007) or Germany (Clark 2006). Illustrative of the conditions governing worldly theoretical interactions are the many critiques made of Bourdieu's (1977) concepts by Anglophone scholars (Bohman 1999; Dreyfus and Rabinow 1999; Fowler 1997; Lane 2000; Robbins 1991).

confers recognition of a mutuality of intellectual equality. In its ideal form *nif* presupposes that participants in critique are intellectual equals:

To make someone a challenge is to credit him [sic] with the dignity of a man [sic] of honour, since the challenge, as such, requires a riposte and therefore is addressed to a man deemed capable of playing the game of honour, and of playing it well. (Bourdieu 1977, p. 11)

Second, *nif* also means that a Chinese teacher-researcher who engages in a critique with an Australian teacher-educator, and vice versa, who is not capable of engaging in such a *worldly critical theorizing* may bring discredit to the person who does so: “he [sic] who challenges a man [sic] incapable of taking up the challenge, that is, incapable of pursuing the exchange, dishonours himself [sic]” (Bourdieu 1977, p. 11). Third, *nif* means that only a critique from an equal deserves direct intellectual engagement. That is to say, only a critique “coming from an equal in honour deserves to be taken up ... for there to be a challenge, the man [sic] who receives it must consider the man who makes it worthy of making it” (Bourdieu 1977, p. 12).

The critical self-examination of knowledge claims is integral to the ROSETE Partnership’s efforts to extend and deepen the teacher-researchers’ disposition as *honourable critics*. This means critically examining how their own knowledge claims may be embedded in dominating power relations within Australia as much as their own homeland.²⁰ Here it is important to guard against the dangers of, and to critique reverse orientalism with its agenda of intellectual separatism, theoretical provincialism and scholarly exclusivism (Said 1993), and the unacknowledged misappropriation of knowledge through the process of transnational exchange (Nanda 2005). Given this, the ROSETE teacher-researchers learn to test what they constitute as research-based knowledge claims, the limitations and delimitations of these claims, as well as establishing the robustness of the tests used in such validation exercises.

9.5.3 *What Teacher-Researchers from China Can be in Australia*

Now we turn to the final question which provides the focus for this meta-analysis. What teacher-researchers from China *can be* in Australia? The answers to this question are found in the concepts of *cross-linguistic bridgeheads* and *teacher-researcher theorists*. These concepts are integral to extending and deepening the capabilities for critique represented in the ROSETE Partnership for engaging *worldly critical theorizing*.

²⁰For example, Chinese cyber-nationalism and its neo-nationalistic slant have attracted the critical attention of Chinese researchers (Shen and Breslin 2010; Wu 2007). Likewise, the proposal for an Asiatic agenda for non-western theorising (Miike 2006) is questionable in terms of its separatism, provincialism and exclusivism.

9.5.3.1 Cross Socio-Linguistic Bridgeheads

Worldly critical theorizing in the ROSETE Partnership explicitly focuses on, and engages China's and Australia's educational cultures; their theoretical assets and research processes, and the taken-for-granted presumption of absolute differences between the English and Chinese languages (Singh and Han 2010). For instance, both Chinese and Australian teacher-researchers use idioms and maxims to enchant and empower their scholarly critiques, providing them with a repertoire of condensed and abstract metaphors. Similar to, but quite unlike English-language proverbs, *chengyu* (Mah 2002) are part of the critical assets these bilingual teacher-researcher theorists are encouraged to use for critical theorizing in their studies of Australian education, teaching and learning.

Thus, in Australia these bilingual teacher-researchers from China *can be cross socio-linguistic bridgeheads* by using metaphors, concepts and images from China as critical tools in their theoretical analysis of evidence.

These bilingual teacher-researcher theorists are asked to provide an explanation of the meanings and socio-historical context of these metaphors, concepts and images, and to show how they can be used to critically analyse evidence of education, teaching and learning in Australia. At the early stage of acquiring this capability for theoretical interdependence, the ROSETE teacher-researchers learn to use metaphors such as *chengyu* as critical theoretical tools to analyse evidence they generate in and about Australian education. This use of *chengyu* as tools in *worldly critical theorizing* also provides a vivid picture of China's intellectual culture(s) of critique through its literary and philosophical heritage. However, contemporary metaphors are also encouraged.

To enable *worldly critical theorizing* it is the functional similarities in the resources used for critique which provide the *cross socio-linguistic bridgeheads*. At least during the early stage of acquiring the capabilities for *worldly critical theorizing* their search for, and use of *cross socio-linguistic bridgeheads* is "an essential process in ... learning something new [as it involves establishing] a relation between a new proposition or task and what already exists in the mind" (Ringbom 2007, p. 5). That is, the challenge for the ROSETE teacher-researchers is to find a metaphor, concept or image in the Han Chinese which serves a similar function to words of critique in English. Thus, in addition to *chengyu*, these *cross socio-linguistic bridgeheads* also include cognate similarities in both form and meaning of Chinese and English. These *cross socio-linguistic bridgeheads* include the potentially shared vocabulary that exists in the two languages that have been created through loanwords (English into Chinese, Chinese into English) as well as sound correspondences, high-frequency words and syntactic structures (Ringbom and Jarvis 2009).

With regard to the conditions required for the international circulation of Chinese theoretical ideas in and through this particular Australian teacher education, it has been important to address the "questions of translatability" (Nice 1977a, p. vii). For Nice (1977a, p. vii) "questions of translatability" arises in part because of the "loss entailed in extracting a text from its context." The problem is that these taken-for-granted nation-based assumptions and arguments structure the field of knowledge

production, and “when these bearings are removed the text becomes open to misreading” (Nice 1977a, p. viii). The necessary conditions for the success of translations depend on establishing plausible bridgeheads that assume similarities in linguistic functions, especially overlaps in principles, concepts, the use of metaphors and their applications. With regard to *Reproduction in education, society and culture* (Bourdieu and Passeron 1990), Nice (1977b, p. xxvi) faced the “translator’s quandary” of a simple Parisian French word *méconnaissance* (misrecognition) having to be translated in a way which gives it a “specific scientific sense.”

In the case of the international circulation of Chinese theoretical ideas in Australian educational research in English, *cross-linguistic bridgeheads* are important in addressing the question of the translatability of knowledge. Being bilingual (Pavlenko 2003), these teacher-researchers can make themselves into intellectual mediators in *worldly theoretical interactions*. They learn to affect a scholarly sensibility by the recurrent use of a key Chinese concept throughout their thesis, providing necessary contextual details to ensure Anglophone readers’ familiarity with it as an analytical concept. For English readers to appreciate Chinese theoretical ideas, the cardinal points in the intellectual context or field of knowledge production needs to be explained.²¹

9.5.3.2 Bilingual Teacher-Researcher Theorists

The ROSETE Partnership engages teacher-researchers from China in quasi-ethnographic projects to study how they can make Han Chinese learnable for those Australian students for whom it is a second language. The pedagogical orientation is to develop these students’ capabilities for using Chinese categories, metaphors and images as theoretical tools for data analysis and to promote cross-national learning among teacher-researchers. The students develop a collective written knowledge of these matters, in part because such knowledge is necessary for them to extend and deepen their transnational intellectual and career trajectories. Such knowledge is an important source of lessons and insights for all teacher-researchers studying in Australian teacher education programs. Inherent in the Western Sydney Ningbo Volunteer Program’s re-working of ethnographic practices to enable *worldly critical theorizing* is the pedagogical engagement of these students as media of Australia/China intellectual connectedness. *Pedagogically, this involves the shift in the focus of Australian teacher educators and the teacher-researchers themselves to presupposing and verifying worldly critical theorizing, and making explicit representations of Australian students’ learning using Chinese theoretical tools.* This shift also aids Australian teacher educators to better understand the representations of Australian education held by these Chinese teacher-researchers.

²¹For example, the intellectual context of theoretical production can be related to oeuvre which encompasses numerous major works in the field. Likewise, the translation process may also benefit from a glossary.

9.6 Conclusion

There are Australian teacher education programs which continue to invest heavily in Euro-American research and theories to produce educators. In marked contrast, this chapter has presented a meta-analysis of a large-scale, longitudinal study of the Research Oriented School Engaged Teacher Education (ROSETE) Partnership that is preparing teacher-researchers in Australia for the twenty-first century, one which is presently Asia-centred and China-focused. Funded by the Australian Research Council the focus of this investigation is on developing new principles and pedagogies for preparing bilingual teacher-researcher theorists for *worldly linguistic connectivities and critical theorizing*. As a developmental, interventionist study through the endeavours of these bilingual teacher-researcher theorists is making small but nonetheless significant presence for *worldly linguistic connectivities and critical theorizing* in Australian teacher education, here and now.

The review of the research literature sought to establish the intellectual context for *worldly linguistic connectivities and critical theorizing* currently in Australian teacher education. Despite claims on cosmopolitanism (Marginson and Sawir 2011), there is little evidence of the joining together of Western and non-Western critical theorizing. The prospects for redistributing the sense and sensibilities of Australian teacher education's extensive investment in Euro-American critical theories are challenging. For this reason *educational research for critique* is being employed in this study of the Research oriented School Engaged Teacher Education (ROSETE) Partnership (Singh and Huang 2013).

The meta-analysis of the ROSETE Partnership's educational principles focused on the concept of *intellectual equality* as a key tool of critique being used to effect the redistribution of the sense and sensibilities of Australia's Euro-American centred teacher education. The ROSETE Partnership's educational principles take the goal of twenty-first century Australian teacher education to be *declassifying* the theory/data divide that privileges Euro-American critical theorizing over the rest; to take as its educational starting point the *presupposition of intellectual equality*, and to make its key educational task as the *verification of intellectual equality*. The meta-analysis of the ROSETE Partnership's pedagogies for *worldly linguistic connectivities and critical theorizing* focused on three themes. First, what teacher-researchers from China *can do* in Australia using their *bilingual research literacy* and their capabilities for *double knowing*. Second, what they *can say* in Australia to form *theoretical contact zones* and make *honourable critiques*. Third, what they *can be* in Australia in terms of *cross socio-linguistic bridgeheads* and *bilingual teacher-researcher theorists*. Of course, this conceptual framework provided by these educational principles and pedagogies are not meant to be taken as a fixed or frozen artefact. As a dynamic diagnostic tool to inform further research in teacher education they provide a focus for critique.

Even in the twenty-first century there are Australian teacher education programs which have invested almost exclusively in Euro-American theories to produce the rising generation of educators. However, it is not at all clear how such programs provide for any serious-minded intellectual engagement that prepares educators in Australia for an Asian-centred, China-focused twenty-first century. What

misfortunes await Australian educators schooled in Euro-American theories? Will they regard it as unusual – even eccentric – when international, immigrant and refugee teacher-researchers from Asia decide to make extensive use of critical theoretical tools from non-Western intellectual cultures? Will their theses and assignments be failed on the grounds of creating binaries, when they should be writing about Australian teacher education's self-proclaimed but largely imagined hybridity?

That Australia has a nationally regulated teacher education system does not mean it is pointed in a single predetermined direction, that of privileging Euro-American critical theories. Moreover, innovative educational principles, programs and pedagogies for *worldly linguistic connectivities and critical theorizing* are unlikely to be provided system support or time. Educational critics know this. The concepts presented in this chapter have application beyond Australian teacher education and in particular the preparation of bilingual teacher-researchers for the twenty-first century. These concepts are likely to be relevant to other Western Anglophone teacher education programs where the preparation of teachers for the twenty-first century means intellectual engagement with the East and the South as a basis for *worldly linguistic connectivities and critical theorizing*. Preparing teachers for the twenty-first century necessitates bringing forward and making anew worthwhile traditions of Australian teacher education by gleaning what might be salvaged from a multiplicity of Euro-American critical theories and rearticulating it through *worldly critical theorizing*.

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Chapter 10

Teacher Education in Hong Kong: Status, Contemporary Issues and Prospects

John Chi-Kin Lee

Abstract This chapter first examines the changing international context of teacher education and then the status of teaching and pre-service and in-service teacher education in Hong Kong including the contexts of change that have shaped teaching and teacher education over the last decade. These latter contexts include educational and curriculum reforms, the decline of the school population, and the increase in both student diversity and the children of recent immigrants in local schools. The literature related to teachers' belief, teachers' perceptions of success as well as those on teaching and student learning and the development of professional learning communities in Hong Kong are also drawn upon to highlight implications for the future development of teacher education. It is suggested that teacher education programmes could reinforce pre-service teachers' self-efficacy specifically in classroom management and catering for student diversity as well as teachers' communication and interaction skills with students. Teacher education institutions could also explore the establishment of partnerships with schools and other organizations which provide policy and resources support for teacher education. Moreover, stress management and stress training activities could be enhanced to help teachers build up habits of work-life balance and enhance their hardiness.

Keywords Teacher education • Hong Kong • Changing contexts

10.1 Part I Introduction

Worldwide, improving teacher quality is a vital issue of concern since it is pivotal to both the overall quality of the school system and the quality of the future workforce. From a lifelong learning perspective, teacher preparation and teacher education can be

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broadly divided into three phases or stages: initial teacher education where teachers acquire their essential professional knowledge, skills and attitudes; induction, particularly in the first year of teaching; and continuing professional development. As has been well documented, Hong Kong has, since the start of the new century, experienced unprecedented government initiated educational reform, and particularly curriculum reform. In 2001, the Curriculum Development Council (CDC) published "Learning to Learn: The way forward in curriculum development" in which teacher educators were advised to strengthen pre-service and in-service programmes so that teachers were better equipped to promote learning to learn and innovative practices such as assessment for learning. In addition, teacher educators were encouraged to develop research and development and longitudinal research projects so that findings could inform curriculum policy and practice in schools (CDC 2001, p. 117).

In 2003, the Advisory Committee on Teacher Education and Qualifications (ACTEQ 2003) put forward the Teacher Competencies Framework (TCF), consisting of the Teaching and Learning Domain, the Student Development Domain, the School Development Domain, and the Professional Relationships and Services Domain, to serve as a basis for teachers' ongoing professional development. In the recent report by McKinsey & Company (Mourshed et al. 2010), Hong Kong was cited as one of the "sustained improvers" with a "great to excellent" journey. Among the factors contributing to success in Hong Kong were the launch of the Quality Education Fund, that had encouraged schools to engage in school improvement, school-based curriculum development and action research all of which were conducive to teaching and learning (pp. 42–43), and a "'soft" input mandate to encourage" professional development (p. 65).

In this paper I will first examine the changing international context of teacher education and then consider the status of teaching and pre-service and in-service teacher education in Hong Kong including the contexts of change that have shaped teaching and teacher education over the last decade. These latter contexts include educational and curriculum reforms, the decline of the school population, and the increase in both student diversity and the children of recent immigrants in local schools. The literature related to teachers' belief, teachers' perceptions of success as well as those on teaching and student learning and the development of professional learning communities in Hong Kong will also be examined to highlight implications for the future development of teacher education.

10.2 Part II The Changing International Context of Teacher Education and Teaching

Cheng (2001), from the perspectives of globalization, localization and individualization (known as triplization), has called for a change in the prevailing paradigm of teacher education. Recently, there have been some important international reviews of teacher education. An influential review by the International Alliance of Leading Education Institutes (Gopinathan et al. 2008) presented examples from the US,

China, Singapore, Australia, Korea, Denmark, UK, Canada and Brazil. The report arising from this review identified a number of significant challenges including marketization of education as a commodity, influence of information and communication technologies (ICTs), learning needs of students shifting to generic or soft skills as well as the heightening expectations of an increasing number of stakeholders. The report called for a redefined professionalism encompassing the following key components: recognizing teachers' work based on specialized knowledge and skills, teachers adopting an inquiry orientation, teachers accepting responsibility for the learning outcomes of their students, and accepting the involvement and collaboration of educational stakeholders and non-education communities, and expecting teachers' self-directed commitment to continuous learning (p. 9).

A recent and authoritative review of teacher education in Queensland, Australia concluded that there was need to strengthen the "clinical partnership" in which "staff based in partner schools are exemplary teachers who receive special training for their roles" and "all students have experience in partner schools that enable them to gain skill in dealing with a range of behavioural issues, including classroom management and support for those with learning difficulties" (Caldwell and Sutton 2010, p. x). A review focusing on teacher education in Scotland proposed: "...four influential "paradigms" of teacher professionalism: the effective teacher, the reflective teacher, the enquiring teacher and the transformative teacher.... This spectrum of professionalism was captured in 1974 by Eric Hoyle when he suggested that "...models of teaching existed at some points on a spectrum between "restricted" and "extended" versions of teacher professionalism.... This concept of professionalism takes each individual teacher's responsibility beyond the individual classroom outwards into the school, to teacher education and the profession as a whole" (Donaldson 2011, Chap. 2, p.15; Hoyle 1974). The review also calls for an emphasis on leadership for twenty-first century learning and recommends that "Teacher education should be seen as and should operate as a continuum, spanning a career and requiring much better alignment across and much closer working amongst schools, authorities, universities and national organizations" (Chap. 6, p. 85).

The Teaching and Learning International Survey (TALIS) conducted by the OECD (2009) has provided the first international comparative perspective on conditions of teaching and learning. Some of the findings reveal that on average across countries, "three-quarters of teachers report that they would receive no recognition for increasing the quality of their work or for being more innovative in their teaching" and factors that could positively shape the quality of learning in schools were related to "a positive school climate, teaching beliefs, cooperation between teachers, teacher job satisfaction, professional development, and the adoption of a range of teaching techniques" but there was much variation at the individual teacher level rather than between schools and countries, suggesting that there might be "the need for individualised and targeted programmes for teachers rather than just whole-school or system-wide interventions that have traditionally dominated education policy" (http://www.oecd.org/document/54/0,3746,en_2649_201185_42980662_1_1_1_1,00.html accessed on 18th July 2011; Zhang and Li 2011). The European Commission (2010) has conducted a secondary analysis and found that, for lower secondary teachers in

Beijing, the need for professional development was identified in the following areas ($n=1,949$; figures indicating the percentage of teachers): learning from model teachers (65.8 %); pedagogy (teaching strategies) (50.3 %); subject matter knowledge (47.3 %); classroom management strategies (42.5 %); multimedia teaching technology strategies (40.9 %); new concepts and theories in teaching and learning (39.5 %); educational research methodology (38.2 %); and common knowledge (humanities and nature) (37.6 %). It was also notable that for teachers with 1–3 years of teaching experience, the most often referred to needs were classroom management strategies and learning from model teachers (p. 156).

10.3 Part III The Status of Teaching and Pre-Service and In-Service Teacher Education in Hong Kong

In Hong Kong, historically there has been no official requirement that a person should be professionally trained before he/she joins the teaching profession. Any person who wants to teach in a school, a person must apply to the Education Bureau (EDB) for registration as either a “Registered Teacher (RT)” or a “Permitted Teacher (PT)”, an arrangement which is somewhat equivalent to the status of “emergency certification” in the US. To become a RT, the candidate must have obtained Qualified Teachers Status (QTS) through the successful completion of a recognized teacher education programme which may be a sub-degree level Certificate/Diploma in Education (awarded by the previous Colleges of Education), a bachelor’s degree in education (or equivalent degree) which pertains a “concurrent model” of teacher education or a Postgraduate Certificate/Diploma in Education (in addition to a university undergraduate degree usually with an academic major) which is known as the “consecutive model” (Lai and Grossman 2008). Nowadays, many PTs will try to obtain QTS and become a RT within the first 5 years of service because a salary bar will be imposed on them and they are not eligible for promotion to senior teaching posts. In Hong Kong, under the auspices of the University Grants Committee, there are some teacher education institutions (TEIs) providing pre-service and in-service teacher education programmes: The Hong Kong Institute of Education (HKIEd), the major teacher education provider, offers a range of sub-degree, degree and postgraduate programmes for pre-service and in-service teachers. The Chinese University of Hong Kong (CUHK), the University of Hong Kong (HKU) and the Hong Kong Baptist University (HKBU) also provide undergraduate and postgraduate programmes for pre-service and in-service teachers. The Open University of Hong Kong (OUHK) offers degree programmes and in-service and pre-service Postgraduate Diploma in Education programmes for primary and secondary school teachers.

According to the EDB, there were some 330,000 primary school students and some 21,000 primary school teachers (including about 1,600 non-degree holders) with approximately 95 % trained teachers in the 2010/2011 school year. There were 440,000 secondary school students and 29,000 secondary school teachers (including 750 non-degree holders) with about 94 % trained teachers in the 2010/2011 school

year. (<http://www.edb.gov.hk/index.aspx?langno=1&nodeid=1038> and <http://www.edb.gov.hk/index.aspx?langno=1&nodeid=1039#> accessed on 17th July 2011)

While the percentages of trained primary and secondary teachers are high, it is notable that the wastage rates of untrained primary and secondary teachers were about 20 % and 16 % in the 2010/2011 school year respectively.

In his Policy Address 1997, the Chief Executive announced that the government “require[s] all new teachers to be trained graduates” (<http://www.policyaddress.gov.hk/pa97/english/patext.htm> accessed on 12th July 2011). However, this policy was not implemented for several reasons, including “maintaining flexibility in teacher supply”, “detering talented people from becoming teachers”, and “preference for in-service training” (Lai and Grossman 2008, pp. 269–270). There were additional arguments such as doubtful standards of teacher education graduates, the dominance of subject matter knowledge over professional training, and the possibility of getting a professional qualification through school-based mentoring support and other short courses (p. 272). As there is a lack of official policy, there is a continuous entry of untrained teachers to schools resulting in teaching being seen by the public at large as a low status occupation with a low level of professionalization (Lai and Grossman 2008, p. 273).

Initial teacher induction, providing extended professional scaffolding and support for beginning teachers, has been practiced in Wales, Scotland and England. In Hong Kong, there is no mandatory centralized or school-based mentoring support. In 2008, the ACTEQ recommended the establishment of a system of voluntary school-based teacher induction, comprising a framework, together with an Induction Tool Kit and a Pamphlet on the Teacher Induction Scheme, “to provide their beginning teachers with a systematic, supportive and comprehensive environment conducive to their professional development” (<http://www.acteq.hk/category.asp?pid=39&cid=297&lang=en> accessed on 17th July 2011). A local study found that new teachers’ learning pattern tended to be individual and varied and, more importantly, 42.5 % of 28 teacher interviewees “have minimal or less than a professionally desirable reflectivity. As respondents then move through their first teaching-year, their school-based experience appears to further mitigate against their use of Schon’s quality professional reflection” (Chau and Forrester 2010, p. 61). It was argued that “Within the Hong Kong context, the stronger argument appears to support the current *laissez faire* practice which accords greater individual freedom” Chau and Forrester (2010, p. 55) and that systematic and specific provision of initial teacher induction backed up by bureaucratic control over teaching practice and accountability for standards might hamper teacher autonomy and pose threats to professionalism. Of course, this assumes that teacher autonomy is something on which teachers themselves put a high priority. From the outside, it seemed, therefore, more desirable to allow flexibility and freedom for beginning teachers in initial teacher induction and to promote collegial support and individually earned (rather than externally imposed) communities of practice which might be more conducive to innovation, problem-solving, critical friendship, knowledge sharing and understanding. Clearly, any arrangements for collegial support have considerable resource implications in that any new arrangement is likely to make new demands on teacher time, a very precious professional resource.

10.4 Part IV Contexts of Change that Have Shaped Teaching and Teacher Education Since 2000

Hong Kong, like many Asian countries and elsewhere, has a tradition of student and parental respect for teachers and teaching is ranked as a relatively high-status occupation in which teachers receive a salary that compares well with those of persons employed in similar occupations. In a comparative study of teacher preparation and qualifications in six countries, Hong Kong has been characterized as a place where teachers engaged in “out-of-field (non-major)” teaching in primary schools and where lower secondary schools teachers have to teach multiple subjects (Ingeroll 2007, p. 10). Despite the public concern about the quality of new entrants to university teacher education programmes, Hong Kong is, however, seen as a place that seeks to “ensure that teacher salaries significantly exceeded the national GDP per capita.... [and to] recruit top-performing students into the teaching profession, and so aim to provide competitive remuneration relative to other professions” (Mourshed et al. 2010, p. 56). In addition, despite the relatively high salary of teachers, Morris (2008, p. 134) commented that teaching had not become an occupation with a high level of professionalism and autonomy. Teachers in Hong Kong had only ““regulated autonomy” within which they were subject to the direct control and surveillance by the state and of the market in which schools compete for pupils and pupils compete with each other”.

In recent years, Hong Kong like many Asian countries has experienced government-led significant educational and curricular reforms. The Education Commission (2000, p. 5) published the education reform blueprint “Learning for Life Learning through Life” and presented a vision for the twenty-first century: building a lifelong learning society, raising overall student quality, constructing a diverse education system, creating an inspiring learning environment, acknowledging the importance of moral education, and developing an education system rich in tradition but cosmopolitan and culturally diverse (Kennedy and Lee 2010, p. 26). In 2001, the Curriculum Development Council (CDC) published “Learning to Learn: The way forward in curriculum development” that calls on teachers to “promote priority generic skills (critical thinking, creativity and communication) in the learning and teaching of KLAs [Key Learning Areas]”, “use appropriate teaching, learning and assessment strategies to motivate students and to improve learning” and “develop a personal plan of professional development and life-long learning” (p. 116). In line with curriculum reform proposals, the Advisory Committee on Teacher Education and Qualifications (ACTEQ 2003) published “Towards a Learning Profession” with a preamble that asserted: “The willingness and capacity for lifelong learning, which we expect from our students, should also be reflected in our teachers. Every teacher should be a continuous learner in order to advance the quality of our education system and the quality of students’ learning. Continuing professional development of teachers today is crucial to preparing the citizens of tomorrow” (p. 1). In addition to lifelong learning, economic drivers remain at the forefront of Hong Kong’s educational and curricular reforms, reflecting a human capital perspective in which

school, teacher and curriculum development need to be reformed and transformed so as to nurture future “knowledge workers” for the knowledge economy (Kennedy and Lee 2010). Moreover, recent socio-demographic and classroom changes in Hong Kong have led to calls for more attention to be given to multi-culturalism, multi-lingualism as well as the use of information and communication technologies in pre-service and in-service teacher education (UGC 2009, pp. 21–22). For newly arrived students (NAS) and non-Chinese students (NCS), for example, there is a need to give close attention to incorporating cultural elements in Hong Kong’s multicultural teacher education (Yuen 2002).

10.5 Part V Issues for Teacher Education in Hong Kong

Important issues have emerged for teacher educators in the development of teacher education in Hong Kong. What are the pros and cons of a bachelor degree in education programme (BEd) versus a postgraduate diploma in education (PGDE)? How can we enhance the attractiveness of a 5-year bachelor degree in education programme? How could the teacher education programme be made more attractive to high quality potential student teachers? How could the teacher education programme be enhanced in its design so that it meets the future needs of the teaching profession? How can teacher education institutions and teacher educators work in partnership with schools to enhance the quality of teacher education programmes?

There has been some discussion by teacher educators about the pros and cons of the BEd programme and the PGDE as models or routes of teacher preparation. Arguments in favour of BEd programmes include: a developmental approach; an emphasis on integrated learning experience; and more comprehensive preparation. Arguments supporting PGDE programmes include: are better preparation based on school subject strength; quicker responses to changing market demand; ability to attract a better intake; and more mature university graduates able to make better career choices (Lai et al. 2002, pp. 8–10). It is noticeable that BEd programmes tended to have higher retention rates and “greater numbers of graduates of 5-year programmes became teachers and remained as teachers” (UGC 2009, p. 20). However, moves towards a 5-year teacher education curriculum (as against a 4-year curriculum in most other non-education degrees) may affect the attractiveness of BEd programmes to potential candidates. With regard to the concurrent model of BEd, there are some developments towards the Master of Teaching (MTeach) degrees in Australia, the US and elsewhere with two main modes: a 5th year model in which students study 1 year extra beyond their Bachelor’s degree to earn a Master’s degree and an initial teaching qualification; and a flexible programme which usually offers part-time weekend and evening courses to accommodate professionals who are changing careers. In addition, the recently launched Master of Teaching programme in the National Institute of Education, Singapore, aiming at graduating teachers with at least 2 years of experience, “optimises the theory-practice balance in learning situated within their [students’] own unique

professional context” (<http://www.nie.edu.sg/mteach> accessed on 17th July 2011). Whether or not Hong Kong TEIs should offer MTeach could be further explored.

To attract high quality students, some countries use scholarship schemes as incentives. The NSW Department of Education and Communities 2012 Teacher Education Scholarship Program in Australia, for example, provides up to 300 scholarships for talented students to train as teachers in secondary mathematics, science or English, and in special education (<https://www.det.nsw.edu.au/about-us/careers-centre/school-careers/teaching/our-programs-and-initiatives/teaching-scholarships> accessed on 16th July 2011). In Hong Kong, the government has introduced The Scholarship for Prospective English Teachers as one of a series of measures to enhance the professionalism of teachers of English. The aim of these Scholarships is “to attract persons proficient in English to pursue relevant local Bachelor degree programmes and/or teacher training programmes which will qualify them to become English teachers on graduation” (<http://www.edb.gov.hk/index.aspx?nodeID=7746> accessed on 16th July 2011). It may be desirable to offer scholarships to talented student teachers in subjects other than English to show the government’s commitment to teacher education.

As regards the partnership between the TEIs and the schools, there has been a call for evidence-based practices and strengthening the relationship between educational research and practice (University Grants Committee UGC 2009, p. 18). It was suggested that “Teacher Education institutions which are actively engaging in research and support research partnerships with schools are most likely to succeed in creating the predisposition to a research-based approach in their students. This is also vital in relation to a teacher’s own analytical or reflective practice” (UGC 2009, p. 19).

(http://www.ugc.edu.hk/eng/doc/ugc/publication/report/hkied_review_report/chapter_2_e.pdf accessed on 16th August 2011.)

10.6 Part VI Future Prospects

In the field of teacher education, epistemological beliefs may have played an important role in affecting the effectiveness of a teacher education programme. Student teachers are capable of holding strongly to their own beliefs and ignoring teacher educators’ presentation of ideas. A study by Chan of Hong Kong pre-service teachers identified four epistemological belief dimensions: innate/fixed ability; learning effort/process; authority/expert knowledge; and certainty knowledge. And pre-service teachers’ conceptions of teaching and learning revealed two dimensions: traditional and constructivist conceptions. Pre-service teachers tended to believe that knowledge was acquired through one’s own efforts and the learning process and tended to hold a combination of traditional and constructivist conceptions. Canonical correlation analysis found that “the Hong Kong teacher education students who have Traditional Conceptions of teaching and learning are most likely to hold beliefs that knowledge is certain, knowledge is derived from experts

and one's learning ability is innate" and alternatively, pre-service teachers with constructivist conceptions tended to believe that knowledge is constructed, tentative and one's ability is changeable (Chan 2004, p. 6). Such findings could be interpreted as students being exposed to both the Confucian-heritage culture, highlighting the authority of teachers and the importance of hardworking, and the Western philosophies and progressive pedagogy. For teacher education, it is desirable for teacher educators to help pre-service teachers make explicit and reflect on their epistemological beliefs and conceptions of teaching. Another related study found that pre-service students who tended to believe that learning necessitates effort and the process of understanding tended to learn by a deep motive and strategy rather than a surface approach with an emphasis on rote learning (Chan KW 2003). A similar study revealed that most of the student-teachers tended to believe strongly that learning effort was more important than innate ability, knowledge changes and question the authority of knowledge but there existed inconsistencies between epistemological beliefs and conceptions of teaching. It seemed that, on the one hand, a teacher education programme advocating constructivist pedagogy and reflective thinking might have a positive impact on student teachers' beliefs but, on the other hand, student teachers might be struggling between pre-existing beliefs and new information during the transition stage of learning to teach. It was suggested that teacher education might place more emphasis on reflective thinking and relation pedagogy which pertains to "valuing the student as a knower, providing learning experiences that are related to the students' experiences, and facilitating a constructivist perspective of knowing and learning" (Cheng et al. 2009, p. 326).

A study of student teachers' inconsistencies between their conceptions of teaching and their actual practice revealed that there were three dimensions: pre-training experiences, teaching context and student needs. It was suggested that student teachers could be provided with the awareness of the various teaching contexts so as to help them reflect on their own teaching. In addition, student teachers could be encouraged to promote self-learning or independent learning which might be partly enhanced through short-term study abroad or exchange programmes. Also, it was found that teacher educators' modeling had exerted some impact on student teachers' learning (Cheng et al. 2010). To address the issue of enhancing student teachers' self-learning and enquiry learning ability, there have been attempts at using innovative approaches or methods in teacher education programmes in Hong Kong. One of these approaches is the use of Problem-based Learning (PBL) but a study found that the classical mode of PBL would pose challenges for implementation even though PBL was recognized by student teacher participants as "encouraging learners to construct and co-construct new knowledge through a high level of self-directed and group-collaborative cognitive learning" (Kwan 2008, p. 340). Instead, it was shown that the problem-based scenario inductive inquiry workshop mode of delivery was preferred for initial teacher education and catering for independent critical and self-directed learning (Kwan 2008).

There has been a call for enhancing classroom-focused and school-based professional development for teachers and establishing teacher-led networks or professional learning teams or communities within and between schools (Lee 2011). The

Advisory Committee on Teacher Education and Qualifications (ACTEQ 2009, p. 10 and p. 16) commissioned a study of teachers' continuing professional development (CPD) in 2007 and the results revealed that 58 % of the teachers' CPD time was devoted to the domain of "teaching and learning" and while over 90 % of teachers considered "structured activities" such as staff development days, seminars and workshops to be helpful, over 80 % of teachers also viewed lesson observations, exchanges with stakeholders and joint lesson preparation as helpful CPD activities. It was noticeable that 70 % of teachers indicated that action research and mentoring were useful (p. 17). It was suggested that the notion of "teachers as co-learners" should be promoted and sustainable development of professional communities within and beyond schools should be strengthened (p. 26).

In addition to innovative approaches to enhance student teacher learning, the EDB, different teacher education institutions and professional associations have adopted various strategies or approaches to enhancing continuing professional development or in-service education of teachers through formalized short-term courses, Master-degree programmes and school-university partnership projects. The EDB, for example, has run mentorship courses to support new teachers and arranged professional exchange activities for in-service teachers. Meanwhile, some professional associations introduced action learning components in training programmes for middle managers in schools (Wu 2008).

Tang and Choi (2005) introduced a mentoring model in The Hong Kong Institute of Education (HKIEd), involving collaborative enquiry among teachers into teaching and learning by engaging in lesson study. Lesson studies have been demonstrated by both statistical and qualitative evidence to reveal positive impacts on the professional learning of teachers, and the learning of students through building up a learning community (Ko et al. 2011; Lo 2009). Pang (2006) adopted a "learning study" approach in which teachers were expected to learn the object of learning, the linkage between theory and practice, and the way of handling the object of learning (p. 33). This approach had been used in teacher education programmes and school-based professional development projects. In general, there was a positive impact on shifting their "focus from the teacher more towards the learner, from teaching towards student learning, from knowledge and/or skills towards a way of understanding the phenomenon, and from the school context towards multiple contexts" (p. 40). Chow and Tang (2009) used a learning-oriented field experience assessment framework for developing in-service teachers into self-regulated learners through supervisory conferences between supervisors and teachers. A Professional Development Progress Map was formulated with three key performance domains namely professional attributes, teaching and learning, and involvement in education community. Through field experience or teaching supervision, evidence of achievements was recorded for feedback into future work. This approach to the assessment of teaching enables the transfer of tacit knowledge through interactive talk, the sharing of standards and the setting of targets for developing self-regulation in teachers, the expansion of professional discourses to collegial practices beyond the classroom, the development of positive assessment culture in teaching practice supervision (pp. 330–332).

The University of Hong Kong had initiated the Quest Project (Stimpson et al. 2000) in the late 1990s and the Unified Professional Development Project (UPDP) which comprised the following components: the School-University Partnership Scheme, the Unified Professional Development Fellowship, and the School-based Development Consultancy. As regards the contribution to teacher education, student teachers had greatly benefited from mutual lesson observation between school mentor teachers and student teachers as well as from the tripartite conferences (between student teachers, school mentor teachers and university tutors) which enhanced the partnership between school mentor teachers and university tutors in teacher education (Lo and Lai 2004). The Teacher-Fellowship Program was another innovative component of UPDP in which teachers engaged in components of “mentoring”, “professional development and professional learning”, “pedagogy of teaching”, “lesson analysis” and “lesson study” and had extended their horizons and enriched their experiences (Tsui and Wong 2006). In a PGDE programme for in-service teachers, both supervised teaching practice and on-site peer observation were used and it was found that while both modes were complementary, in-service student teachers tended to prefer supervised teaching practice. There existed some constraints of on-site peer observation implementation, such as lacking a culture of peer observation, and these findings pointed to both the need for strengthening school-university partnerships in teacher supervision and for training more school teachers as mentors (Sivan and Chan 2009). A study of the dynamics of school-based learning in initial teacher education suggested that teacher education tutors and teachers, in the form of a pedagogical partnership, needed to understand student teachers’ teaching self and their student teaching context and it was pertinent to provide both challenge and support as well as a facilitative milieu for student teachers to frame their teaching situations, form a strongly held teaching belief, and develop a rich teaching repertoire (Tang 2004). This necessitates, however, a teacher education institution-school partnership which helps bridge the link between coursework and fieldwork, on the one hand, and enhances the complementary contribution of TEI and schools to initial teacher education on the other.

Another example is a small-scale 4-P action research model, comprising cyclical components (Problem clarification, Planning, Programme action and Progress evaluation), which was used in school-university partnership projects to help enhance teachers’ professional development and instructional improvement (Lee et al. 2008; Lee 2011). In line with the development of teacher education and school-university partnerships in the US, the Netherlands and Hong Kong, Cheng and Tsai (2008) proposed a cross-sectoral strategic alliance between the government (education administration bureau), teacher education institutions and the schools for enhancing the quality and accountability of teacher education. In such an alliance, schools become sites of professional development schools in nurturing pre-service teachers with the support from the government and coordinated efforts of teacher education institutions in co-planning the teacher education curriculum and negotiating the in-service professional development of teachers.

Moreover, curriculum reform has profound implications for the reform of teacher education not only in curriculum design and pedagogical approaches, but also in

assessment of student teachers' knowledge and learning which highlights the integration or consistency between the theory and the practice and the personal cognitive perspective of teacher development. This calls for a move towards the use of portfolios as platforms for analytic and formative evidence-based assessments which could be externally validated and assessed by experienced teachers and/or teacher education tutors (Elliott and Morris 2001).

A study has identified three groups of factors that account for Hong Kong teacher success: personal, professional and environmental. For the group of personal factors, "being responsible, having a caring attitude and self-reflection were found to be the three most important factors". For professional factors, "having a thorough understanding of the subject matter, being a role model for students and having an enthusiasm for teaching were found to be most important". For environmental factors, "the principal's support, collaboration with colleagues and positive feedback from students about teaching methods were shown to be the three most important factors" (Cheng et al. 2007). These findings imply that for successful teachers, it might be desirable to enrich teachers' repertoire of instructional strategies and their understanding of their subject knowledge in teacher education and professional development courses. The results also suggested that "programmes on subject matter, educational psychology and increasing self-confidence came top of the list of such needs" (p. 429). Teachers' self-efficacy has been another topic of research in teaching and teacher education. Chan (2009) found that there was broad similarity in the structure of domain-specific teacher self-efficacy, which comprised teaching highly able learners, classroom management, guidance and counseling, student engagement, teaching to accommodate diversity, and teaching for enriched learning, for prospective and in-service teachers. It was, however, notable that teachers, especially prospective teachers, had the lowest mean scores of self-efficacy in classroom management. This suggested that classroom management needed to be enhanced in teacher education programmes.

The findings of another, more recent, study showed that student teachers enrolling in an English language teacher education programme with teaching practice experiences had positive significant differences in self-efficacy than their counterparts without teaching practice experiences. It was suggested that student teachers could be provided with qualitative data (such as lesson observations, interviews) and narratives through an electronic platform (e.g., blog-based teaching portfolio) which allowed them to take part in collaborative sharing, learning, reflection and building a learning community (Chan DW et al. 2010). Teacher self-efficacy is a popular area of research and teacher commitment is gradually attracting attention. In a study on trends of teacher commitment in Hong Kong, the results revealed that love for students was a critical personal factor which counterbalanced the unfavourable external conditions and sustained teacher commitment. It was suggested that "'love for students' as a personal value and virtue involves teachers' active experimentation in their daily interaction with students...teacher educators could model the development of the teacher-pupil relationship, which may in turn have an impact on teachers' future experiential learning with their own students" (Choi and Tang 2009, p. 776).

Apart from teacher self-efficacy, teacher stress and burnout as occupational health problems arising from increasing workloads have attracted research attention in Hong Kong. A recent study revealed that comparing over a 5-year period 91.7 % and 97.3 % of more than 1,700 responding teachers self-reported an increase of stress level related to heavy workloads, time pressures, education reforms, external school review, pursuing further studies, and managing students' behavior and learning. It was noticeable while teachers adopted stress management activities such as sleeping, talking to neighbors and friends, self-relaxing, and watching television, teachers tended to resort less frequently to doing exercises and sports (Chan AHS et al. 2010). Another study on the workloads of Hong Kong primary and secondary school teachers found that "over 57% of them worked, including professional development, more than 61 hours on average per week (including Saturday and Sunday). 27% of the primary teachers and 25% of the secondary teachers reported that they worked more than 71 hours per week" (Lai et al. 2011, p. 4). Teachers were less satisfied with non-teaching duties such as "school administration meetings", "clerical work", "preparation of proposals and reports" and "school promotion and recruitment" and most responding teachers perceived their increasing workloads were mainly due to "External school review" (both primary and secondary teachers), "Territory-wide System Assessment" (primary teachers), "School self-evaluation" (both primary and secondary teachers), "Inclusive education" (primary teachers), "New Senior Secondary Curriculum Reform" (secondary teachers), and the "Introduction of school-based assessment in public examinations" (secondary teachers) (Lai et al. 2011, p. 5).

Another study found that "positive hardiness had significant main effect on personal accomplishment...[while] negative hardiness mediated slightly the impact of stress on emotional exhaustion and depersonalization" but there was no evidence of the clear linkage between the stress-moderating effect of positive or negative hardiness and teacher burnout (Chan DW 2003, p. 381). This has implications for teacher education programmes of both pre-service and in-service teachers which may need to increase the components of stress management and stress prevention training with more emphasis on positive hardiness or resilience and beliefs in commitment, control and challenges. It is also desirable to enhance the communication and interpersonal skills of teachers who can then enhance their interaction with students and boost their sense of achievement.

There have been suggestions that continuous professional development of teachers in Hong Kong should pay more attention to addressing teachers' emotions and promoting teachers' psychological well-being as well as encouraging teacher collaboration and interactions (Lee and Shiu 2008).

To enhance the overall educational quality in schools, there is a need to enhance the prestige of the teaching profession so as to attract capable candidates with a passion for teaching to choose quality teacher education programmes as a higher priority for their future career as well as to provide more time and capacity for in-service teachers in continuing professional development. To achieve this, the Hong Kong government could consider adopting the following measures: providing scholarships for highly capable candidates; reducing the workloads of in-service teachers; and boosting the image of the teaching profession. It may be desirable for the

government to revisit the issue of “all trained, all graduate requirement for new teachers”. Moreover, based on the above review, it is proposed that pre-service and in-service teacher education could pay attention to the following:

- Teacher education programmes could reinforce pre-service teachers’ self-efficacy specifically in classroom management and catering for student diversity as well as teachers’ communication and interaction skills with students so that they derive their satisfaction more from “love for students” and successful student learning. It is also desirable to enhance subject matter and diversified instructional strategies as well as increase opportunities for teachers to engage in reflection and collaboration through peer observation, action research and learning.
- Teacher education institutions could explore the establishment of partnerships with schools involving the mutual collaboration of supervising teachers as mentors and/or teacher leaders and teacher education tutors acting as teacher educators and/or school improvement consultants as well as government officials who provide policy and resources support for teacher education. More efforts could be paid to nurturing competent and experienced teachers to be mentors and models for beginning teachers.
- Stress management and stress training activities to help teachers build up habits of work-life balance and enhance their hardiness.

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Chapter 11

Preparing Teacher Educators in U.S. Doctoral Programs

Emily Lin

Abstract To a large extent, the quality of future generations of K-12 teachers and their students' performance is dependent on how well teacher educators, the teachers of teachers, are prepared in doctoral programs. Preparing quality teacher educators in academe encompasses being able to conduct high-quality educational research and be strong teacher leaders. Currently, teacher educators are prepared in either a Doctor of Education (Ed.D.) or Doctor of Philosophy (Ph.D.) degree program in the United States. In this paper, I discuss implications of these two degree programs and the challenges of preparing U.S. teacher educators in attaining both educational research literacy and teaching competence.

Keywords Teacher educators • Preparation • Tertiary education

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A common assumption about teacher educators when they graduate from doctoral programs is that they possess the knowledge and skills to conduct research that can build on the knowledge base that can inform teaching practice, teacher education, and policies. However, criticism about the lack of rigor and weaknesses in work produced by educational researchers in general, and teacher educators in particular, have raised questions about the value of some of their contributions to the collective knowledge about teaching and teacher education (Grossman 2004, 2008; Lagemann 2000; Levine 2007; Lin et al. 2011; Mitchell and Haro 1999; Wilson 2006; Wilson and Tamir 2008; Zeichner 2005). Variations in traditions, purposes, design and foci among different doctoral programs and the lack of consensus about definitive standards of good research have contributed to the low value and perception of teacher education research. In addition, the multiple disciplinary traditions within the field of educational research (Levine 2007; Metz 2001) and the lack of distinction between Ph.D. and Ed.D. degrees (Shulman et al. 2006) have fortified these views.

Although some discussion has focused on improving the preparation of educational researchers in doctoral programs in recent times (Labaree 2003; Levine 2007; Neumann et al. 2008; Pallas 2001; Schoenfeld 1999; Wilson 2006; Young 2001; Zeichner 2005), research about teacher educators and their preparation in doctoral programs is understudied and in its incipient stage in the US.¹ There is general acceptance that there is a lack of knowledge about the connections between teacher education programs and subsequent teacher performance and student achievement in the field. A similar void exists between doctoral preparation and the subsequent quality of educational researchers produced. There is a need to know more about how best to prepare teacher educators situated within a climate beset with charges of low quality research, increasing appeals for research that can inform policy and practice, and intensifying accountability for preparing new generations of quality teachers that can improve student achievement.

The major aim of this article is to generate thought and dialogue about how to better prepare teacher educators in research and teaching in doctoral programs by addressing the challenges often seen in preparing teacher educators in graduate schools within U.S. university contexts. I assume that preparing good teacher educators in academe encompasses being prepared to conduct high-quality educational research and learning to be strong teacher leaders (Chauvot 2009). I frame the discussion around three questions: What's the difference between Doctor of Philosophy (Ph.D.) and Doctor of Education (Ed.D.) degrees? What are the challenges of preparing teacher educators to learn *about* and *do* research in doctoral programs? What are the challenges of preparing teacher educators to be teacher leaders?

¹It is anticipated that the first nationwide assessment of US graduate schools and colleges of education in the field of educational research, including teacher education, will be conducted jointly by the American Educational Research Association (AERA) and the National Academy of Education (NAEd). This study proposes to collect data that may be used to establish benchmarks and quality criteria to improve education research doctoral programs nationwide. In addition, this study aims to assess the extent and nature of methodological preparation of doctoral students in educational research.

11.1 What's the Difference Between Ph.D. and Ed.D. Degrees?

The majority of U.S. pre-service teachers are prepared in university-based programs within one of the 1,206 colleges and universities across the US (Levine 2006). Within this, about 78 % consists of 4-year institutions that prepare teachers in baccalaureate degree programs. Other pre-service teachers, prepared in various university-based programs, receive their preparation located within different types of degree granting institutions including Masters and Doctorates (Levine 2006). Teacher educators, teachers of teachers, may consist of a combination of academics and clinical practitioners within an university-based teacher preparation program. However, more commonly, teacher educators consist of academics who hold terminal degrees and who design and implement teacher education curricula.

In 2008, 6,578 education doctorate degrees were conferred from a wide range of programs and institutions of varying quality across one of the 203 education doctorate granting universities in the U.S. (Levine 2007; Wilson 2006). Of these graduates, 274 of them reported specialization in teacher education (Fiegener 2009). Even though recipients of doctoral degrees from other specialized disciplines in education (e.g., English education, mathematics education, science education, etc.), or more generalized areas (e.g., curriculum and instruction, adult education, etc.) may end up being employed in teacher education within tertiary institutions, it is reasonable to assume that approximately 5 % of recipients of educational doctorates have specialized research interests in teacher education.

Teacher educators attain their doctoral credentials through either a Ph.D. program or Ed.D. program, typically, within 3–5 years with specified credit hours of coursework including their dissertations. Although not unique to only education, the field of teacher education has been contending with the research-practice tension persistent since the early part of the 1900s, when the first Ph.D. in education was granted by Teachers College, Columbia University in 1893 and Ed.D. was granted by Harvard University in 1920 (Shulman et al. 2006). Originally conceived, the intent of the two degrees was to serve distinct but eclipsing purposes for the field. Ed.D. programs prepared a range of advanced practitioners including principals, curriculum specialists, teacher educators, and evaluators, to solve educational problems using extant research knowledge. In contrast, Ph.D. programs prepared candidates to be researchers, scholars, and university professors in education, more in the traditional academic sense with emphasis on theory and research within an academic discipline.

As Ed.D. and Ph.D. preparation are currently actualized, the differentiation between the two degrees is not always clear in many US universities. It has been reported frequently that Ed.D. programs often mimics Ph.D. programs even though most of the Ed.D. candidates do not aspire to be traditional educational researchers (Anderson 1983; Dill and Morrison, 1985; Murphy and Vriesenga, 2005 as cited in Shulman et al. 2006). Too often, Ed.D. candidates do not experience the high quality preparation for advanced practice or leadership as those found in other

professions. Rather, they undergo similar, if not identical, coursework and experiences as Ph.D. candidates with only the exclusion of a few Ph.D. requirements and full-time residency expectations, and are often labeled as “Ph.D.-Lite” (Shulman et al. 2006). Because of blurred boundaries between the two degree programs, current Ed.D. and Ph.D. graduates are often not prepared very well in either original intents of being effective researchers or advanced teacher leaders in the profession.

Given this circumstance, some scholars have discussed the possibility of offering distinct Ed.D. and Ph.D. degrees in which the Ed.D. would be oriented towards practice and the Ph.D. toward research (Eisenhart and DeHaan 2005; Shulman et al. 2006; Levine 2007; White and O’Neal 2002). Some initial movement has been made towards making clearer differentiations between the two degrees with the establishment of the Carnegie Project on the Education Doctorate (CPED) in 2007 lead by David Imig with the intent to redesign the Ed.D. degree to focus more on the preparation of advanced school practitioners rather than researchers. However, with only about two-dozen colleges and institutions (<http://cpedinitiative.org/>) currently involved with this project, in its current form and status, it is often difficult to discern between the two degrees in many other institutions. Overall, the field may benefit from greater attention given to a better understanding of the impact of program structure, pedagogy, and design and ways in which these foster the type of learning teachers educators need in order to conduct quality research and/or advance practice so that the field may be transformed in distinct directions to advance teacher education goals.

11.2 What Are the Challenges of Preparing Teacher Educators to Learn *About* and *Do* Research in Doctoral Programs?

Even if there is a clear distinction between the two existing degrees, the challenge of preparing teacher educators to learn *about* and *do* research remain in doctoral programs. That is, challenges still remain in clearly conceived Ph.D. programs where candidates would be immersed in full-time study and there would be genuine apprenticeships in research that would contribute to teaching and teacher education.

Many prospective teacher educator-researchers who enter doctoral programs are former K-12 teachers prepared in education schools (Labaree 2004; Weiland 2008; Wilson 2006; Zimpher and Sherrill 1996). Considering that most of their preparation at both the baccalaureate and master’s degree levels is conducted in education schools, many prospective teacher educator-researchers are prepared predominantly to teach, and may not have had opportunities and experiences to develop deep disciplinary knowledge of theories, subject matter, or methods that would allow for epistemological debates or the generation of knowledge within a field (Boote and Beile 2005; Eisenhart and DeHaan 2005; Labaree 2003, 2004; Pallas 2001; Wilson

2006). Although this lack of opportunity in pre-doctoral studies may not be unique to the field of education, beginning education doctoral students appear often to have had little exposure to theories. In their pre-doctoral training, most teacher education students are prepared to focus on *what* and *how* to teach rather than on theoretical thinking and the processes of knowledge construction.

Many teacher education students, with limited research knowledge and experience, encounter conceptual transformational shifts from classroom teacher to researcher when they enter doctoral programs (Labaree 2003). Labaree (2003) argues that “the shift from K-12 teaching to educational research often asks students to transform their cultural orientation from normative to analytical, from personal to intellectual, from the particular to the universal, and from the experiential to the theoretical” (p. 16). Teacher educator doctoral candidates are typically older with prior experiences in K-12 teaching, which often predisposes them to seek answers or solutions to problems that are immediate, practical, and personal instead of *how* and *why* something works. Because of the differences in the nature of their work, conditions, institutional demands and missions as well as professional incentives, teachers and researchers often hold different orientations to education in the way they engage in educational practices and think about education (Labaree 2008). Doctoral candidates are often expected to acquire a deep understanding of educational theory and research within a relatively short time period while contending with this shift in worldviews in doctoral programs.

Three issues often arise and are frequently debated when engaging prospective teacher educator-researchers in full immersion of the norms and practices of educational research in doctoral programs. First, although there is general agreement for research immersion to begin at the start of doctoral programs with the introduction of a traditional set of core courses in educational philosophy, foundations, history, particular specialized discipline subject matter, and methodological theories and techniques, there is little consensus and research about where and when the practice of research should be introduced within a program. For instance, some universities offers most of their support of practice to aspiring researchers during the middle years of students’ programs (Weiland 2008) while other programs begin the practice of learning to do research near the initial phases, concurrent with course taking (Eisenhart and DeHaan 2005; Pallas 2001). With few comprehensive studies of measured outcomes of the scope and sequence of research practice experiences on doctoral students’ learning, it is difficult to determine the nature and sequence of experiences that are currently implemented in US doctoral programs and how these programs enhance learning *about* and *doing* research in teacher education.

Second, the nature and type of meaningful experiences or activities in conducting research need to be explored further. There is scant research and little conceptualized understanding of the extent to which specific types of practice or experiences enhance research education. For example, does learning to conduct research happen primarily in formalized coursework with specific activities, a configuration that is typically outside authentic research contexts? How much is known about the informal learning experiences of conducting research? What types of pedagogy and activities enhance the ability to formulate and frame researchable questions in the

field? What do students learn when students replicate studies about the underlying process of conducting certain types of research? What research and learning contexts best promote interdisciplinary research? How many and how varied should experiences be to encourage deep learning within the confines of a doctoral program? (Lin et al. 2011).

Third, in order to be immersed fully in the culture of research, and to be able to engage in the full range of experiences within authentic investigations, it is likely that students need to be enrolled on a full-time basis when faculty are conducting their research. Full immersion during which students are socialized to the practice and norms of research may be complicated by the requisite for full-time study. Many aspiring teacher educator researchers enroll on a part-time basis and hold employment outside of their program due, in part, to the limitations of adequate financial support for education students compared to other fields, such as the sciences (Eisenhart and DeHaan 2005).

Another challenge in preparing teacher educators is learning *about* research. Learning *about* research encompasses many aspects. It is expected generally that, in doctoral programs, aspiring educational researchers learn to understand the complexity of research issues from multiple disciplinary traditions of theory and method and situate their work so that it contributes to the collective understanding of the field (Boote and Beile 2005; Metz 2001; Golde 2007; Shulman 2003; Towne et al. 2005). As Golde (2007) described, “Students of education must undertake the following (this list is not exhaustive): absorb the content of what they read, determine what is known and what needs to be known, identify important ongoing disciplinary debates, develop the judgment to discriminate between work of high quality and mediocre efforts, extract useful information on which to build, juxtapose multiple theoretical perspectives and explanations, connect research studies to one another, synthesize and reappraise others’ work, and learn the stylistic conventions of written work, such as norms of what to say and what to omit” (p. 344).

I use the term “educational research literacy” to describe one of the goals of doctoral student education. Borrowing from the concept of attaining “scientific literacy” or “language arts literacy,” achieving a minimal level of “research literacy” means that doctoral students are able to read, understand, and evaluate different types of research; develop meaningful research questions situated within an historical and theoretical context; develop strategies, collect and convert empirical data into text; and communicate their ideas in clear and coherent ways to intended audiences. It is implied that developing basic research literacy includes the development of fundamental skills of numeracy, reading, and technical writing, all utilizing the specialized language of educational research. To be fully research-literate, doctoral students need to develop the knowledge, skills, and dispositions of a researcher as well as to be able to reason and argue from evidence and read research critically. In this regard, critical consumers of research need to have an in-depth understanding of the cores and canons of educational knowledge and methodologies and should be able to recognize the implications of historical, sociological, moral, ethical, and political issues within the field of teaching and teacher education (Lin et al. 2011).

In addition, being able to distinguish between high quality and low quality research necessitates being knowledgeable about the general standards for high quality research such as those outlined by the National Research Council Committee on Scientific Research in Education (NRC 2002), *Studying Teacher Education: The Report of the AERA Panel on research and Teacher Education* (Cochran-Smith and Zeichner 2005) and the American Education Research Association (AERA) (Moss et al. 2006). These standards highlight the importance of selecting central questions, linking research questions to theoretical frameworks situated within relevant literature, adhering to rigorous design, disclosing methods for replication and generalization, using explicit chains of reasoning, and linking results to theory, practice and policy. Although there is no general consensus, there is a general spirit of understanding that these are all essential and critical learning important for all doctoral programs but the obvious challenge is how to best prepared prospective teacher educators (Lin et al. 2010).

11.3 What Are the Challenges of Preparing Teacher Educators to Be Teacher Leaders?

Besides attaining research literacy, it is generally accepted that teacher educators will be prepared *about* and be able to *enact* the professional knowledge for teaching which includes content knowledge, curricular knowledge, and pedagogical content knowledge (Shulman 1986, 1987). Specifically, Shulman (1986, 1987) proposes that central to excellence in teaching practice is the mastery of seven types of knowledge: (1) content knowledge; (2) general pedagogical knowledge; (3) curriculum knowledge; (4) pedagogical content knowledge; (5) knowledge of learners and their characteristics; (6) knowledge of education contexts; and (7) knowledge of education ends, purposes, and values. In other words, teacher educators must not only possess *content knowledge*, which includes knowledge of the subject and its organizing structures (Grossman et al. 1989; Shulman 1986, 1987; Wilson et al. 1987) but also pedagogical knowledge (PCK), which includes knowledge about “the most useful ways of representing and formulating the subject that make it comprehensible to others” and an “understanding of what makes the learning of specific topics easy or difficult” for teacher candidates, “the conceptions and preconceptions that” prospective teachers of “different ages and backgrounds bring with them to the learning of those most frequently taught topics and lessons” (Shulman 1986, p. 7).

However, when examining current doctoral preparation programs, there is generally an inattention to the development of PCK and other skills essential for teacher educators (Abell et al. 2009; White and O’Neal 2002). As in many other fields, major challenges exist in the design and delivery of doctoral programs that develop PCK among prospective teacher educators. First, as Boyer (1990) reported in his study of higher education, the reward system for US research-oriented universities, especially those preparing prospective teacher educators, commonly focus on scholarship

which is often equated as research publications. Professors in these types of institutions, who prepare the majority of future teacher educators in the nation, are rewarded generally for studying teachers and their teaching rather than preparing them for high quality instruction as effective teacher leaders (Goodlad 1990). Placing value in research over teaching is evident in a culture reported by 43 % of non-tenured faculty (Boyer 1990) as viewing the quality of their teaching as being affected by the pressures to publish. Further, prospective teacher educators are mentored and socialized early in their doctoral programs to focus primarily on scholarly pursuits within research-oriented university cultural norms of scholarship and productivity. However, it is ironic that rather than an emphasis on scholarly pursuits, many of the graduates of these programs may end up working in institutions where their core work and mission is dependent on their knowledge and ability to actualize teaching effectiveness in the preparation of future generations of K-12 teachers.

Second, the current focus on research endeavors dominates the curricula in doctoral teacher education programs which leave little room for future teacher educators to advance their PCK development in their doctoral studies. Many prospective teacher educators may not have opportunities to teach higher education courses while in their doctoral programs. Moreover, even when given the opportunities to teach, they are frequently isolated and not closely guided by knowledgeable faculty mentors to study instruction in a systematic way. Too often, they are not supported in their teaching and do not experience an explicit and well designed sequence of learning experiences that can help them develop the kinds of PCK and skills that can aid them in their future roles as highly effective instructors and role models, co-instructors, as well as mentors and collaborators in field experiences necessary as teacher education moves in a direction toward more school-based clinical practice akin to the preparation of medical doctors (Abell et al. 2009).

Third, research and conceptualized understandings of the extent to which specific types of practice or learning experiences enhance PCK and skills among teachers and teacher educators are still thin in the field. Although the majority of prospective teacher educators enter the doctoral programs with K-12 teaching experience, many possess varying prior knowledge, experiences, and backgrounds with respect to teaching effectiveness and leadership. Working with prospective science teacher educators, Abell et al. (2009) proposes a beginning framework that may to help promote the type of discourse needed for structuring doctoral programs that can prepare teacher educators to be effect teacher leaders.

Abell and her colleague's model parallels the development of learning to teach among K-12 teachers founded on the apprenticeship of observation (Lortie 1975) and opportunities for legitimate peripheral participation (Lave and Wenger 1991). The prospective teacher educator would undergo a continuum of learning experiences based on five possible scaffolded progression of learner roles as they advance through their doctoral preparation. Beginning with the *observations stage*, the prospective teacher educator at the beginning of their doctoral program would observe how teacher educators develop preservice teachers' PCK in a teacher preparation program and in classroom teaching experiences. Next, prospective teacher educators would enter the *apprenticeship stage* where prospective teacher educators

develop PCK and skills for teaching preservice teachers by “actively engaging in discussion with a veteran and by reading about, discussing, and practicing teacher education” (Abell et al. 2009, p. 88). This is followed by the *partnership phase*, in which prospective teacher educators co-teach with experienced teacher educators to design and implement a course and engage in shared reflections about curriculum, instruction, student learning, and assessment. Next, prospective teacher educators would progress to the stage of *independent instructors* where they develop further their PCK and skills through actual course teaching serving as lead instructors while being guided by their faculty mentors. The final stage would likely occur upon graduation, where teacher educators enter academe and continue their PCK and skills development through the *mentoring* of their own doctoral students in various contexts such as fieldwork, research, or co-teaching opportunities. In this way, the model offers a longitudinal career view of professional learning for teaching effectiveness (Loughran 2006). This model and research offers some promising direction in developing and advancing the preparation of teacher educators in doctoral programs to be teacher leaders.

11.4 Summary

In summary, the preparation of prospective teacher educators to meet both research and teaching expectations is a complex enterprise (Loughran 2006). US doctoral programs that prepare prospective teacher educators in its current varying forms aim to serve multiple purposes and are increasingly influenced by mounting pressures to focus attention towards accountability in teacher quality and student achievement (National Academy of Education 2009) while contending with effects from changing global economics, population shifts, politics, and educational policies. To a large extent, the quality of future generations of K-12 teachers and their students’ performance is dependent on how well teacher educators are prepared in doctoral programs to be competent in both research and teaching. Perhaps, a coordinated and concerted effort is needed at this critical juncture in history to examine closely the ways we are currently preparing teacher educators and how we can rethink ways in which teacher educators can be better prepared in doctoral programs in order to meet explicit and well defined goals in teaching and teacher education. It is with hope that this article will inspire such dialogue in the field.

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Chapter 12

Research on the Impact of Chinese Teacher Preparation Reform on Teacher Candidates' Quality After the 1990s

Weifen Dai and Lin Goodwin

Abstract The period from the 1990s to the present is one of critical importance for the development of Chinese teacher preparation. During this period, Chinese teacher preparation gradually embarked on the development of diversification, integration and openness in place of a closed system of normal education. This research focuses on the impact of course learning of teacher candidates at 18 normal universities or colleges in three categories countrywide, and uses a questionnaire (stratified samples), indepth interviews and focus groups to reveal the quality of teacher candidates' preparation and its influencing factors. From the findings we can conclude that in terms of improving the quality of teaching at universities and colleges, the three different categories of normal universities or colleges demonstrate a hierarchic pattern. In general, teacher candidates' performance has been improved remarkably during the process of comprehensive development of teacher preparation. However, there are some problems relating to the instructors and low quality of internships. It is necessary to integrate theory-based knowledge and practice-based knowledge, and develop coherence and integration in the teacher preparation curriculum for higher quality teachers.

Keywords Chinese teacher preparation reform • Teacher candidates • Teacher candidates' quality

Weifen Dai. Scholarly Interests: Comparative education; Teacher education.

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12.1 Introduction

From the literacy level in the early twentieth century to the current professional level, from basic teacher training to systematic teacher preparation incorporating pre- and in-service teacher preparation, teacher preparation has changed greatly. The level of teaching professionalization has been enhanced substantially. This has triggered endless debates over the years, as China attempts to upscale its teacher preparation system to the developed-world level. Thus, the key question of this research is: what is the impact of the teacher preparation reform on candidates' quality? In order to get a clear picture of the reform of teacher preparation on teacher candidates' quality, it is important to first describe the reform of teacher preparation in China, measure the quality of teacher candidates (by focusing on teacher candidates' learning achievement), and analyze the results of the investigation. This research paper is divided into the following parts: the reform of teacher preparation including reasons, content, problems and doubts; methodology; results and analysis

12.2 Teacher Preparation in China Before the 1990s

Following the establishment of the PRC in 1949, the Chinese teacher preparation system adopted the model of the Soviet Union as shown in the table below: elementary school teachers were trained in secondary normal schools; junior high school teachers were trained in 3-year teacher colleges; senior high school teachers were trained in 4-year teacher colleges and normal universities (Table 12.1).

This previous three-stage normal education system was close-oriented, which means that the teacher preparation system had no integration of pre- and in-service teacher preparation, it had no consistent system of evaluation, no curriculum or objective. Teachers were prepared formally once only, and the government was responsible for the job placement of candidates upon graduation according to the level of their training institutions, which is not consistent with market conditions. However, this teacher training system supported and guaranteed the supply of teachers for fundamental education in China. It managed to meet the demand of the education system. It was necessary to popularize compulsory education in densely populated China at a time when economic levels were lower (GU Mingyuan 2003).

Table 12.1 Previous three-stage normal education (From 1949 to the end of the 1990s)

Category of teachers	Training institutions	Academic degree
Elementary school teachers	Secondary normal schools	Diploma ^a
Junior high school teachers	3-year teacher colleges	Associate bachelor
Senior high school teachers	4-year teacher colleges and normal universities	B.A.

^aDiploma: basic requirement for being a teacher

12.3 The Reform of Teacher Preparation in China

12.3.1 *Reasons for Reform*

Teachers' professionalism was put on the agenda in the early 1990s and the changes started in 1999. Why was the reform of Chinese teacher education necessary?

Firstly, given the movement to a market-oriented economy, the close-oriented teacher preparation system operating within a context of a planned economy did not fit the evolving environment.

Secondly, with a sufficient supply of teachers, government and schools began to consider higher requirements to raise the quality of teachers. Therefore, teaching professionalization and high academic level became musts.

Thirdly, higher education institutions are becoming profit-oriented; thus, since 1999, non-teacher preparation institutions have set up teacher preparation programs while normal universities or colleges have set up non-education programs. Moreover, with higher education institutions' expansion of recruitment and the ensuing pressure of employment, the teaching career has attracted more and more people including career changers. Therefore, the closed teacher preparation system gradually gave way to a new teacher preparation system.

Last but not least, due to the rapid development of technology and the speeding-up of knowledge updating, a teacher should keep on studying so as to keep up with the pace of the development of science and technology, and guide students in exploring new knowledge. All of these factor call for a lifelong teacher preparation system.

12.3.2 *Content of Reform*

Generally speaking, the reform of teacher preparation in China can be summarized into terms of two transitions:

12.3.2.1 **A Transition from the Previous Three-Stage Normal Education into the New Three-Stage Teacher Preparation**

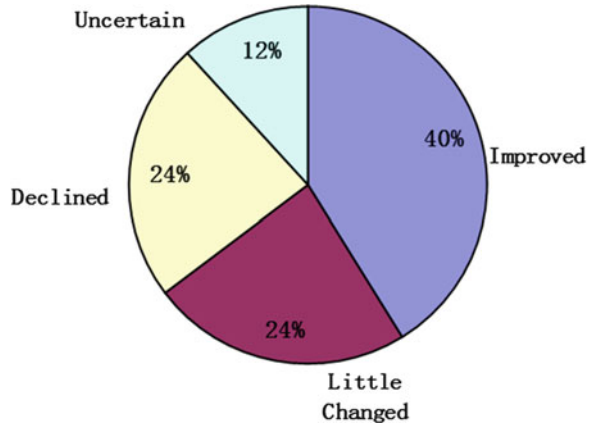
The new three-stage teacher preparation is characterized by the following: : secondary normal schools are gradually disappearing; elementary school teachers are trained in 3-year teacher colleges or 4-year teacher colleges; junior and senior high school teachers are trained in 4-year teacher colleges and normal universities. Meanwhile, some of the senior high school teachers are required to hold a post-graduate diploma (Table 12.2).

From the table, we can see that firstly, the academic level required is higher than the previous system, with the government trying to bring the quality of teaching education

Table 12.2 New three-stage teacher preparation (From the late 90s till now)

Category of teachers	Teacher institutions	Academic degree
Elementary school teachers	3-year or 4-year teacher colleges	Associate bachelors
Junior and senior high school teachers	4-year teacher colleges and normal universities	B.A.
Senior high school teachers	Higher education institutions	M.A. & M.Ed. or above

Graph 12.1 Changes in teacher institutions after 1999 (79 investigated teacher institutions. Source: Ministry of Education, 2005)



up to a higher standard and level; secondly, the preparation of elementary school teachers and in-service teachers is now implemented within the higher education system which means the integration of pre- and in-service teacher education

12.3.2.2 Transition from a Closed System of Normal Education into an Open System of Teacher Preparation

This transition means other higher education institutions are allowed to participate in teacher preparation. Teachers are trained not only in normal universities and colleges, but also in universities that are now qualified to train teachers (this policy was first proposed at the National Education Conference in 1999 and then revised in 2001).

This new transition is reflected by two phenomena: the upgrading and merging of normal universities or colleges (Graph 12.1)

Among 79 investigated normal universities or colleges, 32 have been upgraded and 28 merged; upgrading means that normal universities or colleges have been promoted to a higher level, such as: from normal school to 3-year teacher colleges or from 3-year teacher colleges to 4-year teacher colleges and universities. Merging means

normal universities or colleges combine with other higher education institutions into a comprehensive higher education institution.

Thus, Chinese teacher preparation has gradually embarked on a process of diversification, integration and openness, with which teacher institutions are the main bodies and other higher education institutions play a participatory or supportive part. It is becoming compatible with internalization.

12.3.2.3 Main Problems and Doubts

Despite the achievements of this reformed system, there are some key problems and doubts arising from the process of the reform.

Key problems and doubts:

- i. Some normal universities or colleges were upgraded despite their inherent lack of qualification. In order to pursue higher standards and levels of personnel training, they focused on non-elementary teachers' training. This has led to a decline in the supply of elementary school teachers.
- ii. Some teacher institutions have expanded their non-teacher education programs, allocating public education resources to non-teacher education programs that are hot in the employment market.
- iii. Comprehensive universities emphasize "academic" and "extensive" curriculum, and value theory more than practice, ignoring the importance of practical skills for teacher preparation.

Therefore, questions and debates have arisen. The key question is what the impact of teacher preparation reform on candidates' quality is, for which we have conducted an investigation.

12.4 Methodology

Investigation participants included 2,030 candidates, eight chiefs of academic affairs division and other personnel of academic affairs division in 18 normal universities or colleges. In order to know about the status of teacher preparation, especially the impact of the reform of teacher preparation on teacher candidates' quality, we conducted a questionnaire with 2,030 teacher candidates, interviewed eight chiefs of academic affairs divisions, and held focus groups of other personnel in academic affairs divisions.

Sample-Questionnaire

1. We secured stratified samples from six provincial teacher colleges, six provincial key teacher universities in central, south-eastern and western China and totally six normal universities affiliated with Ministry of Education (Table 12.3).
2. We got 1,811 usable questionnaires from 2,030 candidates in 18 normal universities or colleges, along with total numbers of effective questionnaires collected

Table 12.3 Distribution of 18 normal universities or colleges

Type of institutions	Normal universities affiliated with Ministry of Education	Provincial key teacher universities	Provincial teacher colleges
Location	Totally six in China	Six from central, south-eastern and western China	Six from central, south-eastern and western China
Teacher institutions	1	South-east	South-east
	2	7	13
	3	8	14
	4	Central	Central
	5	9	15
	6	10	16
		West	West
		11	17
		12	18

from normal universities affiliated with Ministry of Education, provincial key teacher universities and provincial teacher colleges of 460, 751 and 600 respectively, accounting for 25.4 %, 41.5 % and 33.1 % of the total questionnaires.

3. Questionnaire composition: The questionnaire was structured in five parts. The first part asked for basic information, including that of the individual students, their family and their learning. The second part allowed the students to make a judgment about the learning process of their courses and the outcome forecast from their personal perspective, so as to understand and analyze the setup of teacher preparation programs and the factors influencing the quality of teacher candidates' preparation. The third part mainly analyzed the learning outcome of courses from the angles of knowledge structure, ability development and professional feeling. The fourth part analyzed the fundamental mode of teacher preparation in four aspects, namely, core courses, objective of preparation, teaching process and professional practice. The fifth part focused on the analysis of students' learning experience in the teacher preparation courses.

One thing to point out: during the questionnaire design process, the topic team first conducted a trial test at a normal university affiliated with Ministry of Education, called for an expert consultation meeting and interviewed the head of the academic affairs division for the reformulation of questionnaire. The questionnaire mainly involves learning activities spanning from recruitment to graduation of teacher candidates, and highlights the analysis of the learning experience in teacher preparation courses as well as the learning outcome. Given its limited length, this article is focused on the elaboration of learning outcome, which is more directly linked to the quality of teacher preparation. The common factors that contribute to learning outcomes are drawn from a factor analysis conducted on the third part of the questionnaire. With KMO of 0.928 and Sig. of 0.000 (lower than 0.05), Bartlett Test of Sphericity indicated that the use of factor analysis was appropriate. With eigenvalues

Table 12.4 Distribution of teacher candidates

Teacher institutions	Effective questionnaires (completed)	Percentage of participants
1	100	5.5
2	88	4.9
3	87	4.8
4	94	5.2
5	51	2.8
6	40	2.2
7	90	5
8	107	5.9
9	204	11.3
10	113	6.2
11	100	5.5
12	137	7.6
13	88	4.9
14	121	6.7
15	100	5.5
16	100	5.5
17	97	5.4
18	94	5.2
Total	1,811	100

higher than 0.9 and loadings higher than 0.5 (to avoid missing of information, loadings were slightly lower than 0.50 for certain questions), five common factors were drawn (see Table 12.4), whose total explained variance was 60.695 %. Through rotation, the 17 evaluation items of learning outcome clustered around the five common factors. Based on the characteristic of factor clustering, we defined them as “basic knowledge”, “core knowledge”, “basic skills and experience”, “teaching/professional interest” and “reflection and evaluation”, which constituted the five basic dimensions of learning outcome. See the below Table 12.5 for the basic composition of the questionnaire.

12.4.1 Interview and Focus Group

Interview and focus group with 8 division chiefs and other personnel of academic affairs division in all 18 institutions, targeted the evaluation of reform measurements of training model, curriculum design, teaching and learning process and practice as well as critical problems during the process of teacher preparation development.

12.5 Results and Analysis

Our findings are from three perspectives: overview of teacher candidates' quality from the perspective of the administrators; horizontal research on the impact of course learning of teacher candidates at three types of normal universities or

Table 12.5 Measurements of the impact on candidates' quality

Goal	Basic dimensions	Subset dimensions	Composition of the questionnaire	
Measuring the impact on teacher candidates' quality	Candidates' basic information	Individual background	The first part	
	Course learning	Offering specific courses	The second part	
		Core courses	The fourth part (2)	
	Objective of preparation	Course learning process	The fifth part	
		Impact of course learning	The third part	Basic knowledge Core knowledge Basic skills and experience Teaching/professional interest Reflection and evaluation
				The fourth part (1)
	Teaching and learning process		The fourth part (3)	
Professional practice		The fourth part (4)		

colleges from teacher candidates' perspective; research on factors influencing teacher candidates' quality from both perspectives.

12.5.1 Overview of Teacher Candidates' Quality from the Perspective of Administrators

As to the impact on teacher candidates, 40 % of the interviewed institution administrators think that teacher candidates' achievement has been improved, 24 % think that little has changed, another 24 % believe that achievement has declined, and 12 % are uncertain (see Chart 12.1). Thus, generally speaking, candidates' achievements have shown improvement from the perspective of administrators. It is thus clear that the quality of teacher candidates' preparation has been enhanced remarkably during the "comprehensivization" of normal universities and colleges, mainly reflected in the enhancement of comprehensive quality and academic level of the teacher candidates, which, not surprisingly, is one of the objectives of comprehensivization. Nevertheless, a comparatively large portion of administrators believe that despite the above mentioned enhancement, the practical teaching ability of new teachers has declined. For some local universities and colleges, the teaching and administration ability of

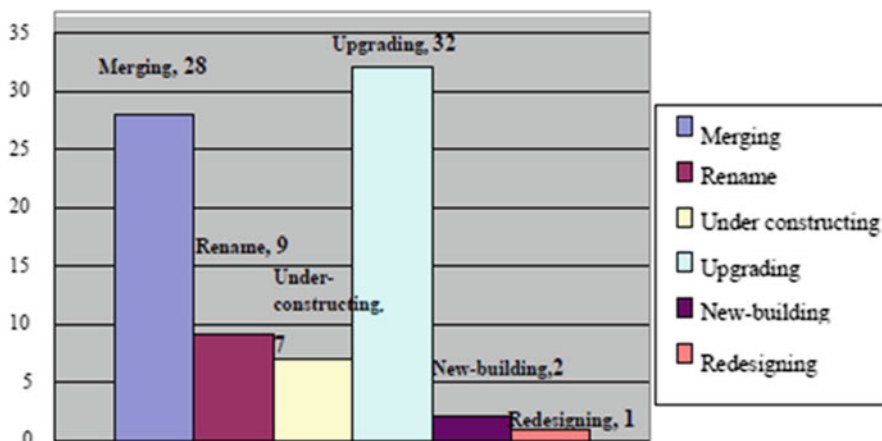


Chart 12.1 Impact on the quality of teacher candidates according to the perspective of administrators

elementary teachers should be strengthened, and importance should be attached to their professional feeling and ethics.

12.5.2 *Impact of Course Learning of Candidates at Three Types of Teacher Preparation Institutions*

From the following table we can see that the total scores of the impact of course learning at the three types of normal universities or colleges are 45.77, 41.05 and 40.99 respectively through testing. The total score of normal universities affiliated with the Ministry of Education is higher than those of the other two types, which are almost equal.

In addition, as far as the single factor is concerned, the degree of difference varies. There is significant difference between normal universities affiliated with the Ministry of Education and the other two types. The difference between the other two types is not obvious (see Table 12.6). From the table we can see that core knowledge, teaching/professional interest, reflection and evaluation at the provincial key teacher universities are rated as better by respondents than those at the provincial teacher colleges. While the basic knowledge, basic skills and experience at provincial teacher colleges are rated better than those at provincial key teacher universities (Table 12.7).

According to the results, the level of teaching quality in different types of normal universities or colleges demonstrates a hierarchic pattern. Due to lack of longitudinal study, we cannot evaluate the extent of impact of candidates' course learning. But as can be seen from the horizontal research, there is a gap between Type 1 and

Table 12.6 Impact of course learning at three types of teacher preparation institutions

Dimensions of the impact of course learning	Type of teacher preparation institution	Sample number	Mean	Standard deviation
Basic knowledge	1	433	20.53	5.17
	2	738	18.67	5.06
	3	593	18.81	4.81
Core knowledge	1	435	5.00	1.56
	2	745	4.39	1.48
	3	595	4.32	1.44
Basic skills and experiences	1	438	7.57	2.05
	2	747	6.91	2.13
	3	596	7.07	2.28
Teaching/professional interest	1	435	6.77	2.33
	2	743	6.12	2.29
	3	597	5.88	2.26
Evaluation and reflection	1	436	5.90	1.86
	2	747	4.96	1.71
	3	596	4.91	1.83

The total scores of 1=45.77, 2=41.05, 3=40.99

Note: 1. Normal universities affiliated with Ministry of Education

2. Provincial key teacher universities

3. Provincial teacher colleges

the other two types. Therefore, since provincial key teacher universities and provincial teacher colleges are the main force of teacher preparation, perhaps the government should consider attaching more importance to them in terms of investment and policy making in the future.

12.5.3 Factors Influencing the Teacher Candidates' Achievements

From the perspective of administrators and as shown in Table 12.8 (The values in the table are the result of frequency of selection multiplied by value of degree of importance <sequencing from 1, a total of 6 levels, decremental assignment starting from 6 point>), the first 3 factors are key factors influencing the candidates' achievements. Comparing it with Table 12.9 (from the perspective of teacher candidates), we can see both of them reflect instructors' lack of practice experience, ignorance of teaching practice at normal universities or colleges (esp. normal universities affiliated with Ministry of Education), and the low quality of internships. The common result is that pre-service teacher preparation comes up short on practice.

This result reflects not only teacher candidates' shortage of teaching skills but also their apparent lack of understanding of what they are learning. In addition, they perceive the content of teaching as outdated. Thus, they don't evidence much

Table 12.7 Comparison of single factors of the course learning outcome of three types of normal universities and colleges

Dimensions of the impact of course learning	Type of teacher preparation institution	Type of teacher preparation institution	Average difference	Standard error	Significance
Basic knowledge	1	2	1.86 ^a	0.3	0
		3	1.72 ^a	0.32	0
	2	1	-1.86 ^a	0.3	0
		3	-0.14	0.28	0.87
	3	1	-1.72 ^a	0.32	0
		2	0.14	0.28	0.87
Core knowledge	1	2	0.62 ^a	0.09	0
		3	0.68 ^a	0.09	0
	2	1	-0.62 ^a	0.09	0
		3	0.07	0.08	0.71
	3	1	-0.68 ^a	0.09	0
		2	-0.07	0.08	0.71
Basic skills and experiences	1	2	0.66 ^a	0.13	0
		3	0.51 ^a	0.14	0
	2	1	-0.66 ^a	0.13	0
		3	-0.15	0.12	0.43
	3	1	-0.51 ^a	0.14	0
		2	0.15	0.12	0.43
Teaching/professional interest	1	2	0.64 ^a	0.14	0
		3	0.89 ^a	0.14	0
	2	1	-0.64 ^a	0.14	0
		3	0.25	0.13	0.15
	3	1	-0.89 ^a	0.14	0
		2	-0.25	0.13	0.15
Evaluation and reflection	1	2	0.94 ^a	0.11	0
		3	1.00 ^a	0.11	0
	2	1	-0.94 ^a	0.11	0
		3	0.05	0.1	0.87
	3	1	-1.00 ^a	0.11	0
		2	-0.05	0.1	0.87

^aThe mean difference is significant at the .05 level

Note: 1. Normal universities affiliated with Ministry of Education

2. Provincial key teacher universities

3. Provincial teacher colleges

enthusiasm in the learning of teacher preparation courses. Moreover, instructors of teacher preparation in China pay more attention to research than teaching because of the appraisal system of higher education institutions, which is an existing problem in many universities around the world, resulting in less attention being paid to teaching and teacher candidates' course learning, which influences teacher candidate's interest in teaching career at elementary or secondary level, and can be a negative factor influencing teacher candidates' achievements. For a long time,

Table 12.8 Factors influencing the candidates' achievements (administrators' perspective)

Influencing factors	Evaluation score
Instructors' lack of practice experience in elementary and secondary school teaching	35
Textbook and teaching content is outdated	34
Not attaching importance to teaching practice, low quality of internship	25
Relatively low quality of enrollment	15
Course hours are too short to learn sturdily	8
Candidates do not have enthusiasm in learning teacher preparation courses	8

Table 12.9 Factors influencing the candidates' achievements (Teacher candidates' perspective)

Influencing factors	Frequency and percentage of participants' selection
Not attaching importance to teaching practice, low quality of internship	1,473(81.34)
Instructors' lack of practice experience in elementary and secondary school teaching	1,443(79.68)
Candidates do not have enthusiasm in learning teacher preparation courses	1,438(79.40)
Course hours are too short to learn sturdily	1,328(73.33)
Textbooks and teaching content is outdated	1,287(71.07)
Relatively low quality of enrollment	1,043(57.59)

instructors at teacher preparation institutions have mainly been playing the role of teacher of major courses, and have rarely taken on the job of teacher educator. Therefore, doubts remain as to the identity of the teacher educator, a very important issue in determining the status of teacher educators thereof. Eventually these factors seem to influence teacher candidates' achievements.

Those problems also exist in the U.S. In order to strengthen the relationship between teaching theory and teaching practice, individual states specify teaching standards and requirements and individual programs can develop an integrated teacher preparation curriculum to comply with these. This integration can support greater coherence and integration among courses and between course work and clinical work in schools. The second critically important feature that requires a change from traditional models of teacher preparation is the importance of extensive and intensely supervised clinical work – tightly integrated with course work – that allows teacher candidates to learn from expert practice in schools that serve diverse students. Fieldwork has been implemented as a requirement for many decades, but now the call in the U.S. is for an even greater emphasis on clinical practice. Finally, these kinds of strategies for connecting theory and practice cannot succeed without a major overhaul of the relationships between universities and schools, ultimately producing changes in the content of schooling as well as teacher training. No amount of coursework can, by itself, counteract the powerful experiential lessons that shape what teachers actually do. It is impractical to expect to

prepare teachers for schools as they should be if teachers are constrained to learn in settings that typify the problems of schools as they have been – where isolated teachers provide examples of idiosyncratic, often theoretical practice that rarely exhibits a diagnostic, assessment-oriented approach and infrequently offers access to carefully selected strategies designed to teach a wide range of learners well. Some very effective partnerships, however, have helped to create school environments for teaching and teacher training through PDSs, lab schools, and school reform networks. Some of these are such strong models of practice and collaboration where the environment itself serves as a learning experience for teachers (Darling-Hammond, 2006; Trachtman, 1996). In conclusion, theory without practice is stagnant, but practice without theory also remains at the context-specific, possibly idiosyncratic and static stage. So there needs to be an interactions between the two (through partnership is one way) to ensure fluidity of thinking and ideas, movement across and among practice and theory, so both remain mutually informing.

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Part III
Professional Development

Chapter 13

Push, Pull and Nudge: The Future of Teaching and Educational Change

Andy Hargreaves

Abstract This paper draws on recent research on teacher collegiality and professional learning communities to unpack the nature, benefits and drawbacks of different forms of collegial relations, especially in circumstances of high stakes reform. In particular the paper examines the relative merits of pulling change by inspiring and enthusing teachers in their efforts by appeal to the moral principles of their work, or pushing change by placing teachers in situations requiring changes in practice in the hope that this will then lead to changes in their beliefs. The paper finds that teachers sometimes have to be drawn or *pulled* into professional learning communities, and sometimes they have to be driven or *pushed* by them. However, pulling should not be so weak that it permits no collaboration at all, and pushing should not be so excessive that it amounts to shoving or bullying. Instead, collaboration will often require the nudges of deliberate arrangements to enhance learning.

Keywords Professional collaboration • Collegiality • Professional learning communities

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13.1 Introduction

For thousands of years, teaching was a practice conducted by individuals in relation to other individuals or entire multitudes. Buddha, Mohammed, Moses and Jesus; Confucius in the East, and Socrates in the West – all these founders of great spiritual, philosophical and cultural traditions were iconic and charismatic teachers – they purveyed wisdom, conveyed knowledge and sometimes inveighed against social convention and intellectual complacency. They told inspiring stories, posed probing questions, and presented life insights through conundrums and riddles – challenging those who wanted to learn from them at every step. They were teachers who had teachings, and the teachings were supposed to be followed, even if that entailed finding a path for oneself.

If teachers and those who judge them regard the work of teaching as being an essentially hierarchical and individual act – in historical, philosophical and even spiritual terms – they have therefore come by it honestly. They are part of a respectable and revered tradition that stretches back more than two Millennia.

Challenges to the traditional and, many have thought, unavoidably hierarchical nature of the teacher-pupil relationship (Waller 1932), have been prominent during particular historical periods. These include the Progressive Movements of the 1920s and 1930s following World War I in the US, UK, Germany and other parts of Europe; the economically expansionist and culturally questioning era of the 1960s and early 1970s in both the West and parts of Asia; and now, once more, a turn away from teaching to learning, and standardized instruction to personalized learning in the internet age of independent online access and participation in social media in the twenty-first century.

More recent than the historically repeated attempts to transform teaching from hierarchical transmission to facilitation, from authority to authenticity, and from classroom hierarchy to democracy, has been a systematic and sustained assault on the culture and even the cult of teacher individualism. This assault has challenged the second deep-seated idea that teaching is an act performed alone, as an individual, in isolation from all other teachers in the vicinity (Little 1990; Rosenholtz 1991).

If professional collaboration in talking about teaching, planning teaching and performing teaching together was at first an ideal or even an ideology, over the past 20 years, there has been an accumulating body of evidence that professional collaboration which is related to student learning, produces better learning outcomes, improves teacher retention and brings about more successful implementation of change, than teaching which is conducted mainly in isolation from other teachers (Hargreaves 1994; Newmann and Wehlage 1995).

This has led to widespread efforts to design and even dictate specific architectures of collaboration in the form of what are called professional learning communities which redefine expectations for the work of teaching and the profession of teaching in order to improve learning outcomes for students and to implement change successfully within the system (Hord 1997; McLaughlin and Talbert 2001). In many countries, the institution of professional learning communities is redefining the form

and the future of teaching as a job that is performed, or at least planned and reviewed collectively and transparently, so there is little left in teaching and learning that is private. Key data about pupil behaviour and performance are increasingly accessible to and analyzed by professional colleagues in real time to trigger just-in-time interventions for students and also to manage and monitor implementation of reform.

This paper analyzes the nature and dynamics of professional collaboration in an age of increasingly data-driven, large-scale, standards-based reform – where improved learning outcomes for students and incessant attention to reform implementation sit in an uneasy relationship beside one another and are each subsumed by the same technology of professional learning communities. In order to do this, the paper revisits and revises a concept I created two decades ago – *contrived collegiality* – and then investigates how this concept or the process it refers to plays out within the modern context of professional learning communities. It argues against securing increased professional collaboration through strategies of administrative force on the one hand, or voluntaristic freedom of choice on the other. Against these extremes, it counterposes, but also critiques, a strategy of developing professional collaboration or professional learning communities, through a combination of pushing, pulling and nudging professional peers in the direction of desired change that benefits students without undermining teachers' professionalism. In making the argument, the paper draws on recent investigations I have conducted with various colleagues on professional collaboration in high performing educational systems across the world in Europe, North America and Asia as well as organizations in other sectors (Hargreaves and Braun 2012; Hargreaves and Shirley 2012; Hargreaves and Fullan 2012).

13.2 Arranged Collegiality

Some years ago, I was invited to dinner with a group of principals in Australia. Midway through the main course, one of the principals said, "Do you mind if I ask some advice?" He described problems he was having with a teacher who refused to collaborate, even though, paradoxically, the dissertation the teacher had recently completed for his graduate degree was on professional collaboration. When asked to give some examples, the principal said;

"Well, at the start of staff meetings, we usually begin with an ice-breaking activity, and he refuses to do it".

Back came the probing question. "How long have you been at your school?" "What are the relationships among the other teachers like?"

"Actually, they're very good. I've been there a few years and we have worked a lot together. The trust levels are really high".

"So perhaps there's no ice to break, then!" came my reply.

"That's funny", the principal said. "You may be right. He keeps accusing me of this thing... What does he call it? Contrived collegiality!"

"I have bad news for you" I responded. "I invented the term!"

It is one thing to value professional collaboration as an ideal. It is another to be able to develop and enact a theory of change that will bring desired levels and forms

of collaboration into being. Should teachers be encouraged to collaborate then be left alone to do it themselves? Or, if the benefits are so great for students, should they be forced to collaborate, even if it does not suit their own professional needs and styles as adults?

In educational change, it is sometimes said that human beings, like physical objects, usually prefer to be at rest: to remain just where they are. In line with the laws of physics, some kind of force will therefore be required to move them. What kind of force should it be, and who should exert it? Should teachers be pushed, pulled, dragged, drawn or lifted? Is a great shove needed to move them forward and keep doing so, or will just a small nudge be enough to get them moving by their own momentum?

Collaboration is a particularly challenging goal for change efforts. Cultures of professional collaboration don't evolve quickly. They depend on the proof of repeated interactions that establish a foundation of respect and trust (Nias 1989; Datnow and Park 2012; Finnigan et al. *in press*). The time required to build authentic collaborative relationships to which people make willing commitments can be unattractive to administrators who seek swift solutions or are driven by their systems to produce short-term results.

Not only do collaborative cultures take time, but they can also be unpredictable in their consequences. The curriculum that will be developed, the learning that will be fostered, the innovations that will be created, cannot be planned or predicted exactly in advance. For some administrators, this unpredictability can be disconcerting. What is developed by these collaborative cultures may not always correspond to administrators' own preferences or current reform priorities. Just as votes in an election can go against you, so can collaborative cultures. So administrators often prefer forms of collegiality that they feel they can control – meetings with a predetermined agenda, working groups you can list on paper, or data teams that produce specific results. These more regulated kinds of collaboration are what I have termed *contrived collegiality* (Hargreaves 1994).

Contrived collegiality is characterized by formal, specific bureaucratic procedures to increase the attention being given to joint teacher planning and other forms of working together. It can be seen in initiatives like peer coaching, mentoring schemes, data-driven team meetings and inquiry projects. These administrative contrivances can get collegiality going in schools where little or none existed before. They are meant to encourage greater association among teachers and to foster more sharing, learning and improvement of skills and expertise. They are a way to nudge new kinds of interactions and relationships into existence.

In their widely used book *Nudge: improving decisions about health, wealth and happiness*, Richard Thaler and Cass Sunstein (2008) argue against two flawed theories of change that underpin many administrative and policy efforts to alter behaviour. Except where it is absolutely necessary and the protection of public safety is at risk, they argue, attempts to alter behaviour by the first strategy of compulsion or force usually backfire in generating resistance to and avoidance of change. We have seen this, for example, in models of policy delivery where standardized tests or other key performance indicators are linked to high-stakes system

targets for improvement with punitive consequences for those who fall short. In education, health, policing and even management of railways, high speed pressure for measurable improvement provides employees with “perverse incentives” to teach to the test or concentrate undue attention on pupils very close to the passing mark in education, to redefine certain crimes as misdemeanours in policing in order to give the appearance of improved crime rates, to reduce or eliminate safety checks in order to meet the schedules of railway construction or repair, and to drive dangerously ill patients in an ambulance round and round their hospital until the emergency room waiting time within the hospital will be short enough to meet the government target (Bird et al. 2005). Force drives people to game the system and produce the appearance of compliance, even and including when force is applied to requirements for professional collaboration.

The opposite of overwhelming force is unlimited choice. This too, say the authors of *Nudge*, is a detrimental option. In *The Paradox of Choice*, Barry Schwartz (2005) argues and shows that too much choice can be bad for us. It makes us confused, frustrated and unhappy, because out of all the options available, we can never be truly sure we have made the right or completely the best choice – be this shoes for our feet or schools for our children. More than this, say Thaler and Sunstein, when consumers are overwhelmed, they will often make choices, or fail to make choices in ways that are bad for them – especially when the results of those choices are long term and can easily be overshadowed by other choices that yield short-term rewards. This, they say, is why people often choose to purchase and consume foods that are bad for their health, or why they fail to review their pension fund investments to safeguard their long term retirement.

What the authors of *Nudge* argue for instead of inescapable force and unlimited choice is ways to “nudge” or prod people’s choices in one direction rather than another, reducing the range of choice and increasing the probability that people will then choose the behaviours that are in the best interests of themselves or those they serve. Some of these nudges are normative: they are in the language we use and the expectations we set. Others are structural: they are arrangements of the organizational or physical environment to make some choices more likely than others. Placing fruit rather than sweets or candy bars next to the supermarket checkout, shifts the likelihood of what people will buy, on impulse, as they line up to pay. Making the best rather than worst pension option the default option for those who don’t actively choose, again instigates a structure that channels people’s own choices into more beneficial areas, rather than harmful ones. Nudging, say Thaler and Sunstein, isn’t meant to be a way to deceive consumers, or hoodwink people into harming themselves. It is a way to deliberately organize and arrange the structures and norms of organizations to increase personal benefit and public good.

When nudging is applied to cultivating collaborative behaviour, this is one way in which we might use the term, *contrived collegiality*, though in this benign sense, after Norwegian scholar Kirsti Klette (1997), I prefer to call it *arranged collegiality*. Arranged collegiality is a way of putting teachers in contact with each other. Principals and peers can then build on resulting elements of recognition, trust and support to focus conversations and activity more tightly around teaching and learning.

Arranged collegiality is evident in shrewd scheduling that releases the right people to have an opportunity to plan together, within a grade level or across departments, perhaps. Principals can use their own time to cover classes and facilitate this planning. Putting the new teacher and an experienced and accomplished colleague in adjacent classrooms is another way to nudge forward a process of informal mentoring. Arrangements and expectations can be established for special education teachers to meet with regular classroom teachers and work with them in their own classrooms. Protocols can be written where teachers can examine students' work in their respective classes. These kinds of arrangements make it more likely (though not certain) that high-trust collaborative cultures will develop.

What people believe and how people behave (the *substance* of a culture) is, in other words, profoundly affected by their connections to and subsequent relationships with who does or doesn't believe it (the *form* of a culture). Change the *form* of a culture (the interactions among people) through the medium of arranged collegiality and you have a good chance of changing its content too (Hargreaves 1994). Take the case of special education in Ontario, Canada.

Barry Finlay was a quarterback in university and went on to play five years in the Canadian Football League (CFL). A quarterback must see the relationships among all the players on the field. He's the systems thinker of football. Towards the end of his athletic career, Barry started getting involved in coaching young men who others had found challenging in terms of their discipline or behavior. He enjoyed working with them, empathized with them and felt he made a difference to these youngsters who hadn't really fit in anywhere else. Barry was now a systems thinker with a moral purpose and a mission.

Barry's teaching experience led him into special education – with kids on the margins who needed some learning support and guidance in their life. Moving on to take his Masters degree in Educational Administration, he focused on organizational learning and on how everything was connected to everything else in the big picture of change. As a principal of a new innovative high school, Barry then became a systems thinker in action. He organized teaching in Grades 9 and 10 so that students were shared mainly among four teachers, who taught as teams, knew what each other was doing and grasped where all the program was. When substitute teachers came in, for example, they weren't just babysitters, but they slotted right in to the whole team. They were now big picture thinkers too. They all understood how the school worked and what their own contribution was. His effective use of arranged collegiality enabled everyone to see and be responsible for the big picture of school change.

Eventually, Barry became Director of Special Education for the whole of his province. Here was his chance to apply his systems thinking to his passion for special education and for supporting all learners. One of his first moves, against some opposition, was to move his office from a separate building, marginalized from the Ministry offices, into the main building itself. If he was outside the mainstream, he reasoned, how could he persuade districts and schools to make special education part of the mainstream themselves? He realized that if he wanted to change people's beliefs about special education, he had to change the relationships and interactions between special education and other personnel – and he realized this had to start right at the top, with himself and his colleagues.

Barry knew how children with special educational needs had often been separated out from other children – “withdrawn” from classes, taught in separate units or distant portable classrooms far away from the rest of the school. Barry presided over a new provincial philosophy that believed that what was essential for some children was good for all of them – that if you wanted to help children with special educational needs, you had to transform the whole school. Special education teachers worked in teams and in classrooms with regular classroom teachers. They developed senses of shared responsibility for the same children

and their progress. Special education teachers started to help all children who found parts of their learning difficult; not just the ones who had been formally identified as having special educational needs. And in school district offices, special education and curriculum departments began to work more closely together – sometimes becoming almost indistinguishable from each other. All this helped promote the philosophy and practices across the system where whole-school changes like providing differentiated instruction or offering assistive or enhancing technologies for all students, particularly benefited those who had identified disabilities.

Barry Finlay grasped that if you want to change people's practices and beliefs, you have to alter or arrange patterns of communication and build new kinds of relationships among them. This may involve changing people's roles or changing the structures of an organization – but the goal is to *reculture* schools, districts and whole systems so they serve all their children better.

Arranged collegiality can therefore instigate new cultures and relationships of a more collaborative kind, through establishing common norms, creating a common language and placing people in closer proximity to each other in order to develop senses of shared responsibility. At the same time, arranged collegiality can also disturb collective complacency or groupthink and extend what teachers collaborate about.

13.3 Contrived Collegiality

By looking at achievement data, examining learning profiles of particular students, or comparing how different teachers might assess examples of students' assignments, arranged collegiality can also sharpen the focus of joint work among teachers (Datnow 2011). However, there is a fine line between *arranged* collegiality and *contrived* collegiality.

Cultures of professional collaboration take much more time, care and sensitivity than speedily implemented changes or hurriedly assembled teams allow. Arranged collegiality can prod and nudge this process forward by creating opportunities, incentives and also expectations for teachers to work together, but there are still no quick fixes. Arranged collegiality, however, certainly does not mandate collegial support and partnership through fear and force. When arranged collegiality turns into more questionable contrived collegiality, collegueship and partnership are administratively imposed, creating a degree of inflexibility that violates the discretionary judgment that is central to teacher professionalism. Let's consider two such examples of imposed or contrived collegiality:

1. *Coaching*

The first comes from research on peer coaching by a former graduate student, Jane Skelton (Hargreaves and Skelton 2011). Peer coaching relationships where one teacher assists one or more fellow teachers to improve their teaching or learn a new skill can take many different forms – some more empowering than others. Some of these don't just encourage teachers to work together on improvements they identify, but mandate that they work together to implement prescribed programs with *fidelity*.

Here is a US literacy coach and some teachers discussing their struggles in using mandated common planning time so that special education teachers could respond to short vignettes about their work with a prescribed vocabulary curriculum. The coach's job is to steer an agenda related to the district's goals within a mandated common planning period, but where there is shortage of time more generally.

Coach: *I struggle with having to get the conversation going. Sometimes I feel like I say a lot. I do a lot of "okay." Time is always the constraint. It's always the big factor. I've always struggled with what are the questions you have to bring forth in the moment to get things going. You don't want to say too much. You don't want to say too little.*

Teacher 2: *There's a point where if you try to do so much you don't get anything done. I understand the time constraints, but I'd rather come out with a little bit of information that I really know and I can really use. I'm more into the concrete.*

Coach: *Getting other folks to talk – that's my struggle. I feel pressures to have other folks speak. So I feel like I say too much up front. [I'm] just trying to get other folks to speak. (Almost all of the teachers nodded in agreement.)*

Time is not the only problem here. Teachers have to deal with many other initiatives and everyday demands such as "kids coming down the hallway" or parents waiting for attention, as well as the literacy requirements, and because of budget cuts, they are not even sure they will be keeping their jobs or where they will be working the following year.

Teacher 7: *When we come in here, we have to switch off from that other stuff. We know it's Word Generation, and [we have to] focus on what we're doing.*

Teacher 1: *We have so many team meetings. We're at the service of the parents and if the parents come, it's just a matter of us being in two places at once.*

Teacher 4: *You have common planning time, you have cluster time, and there's no real sacredness to it. So everything comes before it, and you're flying by the seat of your pants. And, you sit down for a couple of minutes and you want to participate and you find yourself, like everybody else, waiting for the kids to be coming back from gym. So you can never really be relaxed.*

Teacher 3: *And then with this year and everyone trying to figure out their job, our minds are in different places.*

Teacher 4: *Finding work.*

Teacher 2: *The [writing prompts] still have to be corrected.*

Coach: *About coming from one place to the next – [the common planning time] tends to be very coach-driven. I think that there are places where I try to invite, but I think that folks feel overloaded with what they are trying to do outside of these meetings. I know that we had talked about questions (related to the vocabulary issues) and a couple of folks had brought them back. You get caught up in things. And so when you think about*

doing that collaborative piece....I mean, they had a parent show up this morning. They had an [individual education plan] meeting this morning. And I feel lots of times, it's like, "Can you handle this so we can deal with the parent and go to the [individual education plan] meeting? And kind of bring it back together for us week by week so that we can remain focused. (The teachers were silent.)

Teacher 2: *I think that it's hard to get a format that would fit every meeting like this – professional development meetings, curriculum-based meeting[s]. Personalities have a huge part of it. No matter what you have in front of you, like – "This is the manual for it, and we're going to follow this". Forget it. It's not going to happen, because people are different. [They] react to each other differently. They react to the coach differently and vice versa.*

Coaching in the context of mandated reform can often fall short of its ideals, therefore, leading to hurried, anxious and one-sided interactions, in required time periods that draw teachers away from compelling classroom concerns in a system where even basic job security can no longer be counted on. This is what, some years ago, I described in terms of "coaching as unreflective practice" (Hargreaves and Dawe 1990). Passive resistance results in the form of withholding full attention or not responding to the coach's requests to complete a survey on what students are learning. It is easy to argue that teachers are just dragging their feet in acquiring new and much needed technical *skills*. But in this case, they are actually digging in their heels to assert a contrary *will* that opposes the enforced transportation of unwanted programs and practices into their classrooms, especially at a time when their very jobs are up in the air.

2. Peer Pressure

Peer pressure of certain kinds can be a highly valuable ingredient of positive professional collaboration – when peers who are knowledgeable about your practice, and share your instructional goals, help you and even push you to be the best you can be through processes of what are called cognitive coaching and challenge coaching that provide feedback that will deepen reflection, provoke inquiry and question existing assumptions. Writers such as Michael Fullan have argued that shifting the pressure exerted by those at the top, to pressure exerted by peers – what he calls positive peer pressure – is one of the most significant transformative changes that can occur in educational change (Fullan 2011). Yet this perhaps misrepresents the change question as being one of *who* controls change, rather than *how* change is controlled. A literacy coach, we have seen, can be just as pushy as a principal. Whether it is leaders or teachers who exert pressure to collaborate is not the point. The more important argument is what that pressure looks like and whether it amounts to a nudge or a shove. Nudging is an act of collegial encouragement. Shoving can border on professional abuse.

Sometimes, peer coaching can be just another technical way to implement an external mandate – with peer coaches or system literacy coaches now acting as

messengers of compliance with enforced external reforms. An interesting example of this kind of peer-mediated accountability comes from an example of peer-driven change in Ontario, Canada, described by McKinsey & Co. To quote directly:

This is the story of a teacher who joined a primary school that had established the routines of collaborative practice as part of its literacy and numeracy strategy – these were professional learning communities through which teachers jointly reviewed student work and developed teaching methods. In that teacher’s first week in the new school two of his colleagues visited him and suggested that he should use word walls because they had both found them to be effective. When, two weeks later, he had not yet put up the word walls, his colleagues visited him again, this time urging him more strongly to put up the word walls, sitting him down to share why this was the practice in their school and the difference it had made for students. A few weeks later, by then well into the school term, he had still not put up the word walls. His colleagues stopped by again after school, this time simply saying: “we are here to put up your word walls and we can help you to plan how to use them”. As professionals in that school, they had developed a model of instruction that they found effective....so they expected others to use it too. Their commitment was to all students and to their professional norms – not just to their own students in their own classrooms –and they were willing to hold each other accountable for practices that they found effective. (Mourshed et al. 2010)

What are we to make of this example? We hear the triumphant account from the peers who pushed their incoming colleague, but there are no words as to how this process was experienced by the colleague in question, or whether he became a better teacher as a result. It’s a somewhat self-congratulatory account by the pushers, not the pushed. We don’t know how well these peers know, understand and have got to grips with the details of their colleague’s practice, but we do hear about infrequent visits and contacts – “two weeks later” and “a few weeks later” – suggesting that these may have had some of the features of drive-by observations that are all too common in many coaching, supervision and evaluation situations. Then there is the question of whether these educators see themselves truly as professional peers at all if they can take it upon themselves to be “sitting him down”. This is more of a shove than a nudge and is very different from teachers and leaders in high performing Finland, for example, who work together as peers in a “society of experts” (Hargreaves et al. 2008). And we don’t hear about the approaches to literacy that this teacher already uses, whether they are effective or not, and how rich or not they might be. All we know is whether or not the teacher has a word wall – an easily observable item, torn out of context, that can be quickly ticked off a checklist by transient and micro-managing peers armed with clipboards in their quest for compliance.

Of course, it’s perfectly possible that these peers did have deep understandings of and engagements with their colleague’s practice and that the use of a word wall was just one well articulated part of all this. But we hear none of this. In this case, as in too many cases, it simply seems to come down to whether or not the teacher has a word wall: an example of contrived collegiality at its pushiest, most superficial and groupthink-like extreme. And in the way the example is presented by McKinsey & Co, it uses the admirable principle of positive pressure to issue a license to exert any kind of pressure that the pushers decide on.

Some critics of the concept of contrived collegiality (which they often misread and misrepresent as contrived *congeniality*) wrongly claim that it is being used as a

verbal weapon to defend teachers' right to teach any way they like (to shore up their individual classroom autonomy, that is) (Dufour 2011). As the arguments above make very clear, nothing could be further from the truth. But the principle that collegiality usually has to be organized, expected and *arranged* – often (but not always) by administrators – should not be used to justify and to fail to challenge the excesses and abuses of contrivance where professional collaboration is on external agendas, that other people decide, at times of their choosing, in relation to purposes in which teachers have no control and that – in the case of gaming the system to cross test score thresholds, for example – may even be suspect.

To contrive something is to do more than merely organize and arrange it. Deliberate change requires deliberate measures. But to make things contrived is to push them quite a bit further. It is to make them unnatural, false, artificial, even forced. Contrived collegiality is collaboration on steroids. In the end, the drawbacks and benefits of *arranged collegiality* (at its best) and *contrived collegiality* (at its worst) are not to be found in whether or not particular structures or practices are suddenly introduced – like planning times, protocols or procedures for analyzing data. The differences between merely arranged and artificially contrived or forced collegiality are to be found in whether there is already enough trust, respect and understanding in a culture, for any new structures or arrangements to have the capacity to move that culture ahead.

This is not a question of whether administrators or teachers should be the driving force behind professional collaboration. The question is that if there is any pressure, whether it is exerted by principals or by peers, what distinguishes good pressure from bad pressure? Pressure from peers is inherently no better than pressure from principals or other administrative leaders if the pressure is of the wrong kind, exerted in the wrong way.

These issues have been addressed by Amanda Datnow (2011) in a study of the dynamics of data-driven teams in two school districts. Using the concepts of collaborative cultures and contrived collegiality as a touchstone for her team's analysis, she found that while the collaboration promoted by both districts was administratively regulated and designed to meet the districts' purposes through such devices as mandated meeting times and prescribed questions within meeting protocols, many of the negative effects normally associated with contrived collegiality did not take hold. Rather, "what began as contrived meetings to discuss data evolved into spaces for more genuine collaborative activity wherein teachers challenged each other, raised questions, and shared ideas for teaching" (Datnow 2011).

The explanation for this finding is interesting. There was already quality, integrity and long-term stability in these districts' leadership, even before the introduction of data-driven improvement. The districts had pursued continuous improvement for some time and been able to "develop trust among teachers, assuage their concerns about how the data reflected upon them as individual teachers, and promote a positive orientation towards data use." (Datnow 2011). Strong collaborative cultures were the foundation underpinning the immediate efforts at data-driven contrived collegiality.

13.4 Professional Learning Communities

When it is used in a facilitative and nudging, not controlling or shoving kind of way, contrived (or arranged) collegiality can also provide a starting point, and a necessary first step toward building collaborative cultures with focus and depth – as in the case of Barry Finlay and the goals of Ontario’s special education initiative to increase collective responsibility among special education staff and those with more general curriculum responsibilities. One of the most significant, sustained and systemically broad efforts to do that has taken the form of *professional learning communities*: a place where the pushes and pulls and nudges of different kinds of collegiality come through with real intensity.

What have we learned so far about the power of professional collaboration that can help us address the dynamics of professional learning communities? Two basic lessons stand out. First, a lot of the work of building professional collaboration is informal. It is about developing trust and relationships and it takes time. But if all this is left entirely to voluntary and open-ended choice, a lot of collaborative effort will dissipate and provide no benefit to anyone, or never even occur at all. Second, positive collaborative work can benefit from teachers sometimes being nudged forward through deliberate arrangements of meetings, teams, structures and protocols. But if these are hurried, imposed or forced, or if they are used in the absence of commitments to building better relationships, then they too will be ineffective. The necessity of arranged collegiality is no excuse for the forceful and even bullying imposition of contrived collegiality whether this is by formal superiors or by people who are technically one’s peers.

Strong and positive collaboration is not about whether everyone has a word wall, or a set of posted standards, or not. It’s about whether teachers are committed to, inquisitive about and increasingly knowledgeable and well-informed about becoming better practitioners together, using and deeply understanding all the technologies and strategies that can help them with this – whether it is a word wall here and there, or something else instead. The place where all these scenarios play out these days is in professional learning communities.

Since the origins of the terms professional community, learning community, and professional learning community in the 1990s, professional learning communities have spread like wildfire. Sometimes, in line with their origins and original intentions, they have been a means to develop teachers’ overall capacity for inquiry, improvement and change. Sometimes they have been used as a strategy to implement external reforms – especially in tested literacy and mathematics.

Originally, the inventor of the term professional learning community, Shirley Hord (1997), simply meant that a PLC, as it later came to be called, would be a place where teachers inquired together into how to improve their practice in areas of importance to them, and then implemented what they learned to make it happen. In the spirit of this simple starting point, PLCs can be represented as comprising three things (Hargreaves and Fullan 2012). They are:

1. *Communities*: they are places where people work in continuing groups and relationships (not merely transient teams), where they are committed to and have

collective responsibility for a common educational purpose, where they are committed to improving their practice in relation to that purpose, and where they are committed to respecting and caring for each others' lives and dignity as professionals and as people.

2. *Learning* communities: in which improvement is driven by the commitment to improving students' learning, wellbeing and achievement; in which the process of improvement is heavily informed by professional learning and inquiry into students' learning and into effective principles of teaching and learning in general; and in which any problems are addressed through organizational learning where everyone in the organization learns their way out of problems instead of jumping for off-the-shelf, quick-fix solutions.
3. *Professional* learning communities: where collaborative improvements and decisions are informed by but not dependent on scientific and statistical evidence, where they are guided by experienced collective judgment, and where they are pushed forward by grown-up, challenging conversations about effective and ineffective practice.

Sadly, however, professional learning communities have often been imposed in a simplistic and heavy-handed way by overzealous administrations and workshop consultants. Too often, they have become yet one more 'program to be implemented' rather than a process to be developed. One clear example comes from Alberta in Canada. In a research team that one of us led to review the province's groundbreaking school improvement initiative, Brent Davis and Dennis Sumara (2009) undertook an in-depth study of three contrasting school districts and how they each approached school-based innovation within the province's wider initiative. One of them decided what their schools' innovations would be – professional learning communities – and imposed them on everyone. Leadership money was spent on moving one or two teachers from the schools to be coordinators in the district office (in another district, by contrast, the money was spent on providing bits of time for lots of teachers to interact and inquire into their practice together within and across their schools); and on bringing in well-known external trainers to do multi-day workshops with school teams. The aim was to achieve alignment in the district. But in practice, the only time the schools met each other was during the workshops. Because leadership was concentrated in the district office and imposed from the top, none of the schools knew what the others were doing. Ironically, the district ended up getting very little alignment at all because the PLCs were laid on, there was not enough leadership to spread around, and the only learning that was going on was from the external consultants.

Diane Woods' (2007) research pinpoints how PLCs, like many reforms, are often viewed differently by people at the top compared to those on the ground. Charles Naylor (2005), a professional development leader for the British Columbia Teachers' Federation, has seen how the importation and implementation of Professional Learning Communities from the United States has fared in high capacity, high performing Canada and is not impressed with the results. The worst proponents of PLCs, he says, avoid connecting them to innovative and ambitious learning goals

but stick to the technicalities of specifying narrow performance goals, defining a focus, examining data and establishing teams.

There is a dilemma here. If someone doesn't push PLCs, there is a worry that individually autonomous teachers may not get around to purposeful interaction. But a push can quickly convert a nudge into a shove. More than this, do we really want improvement to happen as a result of a collection of change pushers? Why does change always have to be driven or pushed from somewhere else or by someone else? Change isn't a drug. It shouldn't turn agents into pushers. In a study I have conducted with Alma Harris on organizations that perform above expectations in business, sport and education, one of the organizations is a highly successful craft brewery, featured on the Discovery Channel – Dogfish Head beer – that has unusual and innovative ways of approaching change and improvement. The case study writers here were Corrie Johnson and Alex Gurn.

At Dogfish Head Craft Brewery, the Dogfish way of creating “off-centered ales for off-centered people” is all about living life counter-intuitively, against the grain. Dogfish Head's employment of ‘opposite- approach strategies’ works to turn conventional industry practice on its head and circumvent the big three US beer companies’ attempts at structured market domination. For instance, instead of adopting conventional **push** strategies of marketing, which advertise the product far and wide, Dogfish Head uses **pull**-marketing at craft beer events and the like that devote time face to face with people and that develop a cult following. “From the outset, it's still this fun, funky thing that people just gravitate to”, they say. (Hargreaves and Harris 2011)

It sounds like tough talk – the kind that appeals to politicians and high level administrators in places like the US – to be saying we need to be *pushing* things all the time, either from above or from one's peers. But professional learning communities, collaboration, and change in general, are as much about *pulling* people towards interesting change by the excitement of the process, the inspirational feeling of the engagement, the connection to people's passions and purposes, the provision of time that is not consumed by classroom responsibilities or mandated change agendas, and the creation of not just a spreadsheet of higher test scores, but a culture of engaged and successful learners. Create positive energy and excitement in relation to a commonly valued goal and you will always *pull* lots of people towards you. Here is an example from Limeside Primary School in the North of England – part of the Beyond Expectations study conducted with Alma Harris. Kathryn Ghent was the fieldworker at this school.

In June 2000, Limeside Primary School, on a deprived council estate in the North of England, was classified by the English inspection service, Ofsted, as needing to go into “Special Measures”. Less than a third of the children were reaching proficiency on standardized achievement tests and many children were leaving school “not able to read”. “It really hurt”, the headteacher recalled. The school was “a slum school that nobody wanted to go to, in a slum estate that nobody wanted to live in”. “There were no real expectations for the children. It was kind of, ‘Well they're Limeside children, so what can you expect?’”

Over the years, the school turned around with many familiar strategies such as establishing a calm climate with a positive behavior strategy, setting a common vision, relentlessly tracking children's progress, and changing teachers' roles and responsibilities. The great leap forward, though, was higher expectations for success from everyone and the teaching and learning strategies to match them. These days, in the words of a teaching assistant, “Limeside gives them the confidence to achieve”.

The strategies were collective and often counterintuitive to the relentless, earnest push to track and drill people to get improvements in measurable results. Teachers were pulled as much as pushed forward by energizing innovations that yielded increased engagement as well as achievement. Philosophy sessions enabled children to discuss school rules and problems in an open forum. The headteacher introduced meditation each morning to settle children and staff into the day. Children are also explicitly taught prior learning, learning styles and meta-cognition. Wall displays show jigsaw puzzle pieces with the key thinking skills and activities within them. Children are able to follow the framework, looking at prior knowledge, identifying the task, working together and trying to find the best way of solving the problems, then teaching somebody else when they've managed it.

The school bought wizard hats and cloaks and anybody who has shown they are a wizard learner in mastering the key thinking skills is dressed up in assembly to receive their certificate. "The wizard learner is a real event and this wizard is able to ask questions. He's able to work with somebody else. He's able to do lots of home learning. He's able to know what to do when you don't know what to do." The consequence is confidence, accomplishment and more collective confidence for children and teachers alike. "It's a major high when you see a child that has struggled and struggled but persevered and has shown that 'I am going to do this' and they walk up on that stage at the end of so many weeks and they get there and what they say is, 'I've turned a corner, I can do it and not only can I do it but I can show somebody else how to do it.' That's a real high when you see that".

In general, we need to move the debate away from pushing PLCs per se into developing processes where teachers will encourage and challenge each other as well as challenge their leaders as part and parcel of the give and take of continuous improvement. Again, there needn't be an ideological battle between tender words and tough talk, between pushing and pulling as well as nudging change forward. Usually, what will be involved from different quarters is a bit of push, a bit of pull and a bit of push back. And when all the forces come together, the results can be dynamic. All this is evident in an Ontario school district that has been studied as part of an investigation co-directed with Henry Braun of special education reform strategies in 10 (of the 72) districts in the province (Hargreaves and Braun 2012). Here is an example from one of the districts where the push and pull of administrative superiors in developing and administering professional learning communities becomes a push too far for some colleagues. This is an edited and extended report from the original account of case writer, Matt Welch.

Dave Perkins (a pseudonym and composite of two district administrators) is Director (superintendent) of a Northern Canadian school district that has 24 elementary and secondary schools with a 40 % population of First Nations (aboriginal) students in a far-flung territory the size of France.

We investigated how Dave's district used project funding for whole-school approaches to special education reform. Every district took a different approach. Dave's district initially used its resources for supply (or substitute) teacher coverage to allow both general and special education teachers to attend PLC meetings together and for "capacity building" more generally. The reflective aspects of PLCs in this district allowed teachers to increase their awareness that the significant language challenges of their aboriginal students were less a matter of inherent and insurmountable cognitive impairment, but a developmental and experiential issue that could be addressed collaboratively as well as pedagogically.

Dave and his colleagues **pulled** teachers in by having flexible formats and focal points in different schools and by funding ample release time to break down the separation between special education and curriculum staff: "sharing strategies, supporting each other,

talking about at-risk kids, talking about special needs.” They also **pushed** frank discussion about teaching strategies and about expectations for aboriginal students’ learning.

There was a lot more self-direction in the PLCs coming from teachers. It was more “Let’s make sure we’re focused and make sure we’re doing something and our school energies are all being harnessed and directed in unison rather than us all paddling our own little canoes in different directions.

As teachers reflected on their students’ performance data, collaborated, and discussed students’ needs, the task of improving students’ writing no longer mainly meant reviewing student performance on practice prompts or drills related to the high stakes standardized tests. Rather, as the PLC process “unfolded, we began to see more and more connection between early language development as oral language development [and] reading development, writing development, and overall literacy development.” Staff became increasingly aware that many low-SES aboriginal students were entering school with very little existing language capacity whatsoever. During walkthroughs, staff presented early childhood classrooms where groups of students were using a variety of tools to build literacy skills (e.g. computers, board games, and manipulatives). Younger students now had their needs brought to the fore, and teachers began to see the connection to measured literacy performance in later grades.

PLCs could sometimes become quite confrontational, but mainly in a productive way. The district’s data administrator described how it was:

Very confrontational for one teacher – not in a negative way, but they definitely felt that they needed to be able to defend the way that they wanted to mark and grade student work. And she walked away from the table understanding that she wasn’t using a criterion-based assessment even though she had developed a rubric but [the grade was] based on the effort that they were working on. That was her peers at the table. She didn’t go away upset. She went away saying, “I need to rethink this”.

Facilitating the challenging work that enabled teachers to have productive and frank conversations took time. In the words of one teacher:

Pushing people outside of their comfort zone, as difficult as it is, it truly is successful because in time we were able to see changes in the content of discussion and the quality of the discussions that were happening around the table, but it took a lot of time.

Teachers said they were more frequently “listening to colleagues and watching what they’re doing,” and described how they were “more willing” to try colleagues’ ideas since they had built “relationships.” One said, “if we’re going to be an effective school we need those relationships.”

You would think that all this would make the superintendent and his staff self-congratulatory about their success. There were definitely pressures in bringing about changes through “frank” conversations, and these were by no means always seen as positive and productive. The special education coordinator for the district talked about this tension:

“Teachers definitely are feeling that they’re under more scrutiny, more pressure from senior administration. Principals regularly are in classrooms. They’re doing walkthroughs. They’re looking for specific things. They want to see evidence that guided reading is happening. They want to see evidence of all of the initiatives that the board is working on. There is a lot of pressure on teachers to make changes and they certainly are feeling that pressure”.

When this superintendent met with the research team and all his fellow district superintendents from elsewhere, he spoke movingly about how valuable the case study reports had been to him and his district. “I thought I was having challenging conversations with my staff”, he said, to open up practice and raise expectations. “But since I read this report”, he continued, “I realize that what I intended to be challenging conversations have sometimes

been experienced as oppressive conversations”. That is just the perception of some of my staff”, he went on, “but perception is reality and I have to learn from this and take it very seriously”.

Courageous leaders of PLCs are not bullying and self-congratulatory. They nudge, but they don’t shove. They are humble and self-reflective. Commenting on the inherent difficulty of leading an effective PLC, Dave looked to his own practice. “To this day, even as a superintendent, I don’t think I could hold (run) a perfect, effective PLC (discussion)”, he said.

There are some powerful concluding lessons from this example about PLCs, their nature and their momentum. They have a back and forth feel between the relative contribution of pressure and support, push and pull, focus and flexibility, relationships and results. In this district,

- Teachers are *pulled* into something they find energizing, that they are given time for, and that respects their collective (not individual) professional autonomy and discretion; yet they are also *pushed* to review or revise what has been more or less effective for them, and to acquire practices from other colleagues who may be doing some things better.
- PLCs have a clear *focus*, but this is collectively and *flexibly* determined by the community – not administratively imposed on everyone, in a standardized way, from outside.
- There is a sense of *urgency* about challenging teachers’ practice, yet also a *patient* realization that the essential trust and relationships that underpin PLCs can only develop over time.
- The superintendent is *firm and persistent* enough to challenge his teachers and leaders with frankness, yet *humble and open* enough to know when he has to pull back because he has gone too far.

13.5 Conclusion

A professional culture, we have seen, connects the way people perform their work, to the people they are, the purposes they pursue, the colleagues they have, and how they do or don’t improve. In the old days, and still too much today, the professional culture of teaching was one of individual classroom autonomy, unquestioned experience and unassailable knowledge and expertise. Nowadays, professional cultures are more and more collaborative. Teachers may still actually teach alone for much of the time, but the power of the group, and all the group’s insight, knowledge, experience and support, is always with them. The best groups are places where teachers share collective responsibility for all their students – with teachers in other subjects and grades, and with teaching assistants as well. They are places where teachers constantly inquire into learning and problems together, drawing on their different experiences of particular children or strategies, and on what the evidence they can collect is telling them – about the best way to approach a child, a difficult

curriculum concept, an unfamiliar innovation, or a group of learners who are falling behind, together. And they are places where teachers don't just endure but actively enjoy challenging and being challenged by their colleagues and their administrators when results are disappointing, levels of commitment and standards of professionalism start to wane, old habits are not supported by the evidence of what's effective, change efforts seem headed in the wrong direction, behaviour is personally inconsiderate, or there are just better ideas around that need to be embraced in order to move things ahead.

Professional learning communities need an architecture or design if they are going to be productive. They have to be organized and arranged. As in Finland, where teachers spend less of their time in classrooms with their students than any other developed country, time allocations in the school day have to honor teachers' need to have time outside of the classroom together to inquire into their practice and how to improve it together (Sahlberg 2011). Team meetings need a commonly agreed purpose and agenda. Staff meetings need to look more like high quality professional learning than places to deliver announcements. Teachers have to be drawn or *pulled* into these communities, as well as driven or *pushed* by them. In the very best cases, teaching itself is often collaborative. It's the joint work that Judith Warren Little (1990) recommended – with integrated projects moving across grade levels, middle school teachers working in teams who share and often teach large groups of students together, and special educational resource teachers working alongside grade level teachers in the regular classroom setting, for example. In all these cases, professional collaboration is structured, expected, simply the way of working that teaching now has to be.

The days when individual teachers could just do anything they liked, good or bad, right or wrong, are numbered, and in many places, now obsolete. Teaching is a profession with shared purposes, collective responsibility and mutual learning.

But the new expectation that professional cultures have to be ones of *collective* autonomy, transparency and responsibility, that have to be deliberately arranged and structured around these principles, should not be a license for administrative bullying and abuse or enforced contrivance either. When push comes to shove, as it were, professional learning communities are not and should not be professional data communities or professional test score communities. They are not and should not be places for administrators to shove questionable district agendas on to teachers who are gathered together after busy days in class to pore over spreadsheets simply to come up with quick interventions that will raise test scores in a few weeks or less. They are not and should not be places where overloaded literacy coaches convene hurried meetings with harried teachers who scarcely have time to refocus from the preceding class, before they have to rush off to the next one. Nor are they or should they be places where principals and superintendents convert challenging conversations into hectoring harangues, and where all the challenges come from above, with no comebacks or reciprocal challenges allowed from teachers themselves.

The core principles of professional learning communities that are consistent with their origins are about teachers developing their commitments and capabilities, pushing and pulling but never shoving their peers, and exercising collective

responsibility together for the greater good of students that transcends them all. Professional learning communities and collective responsibility will not look identical in all cultures and contexts. In Finland, they look like teachers being given a problem, then quietly solving it together. In Singapore, they are urgent, energetic and always involves food, in a high-powered culture where, as one Singaporean educator put it, “we eat and we run. We eat and we run!” (Hargreaves and Shirley 2012). But in all cases, wherever resources allow, professional autonomy can no longer be reducible to individual classroom autonomy, collective responsibility should be a key goal in building professional learning communities, and while the process for creating this collaboration will often require the nudges of deliberate arrangements to enhance learning, it should never extend to the forceful shoving and bullying of forced implementation that is the antithesis of the very thing it is claiming to create.

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Chapter 14

Learning to Teach Against the Institutional Grain: A Professional Development Model for Teacher Empowerment

Zhihui Fang

Abstract During the past decade, federal and state governments have become increasingly involved in legislating what to teach and how to teach in American public schools. Nowhere is the government intrusion more evident than in early literacy instruction. With recent education legislations spotlighting accountability, teachers are under immense pressure to use prepackaged commercial programs and to teach to high stakes tests. At peril in this educational climate is teacher autonomy. This paper describes a longitudinal professional development project in Florida schools that supported literacy teachers to make pedagogical transitions from total reliance on prepackaged commercial programs to independence in making informed decisions about curriculum and pedagogy. It is suggested that developing teachers' content knowledge, professional wisdom, and psychological strengths is key to their professional empowerment.

Keywords Teacher professional development • Literacy instruction • Teacher empowerment • Teacher learning

During the past decade, federal and state governments in the United States have become increasingly involved in legislating what to teach and how to teach in public schools. Nowhere is the government intrusion more evident than in early literacy

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instruction. For example, with the passage of President George W. Bush's "No Child Left Behind Act" (NCLB) in 2001, teachers are required to use effective methods and instructional strategies that are based on scientifically based research. The National Reading Panel, a committee commissioned by the National Institute of Child Health and Human Development at the request of the U.S. Congress to review the research base on the effectiveness of different instructional techniques and provide a guide for "scientifically-based reading instruction," concluded that systematic and explicit instruction in phonemic awareness, phonics, vocabulary, fluency, and comprehension strategies is key to improving students' reading achievement (NICHD 2000). Under the NCLB act, students must be tested annually in reading and mathematics in grades 3–8 and at least once in grades 10–12. Schools that do not meet "adequate yearly progress" (AYP) for two consecutive school years are sanctioned and required to adopt a scientifically-based reading curriculum from an approved list of prepackaged commercial programs to assist with improving reading instruction. These commercial programs focus on the five areas of reading identified by the National Reading Panel and provide detailed scripts and pacing guides that teachers are expected to closely follow. In this educational climate, teachers are under immense pressure to teach to a standardized, constricted, one-size-fits-all model in order to prepare students for high stakes testing. Such practices severely undermined teachers' creativity, threatened their autonomy, hurt their morale, and decreased their ability to differentiate instruction (Afflerbach 2005; Finnigan and Gross 2007; Valli and Buese 2007).

It is against this sociopolitical backdrop that we, a group of teacher educators from the University of Florida (UF) and the North East Florida Educational Consortium (NEFEC), began to explore ways to empower literacy teachers to make informed, independent decisions about curriculum and pedagogy. Such efforts are critical because "the challenges of coming decades demand teachers who are pedagogically competent while also being psychologically strong enough to use professional knowledge in creatively resourceful ways" (Duffy 2005, p. 321). With funding from the Florida State Department of Education at the turn of the century, we collaboratively developed and implemented a model of professional development that supported literacy teachers to develop content knowledge, psychological strength, and professional wisdom (Duffy 2005; Shulman 1986). This paper describes the guiding principles, components, and outcomes of this professional development project.

14.1 Guiding Principles

We worked with 18 primary-grade (K-3) teachers in six rural elementary schools (3 teachers per school) in northeast Florida over a period of 4 years to create what we called "professional development classrooms," or PDCs. The teachers of the PDCs were exempted from district curricular mandates and allowed to grow as

professionals who designed and implemented research-based, effective literacy instruction. Each of the PDCs had a student population comparable to that in other classrooms in terms of gender, ethnicity, socioeconomic status, and scholastic aptitude, with at least one-third of the students not reading on grade level at the beginning of the project. Students in each PDC stayed together throughout the school year without any pullout remedial instruction.

In developing the professional development model, we subscribed to the theory that it is the teacher, rather than commercial programs, that makes the difference in student learning and achievement (Duffy and Hoffman 1999). We also recognized that successful professional development (a) engages teachers in the learning process by creating opportunities for them to ask questions, collaborate with peers, and explore new ideas and current practices; (b) is long term, providing ongoing support for teachers throughout the year and from year to year; (c) involves modeling, coaching, observation, and follow-up sessions to analyze and critique practices; and (d) is content focused, linking teacher, curriculum, and students (Anders et al. 2000; Darling-Hammond and McLaughlin 1995; Feiman-Nemser 2001; Garet et al. 2001; Guskey 2002). In addition, we held the following beliefs about teaching children to read and write in the early years of schooling:

- The goal of literacy instruction is to develop children as code breaker, text user, meaning maker, and text analyst/critic (Freebody and Luke 1990). To be considered literate, students must be able to decode texts, construct meaning, use texts for functional purposes, and critically analyze and transform texts.
- No single instructional approach will ever teach all children to read (Duffy and Hoffman 1999). Because literacy is a multidimensional construct involving such things as linguistic knowledge, content knowledge, strategy use, purpose and interest, instruction should draw on any approach that has been proven effective in improving aspects of children's literacy.
- Teachers need rich content knowledge of their subject to become informed decision-makers and keen kid-watchers (Snow et al. 2007). Without a solid knowledge base, teachers are less likely to make sense of children's complex literate behaviors and their instruction is likely to be incidental, rather than intentional, and random, rather than systematic.
- Effective literacy instruction requires systematic, multidimensional, and ongoing assessment of children's learning (Tierney 1998). Only when teachers become more aware of the significance of children's literate behaviors can they become more prepared to deal with children who experience reading/writing difficulties.
- Inclusion, rather than short instructional pullouts, benefits at risk children most (Cunningham and Allington 1994). Pullout instruction fragments the curriculum for struggling readers/writers and takes responsibility away from regular classroom teachers.
- Successful literacy programs provide opportunities for quality professional development (Gaskins 1998). Teachers need opportunities to develop new knowledge, to share ideas, and to reflect on their own practices.

14.2 Components

Teaching is hard work, and teaching against the institutional grain is even harder. Cognizant of this, we developed a support structure that enabled project teachers to grow as informed, independent decision makers of curriculum and pedagogy. The four components of this structure – summer institute, monthly meeting, classroom visit, and annual showcase – are described below.

14.2.1 *Summer Institute*

A summer institute was planned each year to extend and refine project teachers' knowledge base about current best practices in literacy, to provide examples of quality instruction, to reflect on personal teaching practices, and to plan instruction for the upcoming school year. The institute lasted 3 weeks for the first year, 2 weeks for the second year, and 1 week each for the third and fourth years. During the institute, project teachers read and discussed professional books and journal articles and watched video clips to keep themselves abreast of the current trends, issues, methods, materials, and practices in literacy education. They read Clay's (1993) *An Observational Survey to Early Literacy Achievement* to learn about informal ways of assessing children's learning; Harste, Woodward, and Burke's (1984) *Language Stories and Literacy Lessons* (1984) to gain a deeper understanding of how literacy emerges and develops in children; Derewianka's (1990) *Exploring How Texts Work* to build an explicit knowledge of the linguistic features of common school-based genres; Fountas and Pinnell's (1996) *Guided Reading* to learn new ways of supporting children's reading process; Lucy Calkin's (1994) *The Art of Teaching Writing* to better understand children's writing process and learn the art of teaching writing; Perry Nodelman's (1995) *The Pleasures of Children's Literature* to discover the power of children's literature and to learn to appreciate children's responses to literature; and Cunningham and Allington's (1994) *Classrooms That Work* to explore ways of designing effective classroom literacy instruction that meets the needs of all children. Project teachers also read and discussed award winning trade books related to their curricula from such sources as the National Science Teachers Association Outstanding Science Trade Books, the National Council for the Social Studies Notable Trade Books for Young People, the International Reading Association Notable Books for Global Society, the National Council of Teachers of English Notable Trade Books in Language Arts, and Orbis Pictus Award for nonfiction books. They were provided financial support and book selection strategies so that they could begin to create their own classroom libraries. In addition, the teachers joined professional organizations (e.g., International Reading Association, National Council of Teachers of English, Florida Reading Association) and subscribed to practitioner journals in the field (e.g., *The Reading Teacher*, *Language Arts*, *Florida Reading Quarterly*).

Furthermore, project teachers critically examined their own literate lives and teaching practices. They interacted with each other as readers and writers during the day and in the evening, sharing teaching tips and memorable teaching moments,

discussing favorite authors and books, and reflecting on their own beliefs and practices. At the end of each summer institute, project teachers agreed on a set of practices that they wanted to implement in their own classrooms. These practices include:

- Use data from anecdotal records and other assessments (e.g., running records, literature response log, writing) to inform guided reading/writing sessions with at-risk children;
- Integrate quality trade books into the curriculum, making literature the staple of children's reading diets and using literature as a model for writing;
- Institute a home reading program requiring all children to read at least one trade book every night and share their responses in class regularly;
- Guarantee time for children to write daily and across the curriculum with an emphasis on self-selected topics, peer response, and teacher conference; revising and publishing on a regular basis; and teaching and reinforcing skills in the context of composing, revising, and editing.

14.2.2 Monthly Meeting

The professional development that had occurred over the summer continued in Fall and Spring through monthly meetings. Each month, project teachers set aside one day to meet with us (i.e., teacher educators from UF and NEFEC) on the university campus. During these monthly meetings, project teachers shared successes and concerns in their daily instruction and brainstormed solutions for problems. Each monthly meeting typically began with a discussion of a recent journal article or book that the teachers had read over the month. The article/book was recommended by us or nominated by the teachers. These monthly articles and books provided fresh ideas that the teachers found relevant and were eager to try out. For example, one kindergarten teacher commented on how an article she read for one of the monthly meetings prompted her to adjust reading instruction in a way that resulted in more productive book discussion:

I tried written literature responses again this year and was again very disappointed. Their [students'] written responses and individual verbal responses seemed to be literal at best and very stiff. I had read an article about a teacher who encouraged lengthy discussions during the reading of stories. I never encouraged a lot of talking because kindergarten children are notorious for going off tangents and I kind of felt I needed to control the direction of the discussion. We would discuss after the story, but discussion during the story was used mainly to clarify a situation, to recap, or to explain unfamiliar vocabulary. I decided to try discussion during the story. It was wonderful. I was amazed at what they thought about and what they thought was important. We began to call these special times as "literature circles" and that was the cue that discussion was encouraged during this particular story. I had to free a lot of time to do this, having never a sure time of conclusion. Some "literature circles" went on for more than 80 minutes. These were some of the best times and the kids learned so much from each other. Just wonderful.

Following the article/book discussion, teachers shared what they had been doing in the classroom as well as the concerns and problems they encountered in their

teaching. To facilitate a greater focus on children during the sharing of teaching practices, each teacher was asked to bring to the monthly meeting a packet of information on one child she was most concerned about. In the packet, which was distributed to all meeting participants, the teacher included 2–3 running records (or a video clip) of the child’s book reading, 2–3 writing samples, and 2–3 written responses to literature. On a cover sheet, the teacher provided brief background information about the child as well as a short description of what the child was capable of doing, what the child was struggling to do, what she had tried with the child, and what her goals were for the child in 1 month. After everyone at the meeting had reviewed the data, the teacher gave an oral overview of the child, referring to the artifacts provided in the packet. Then, the group discussed options for what might be done to help the child improve his/her reading/writing. As a result of this focus on at-risk children, project teachers left each monthly meeting with not only ideas for working with a specific child in their classrooms, but also strategies that might work with many other children.

For example, a first grade teacher brought to the monthly meeting one of her students, Jack, who was characterized as a reluctant reader and writer. Jack had a history of writing failures. He had difficulty completing a full sentence during a 45-min writing workshop. His writing folder had many pieces of writing with incomplete sentences. Looking through his writing carefully, we found that Jack erased a lot because he tried to write every word correctly and perfectly. When we examined the running records of his reading, we found that he sounded out word by word and did not attend to meaning (e.g., he would read “who wants to ride” as “how whats to ride.” In his reading response to *Farmer Joe’s Hot Day* (Richards 1992), Jack basically copied from the book, writing: “Every day Farmer Joe worked hard in the field. The next day Farmer Joe worked hard in the field, he never complained again!” Based on how Jack read and wrote, we concluded that the best way to help him was to ask him to relax when reading/writing, encourage him to take risks, and teach him to read/write for enjoyment and for meaning without having to worry about making mistakes. We recommended that the teacher had Jack read some of her other students’ “messy” but expressive stories and explained to him that this was the way all writers did on their first drafts. At the next monthly meeting, the teacher brought a 3-page story Jack had written and were eager to share how she had successfully helped the child improve reading and writing.

Monthly meetings such as this motivated project teachers to follow the children about whom they were most concerned throughout the school year. They kept “anecdotal records” (Rhodes and Nathenson-Mejia 1992) of these children’s performance and used the records to guide instructional planning. A second grade teacher in the project took the following records of one of her struggling students named Bailey during the Spring semester:

February 25: Bailey’s oral reading is showing marked improvement. She often says words correctly that she doesn’t know the meanings for. So I’m going to give her some additional practice in vocabulary use. She and her peer tutor can use the matching games to increase her use of unfamiliar words.

March 4: Her ability to use synonyms and antonyms is increasing. She likes word puzzles, especially with vocabulary words from the books she’s reading.

March 19: Thrilled that she made it to the “100 books read” Pizza Party today. She got off to a slow start at the beginning of the year, but she’s really showing improvement in all areas now.

March 29: Reading chapter books lately. Even trying some third grade books. Growing confidence is evident in her book discussion.

April 12: Reported that she had read two books while on Spring Break. She was eager to check out class books today.

May 7: Every conversation returns to the zoo field trip. She has written and illustrated a short story about what she saw. She also asked to go to the library to find out more about a particular monkey she saw.

May 13: Enjoys using the Internet. Went to a zoo address and viewed the monkey house. Since then she’s been writing why zoos are not good places for most animals. She and Tom discussed the pros & cons of keeping animals in zoos. How different from the girl who wouldn’t open her mouth last August.

May 20: Parents commented on reading improvement. Asked for a suggested reading list. I told them to let her choose her own reading materials because that’s what has worked so well for her already.

May 29: Bailey was a very self conscious, shy child in August. Her growth in self-confidence this year has been mirrored in her academic growth. She used to stumble over common words and refuse to try figuring out unfamiliar ones. Now, she reads with emotion and recognizes that the different punctuation marks are signals as to how a passage should be read. She has definite opinions about what books she wants to read.

These records became part of the data that the teacher were collecting for an inquiry project she undertook with our guidance to examine the impact of guided reading instruction on struggling readers’ oral fluency. The inquiry project was later presented at a state reading conference and at the project’s annual showcase.

The monthly meetings greatly expanded project teachers’ understanding of children’s literacy development and their own instructional repertoire. The teachers came to the realization that in order to make sound pedagogical decisions, they needed to analyze and interpret students’ reading/writing behaviors, rather than resorted to the instructor’s manual in the prepackaged commercial program. They learned to look at a child from a positive perspective (what the child can do), from an historical perspective (what the child has learned to do and needs to learn more), and from an individual perspective (where the child is in terms of his/her developmental level). They learned to trust their own professional judgment based on their daily observation of and interaction with their students. They became designers of individualized instructional plans, setting goals, selecting materials, deciding on teaching strategies, and adjusting instruction for each child.

14.2.3 Classroom Visit

As a follow-up to the summer institute, we visited each project teacher’s classroom once per month. During the visit, we observed classroom instruction, modeled sample lessons, conferred with the teacher, and provided feedback. Through these visits, we were able to identify areas of instruction that went well and areas of instruction that needed improvement, as well as strategies for enhancing instruction. Sometimes, we came into classrooms with no predetermined foci for observation; other times, project teachers would identify an area of instruction for us to focus on so that both parties could collaboratively address targeted concerns.

For example, when writing workshop was first implemented, students loved the freedom of choosing their own topics. However, there were always a few children who had a difficult time deciding on what to write. They wrote two lines on one topic and then one line on another topic. Sometimes, they tried five or six topics and still did not know what they wanted to write about. In the end, they became too frustrated to continue. We noticed this problem during our visits to one of the project teachers. So we conferred with the teacher at the end of the school day and brainstormed the following ideas to help her students choose topics for their writing: analyzing what published authors of children's books wrote about, modeling how to choose a topic from students' own daily life experiences, asking students during writing sharing time how they picked their topics, and asking students during read alouds to speculate on why the author had chosen the topic they were reading about.

Another problem in implementing the writing workshop was that some teachers provided little guidance outside the managerial tasks of keeping order, answering questions, and supplying writing materials. In one second-grade classroom, for example, children wrote about what happened at home and then read their texts to class every morning, but never returned to their writing to refine it. As a result, many children wrote basically the same thing day after day. We uncovered this problem during our classroom visits to one of the project schools and so brought up this issue in a monthly meeting. During the meeting, it was decided that mini-lessons, small group guided writing sessions, and individual coaching were needed to move children's writing to the next level. In subsequent classroom visits, we modeled sample lessons to show teachers how to help children look for story seeds in their daily journals. We modeled read alouds to show how teachers could draw children's attention to the writer's crafts by discussing how the author focused on one incident, chose details, and developed ideas. We recommended that teachers let their students try one of these crafts at a time and provide suggestions during the writing conference about ways to revise writing, such as trying to lead with dialogues and adding conversation to show the conflict between two characters.

In some of our classroom visits, we found that a few teachers did not read aloud to their students on a regular basis and many provided few opportunities for book discussion. To address this problem, we included a read aloud session at every monthly meeting so that project teachers could see the power of reading aloud and learn strategies for conducting reading alouds and book discussion. We also modeled read aloud lessons in some of our classroom visits. Through these activities, project teachers learned to select books for classroom read alouds and paid attention to many features of books they had previously overlooked, such as flap information about authors and illustrators, dedications, endpapers, and genre. They learned to read and respond to books more critically. Most importantly, they instituted a home reading program that required students to check out books to read with family members every night and allotted time during the school day to discuss the books students had read at home. A kindergarten teacher, who had been teaching at the same school for 17 years, credited the home reading program for helping more of her kindergarteners to become readers than she had ever had before.

During the second, third, and fourth years of the project, we encouraged project teachers to visit each other's classrooms so that they could share insights and ideas

about teaching and learning. For example, in one second-grade class, the teacher decided to expand writing genres from fiction to nonfiction. She invited her students to explore mammals. Together, they read informational books, reference books, and the Internet to search for information about the mammals they had chosen to study. During read-alouds, the teacher drew her students' attention to how the author presented information through writing. The children began to notice the specific features of nonfiction writing, such as use of photos, captions, subtitles, diagrams, and charts. As a result of this consciousness raising, many children chose to write an informational text and some even collaborated to produce informational books with photos, charts, and caption. After visiting this classroom, a kindergarten teacher collected a large number of information books about planets and sent them home with her students, requesting that family members read the books with their children. When the students returned to school the next day, they wrote and illustrated what they had learned from their books. The children's "science reports" were full of interesting information about the planets in the solar system. The teacher collected these reports and posted them on the wall of the school building hallway. The children read and reread the hall displays until they could tell a visitor a lot of information about each planet. It is this kind of idea sharing through classroom visits that improved the teaching practices for all. As one project teacher commented, "Visiting Carol's and Kim's classrooms was a real plus. I gained many new ideas. I think visiting others is very important. Look forward to next year."

14.2.4 Annual Showcase

At the end of each school year, a showcase meeting was held in one of the participating schools. Participants at the showcase included representatives from the state education agencies, school and district administrators, parents, and other teachers in the NEFEC-affiliated schools. During the showcase, project teachers presented findings from their classroom-based inquiry projects, and students and their parents shared their thoughts and comments about the project. The annual showcase became an occasion when project team members (teachers and teacher educators) reflected on what the group together had done during the year, developed a sense of accomplishment, strengthened bonds with each other, and set the agenda for the upcoming school year. It also helped garner support from all education stakeholders, which was critical to keeping the project going for an extended period of time.

14.3 Outcomes

Our professional development project had a significant impact on not only teachers' practices but also their students' literacy achievement. According to an independent evaluation of the project commissioned by NEFEC, the PDC students significantly outperformed their peers in other classrooms within the same school on standardized

tests and placement tests required by their respective school districts. They also outperformed their peers in random samples of NEFEC-affiliated school districts whose teachers did not participate in our project but were involved in other professional development activities. Equally importantly, the PDC students developed better literacy habits over the years. That is, they became more avid readers/writers and critical thinkers. They read many more books and wrote more often both at home and in school than they did in previous years. They were also more thoughtful and analytical in their book responses. The following comments from a PDC student and his parent at the annual showcase illustrate this point:

* When I was in second grade my mom signed me up for the [PDC] because she knew I liked to read. I'm glad she put me in the program because I've read over three hundred books in this program and I love to read. I've learned all kinds of genres throughout the program. My favorite genre is fantasy. I've read about all kinds of subjects. My favorite subject is space. I know a lot about space, not because someone told me, but because I read about it. Since I liked what I read I want to work for NASA and be an astronaut. Reading helps me in all my subjects. Reading helps me with everything in life. (Student)

* My child loves to read this year. He didn't love to read before. Reading was a chore to him. Now serious punishment for him is: sit without a book. He doesn't want to do anything but to read. He improves his reading skills greatly. (Parent)

We believe that the students' reading/writing improvements can be attributed largely to the dramatic transformation that their teachers underwent as a result of participating in the professional development project. When the project began, all teachers taught strictly out of packaged commercial programs and had no classroom libraries of children's books. By the end of the project, all teachers had their own classroom libraries and were, to varying degrees, able to design curriculum and instruction based on what they knew and what they believed their students needed. They showed knowledge, confidence, and enthusiasm in their teaching. Many of them went on to become instructional leaders in their grade levels, schools, or districts, with some promoted to the roles of assistant principal, curriculum resource teacher, and district supervisor of instruction.

An example of such transformation can be found in Kim, a third grade teacher from a rural elementary school with over 70 % of its students on the federal free or reduced lunch program. Kim had 24 students in her class. These children had reading levels ranging from first grade to third grade. To accommodate this range of abilities, Kim instituted flexible grouping in her instruction, meaning that group membership changed depending on the nature of tasks, the skills and strategies to be addressed, and student interests and needs. For children reading at the first grade level, Kim spent a great deal of time during the first semester helping them become readers. For children reading at the second or third grade levels, she met with them on a daily basis either to conduct mini-lessons or just to check their work. Most of these children's reading time was spent actually reading and responding to trade books. Kim wanted to make sure her children were falling in love with books, were able to select books that were "just right" for them, and were gaining fluency. She did oral fluency checks on a regular basis. During daily independent reading time, she would pull students for reading conferences to see what books they had selected for their book baskets, to listen to them read, to analyze their reading miscues, and to talk about how to improve their reading.

Kim believed strongly in the power of children's literature in developing students' reading/writing fluency and in building their motivation to learn. She wanted her students to be independent, lifelong readers/writers. To this end, she made sure that her children were flooded with books. Her classroom library consisted of over 600 trade books of all genres and levels. Some of these books were purchased with the project money; others were checked out from the local public library. Students were taught the "five-finger" rule to help them select books to read that were "just right" for them. Kim also included in her classroom library some books with controlled vocabulary from the basal readers. These books were used from time to time depending on the needs of individual students.

One of the priorities for Kim at the beginning of the school year was to establish nightly reading at home. Her students were told to have a book in the car, in the bathroom, by their beds, and anywhere else they would be for more than 5 min. They were required to read (or be read to) for at least 20 min each night and record the information on a reading response sheet. Because few of her students had many children's books at home, Kim had a take-home book collection from which students could select books to use at home. She also frequently sent home books for reading homework. Her students had daily folders that were brought back and forth and were checked daily to make sure they were reading nightly and returning borrowed books to exchange for new ones.

A typical day in Kim's class began with a morning activity such as journal writing, a handwriting practice activity, or a group task such as completing a puzzle. Following this, she had Circle Time when students shared their reading responses from home reading. At times during Circle Time, Kim would do a Morning Message activity, where she taught basic skills lessons on phonemic awareness, phonics, vocabulary, or grammar. In teaching these lessons, Kim drew examples from her students' writing or from the books they had been reading, rather than from commercial workbooks, thus making the lessons much more meaningful and relevant to her students. Kim also used Morning Message to teach sentence expansion, showing students how to elaborate on a message and vary sentence structures. She usually included different levels of skills in one Morning Message so as to ensure that all students' needs were met and that they enjoyed the activity.

The morning Circle Time usually ended with a read aloud. For the read aloud, Kim typically used a picture book tied into a thematic unit under study or related to a current event or holiday. Before lunch, students had sing-along time, when they followed along on a chart or in a poetry book as they sang. Sometimes, the class read poems from an anthology instead. After lunch, Kim read aloud from a current chapter book and at the end of the day, she usually read a short piece, either poetry or a fable from a collection.

In Kim's class, students were given 20–30 min daily to read independently or with a peer. She used two types of choice reading time in the classroom. One is called DEAR (i.e., Drop Everything And Read), which is a rather unstructured but busy time. During this time, students engaged in many self-selected activities, such as reading alone, with a buddy, or in a group; reading outside; listening to books on tapes; re-creating stories with puppets; reading the environmental print in the classroom; reading and singing from their song and poetry books; checking e-mails; writing

letters; taking tests; doing word work with letter manipulatives; and practicing reading key vocabulary words. The second type of independent reading practice is called PARTY (i.e., Pick Anything and Read To Yourself). During PARTY time, students sat at their desks with their book baskets and whisper read. Each basket was filled with 7–10 books they had chosen, half of which must be “just right” books.

Literature discussion was also a key ingredient of Kim’s instruction. It was done at least once per week for about 40 min. One of Kim’s goals was to have every child learn to think about books and explain their thinking. Early on, she taught her students how to make connections to other books, to social events, and to their own life experiences. This oral discussion helped students improve their written responses beyond the simple “*I like this book because...*”. During literature discussion, Kim also engaged her students in talks about the craftsmanship of books, which tied in directly to students’ own writing.

Journal writing and letter writing were the mainstays of the writing program during the first half of the school year. Kim wanted her students’ writing to be as meaningful as possible. Her students had their own email accounts through which they corresponded weekly with each other, out-of-town family members and friends, high school pen pals, and class guest speakers. After Christmas, Kim began the writer’s workshop in its true form. Because her students relished the accomplishment of publishing their original work, Kim hosted an “author’s tea” at the end of the school year, inviting parents and folks from throughout the school to join her class in celebrating the students’ work.

Even Kim was amazed at her own transformation from someone who totally relied on basal readers for instruction to an independent decision maker who designed her own curriculum and instruction. When asked to reflect on her journey in the project during the second year of involvement, Kim wrote,

I’d taught third grade for nine years. When I became involved with the professional development project, I felt that I was ready for a change. I was ready to give up the teacher-centered classroom. But it was much more difficult than I had anticipated.

The Silver Burdett basal reading series had been the only reading program that I had known. I went story-by-story, used the skill workbooks, following the teachers’ edition pretty much the way it was laid out. Each week’s schedule was similar, just with different stories. Besides a library book, students did not select what they were to read about. They simply read whatever story was next in the basal. This method was very comfortable to me.

Moving away from the basal, letting students select their own reading materials was scary. At first, I felt a loss of control, and I wasn’t sure that I liked it. But ultimately, reading/writing became a much more challenging and exciting time than in previous years. We had the freedom to spend longer than a week on a particular theme or author study.

One area that greatly increased was the amount of time that my students spent engaged in reading. They read more in class and each night at home. They also discussed books at greater length than ever before. The students shared responses and questioned motifs embedded in the literature. It really was wonderful, for the students and for me!

Writing was an area that I’d always spent time on each day in class, and it was very teacher controlled. I set the daily plan myself, gave the grammar lesson to all, set the writing prompts, and gave any other assignments. All of the students worked on the same topic and at the same pace. I never would have dreamed of having each student working at a different phase of the writing process daily.

To be honest, the writing workshop was a struggle for me the first year. I found it very difficult to relinquish control. But I stuck with it! After several frustrating weeks, the writing workshop began to run much smoother. In fact, it became a favorite time of the day for many of the students and for me as well! On days when special events happened and we had to cancel it, many students were devastated. I missed it as well.

The students selected their own writing topics. To my surprise, they always found something to write about. They learned the steps of the writing process. It took time, but it was worth the effort. Even writers who lacked grade-appropriate skills felt that they were authors. Every one was valued as a writer, and growth in writing was evident.

Our classroom was a home to the basics this year—but much more! Our days consisted of reading, writing and math. Science and social studies were integrated into our reading and writing. Our days were full, but never boring! ...

I think I took a risk this year, and my teaching will never be the same.

14.4 Conclusions

In today's educational climate, many districts or schools mandate scripted programs and expect instruction and student achievement to improve. Professional development for teachers, if any, is often done haphazardly through training workshops conducted by publishers whose primary interest is in promoting their commercial programs or by "experts" who claim to help schools improve student scores in high stakes tests. These workshops often do not provide the kind of professional knowledge and support that teachers need to initiate and sustain qualitative changes in teaching practices. The professional development project described in this paper took a different approach. It recognized that the key to improving student achievement is the development of teachers who are capable of making informed decisions about their curriculum and pedagogy. The project provided ongoing support for teachers as they read and discussed professionally relevant articles and books, reflected on and shared their own teaching practices, tried out new strategies and routines, made data-based decisions for individualized instruction, conducted inquiry projects to make sense of their own teaching and their students' learning, grew as readers and writers themselves, and interacted with the greater professional community at conferences and showcases. These efforts helped the teachers develop content expertise, professional wisdom, and psychological strength, empowering them to move away from scripted instruction to a more liberating pedagogy in which they can autonomously make informed curricular and pedagogical decisions based on the needs of their students.

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Chapter 15

Teacher Education: A Question of Sustaining Teachers

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Abstract In many places around the world, early career teacher attrition is a major concern. The costs associated with teachers leaving within their first 5 years of teaching are significant in economic terms. However, there are also concerns that the rapid movement of beginning teachers in and out of teaching creates less educative school and classroom environments and, consequently, less ideal learning conditions for students. Another significant concern is the impact on the identities of early career teachers who leave teaching.

With these concerns in mind, a pressing question for teacher educators is how do we create teacher education spaces that enable beginning teachers to compose identities that sustain them in teaching. Working from a view of teacher knowledge as personal practical knowledge that is expressed on professional knowledge landscapes, (Clandinin DJ, Connelly FM (1995) *Teachers' professional knowledge landscapes*. Teachers College Press, New York) and (Connelly FM, Clandinin DJ (1988) *Teachers as curriculum planners: narratives of experience*. Teachers College Press, New York, Connelly FM, Clandinin DJ (1999) *Shaping a professional identity: stories of educational practice*. Teachers College Press, New York) have developed

This paper draws on research undertaken with Lee Schaefer, Julie Long, Sue McKenzie-Robblee, Pam Steeves, Eliza Pinnegar and Sheri Wnuk of the University of Alberta and C. Aiden Downey of Emory University.

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narrative ways of thinking about knowledge, school contexts and teacher identities (understood narratively as stories to live by). It is from this conceptual framework that we Schaefer et al. (*Alberta J Educ Res*, (2012)) have undertaken a study of early career teachers who are still teaching as well as those who have left teaching within the first 5 years. Working with early career teachers, our purpose is to better understand the stories to live by of beginning teachers and to think about how we might better sustain them as teachers. We see teacher education as playing a key part in helping to sustain beginning teachers.

Keywords Early career teacher attrition • Teacher knowledge

15.1 Introduction

Sitting in the noisy coffee shop Marie and Jean talked for almost 2 h on that late May afternoon. Marie had volunteered to participate in our study of the experiences of early career teachers (Schaefer et al. 2012). She was just ending her second year of teaching. Only a month or so left and she would be gone. She would not be back in the fall. She was heading off to teach in an international school and said that, while she was officially just taking a leave from her position, she knew that she would not be back. By all accounts she was an exemplary teacher who had been shortlisted for awards of excellence, awarded a permanent contract, and whose students had achieved well on the provincial standardized achievement tests. As they said goodbye after our conversation, Jean continued to wonder about beginning teachers. What was her responsibility as a teacher educator in all of this? Why was Marie not staying in teaching? Should Jean be concerned that she was leaving? What is our collective responsibility as teacher educators working with beginning teachers to look closely at when, how, and why the teachers we educate leave the profession?

If Marie had been a single instance of an early career teacher leaving teaching, perhaps we would not have wondered. But she is not. She is one of about 40 % of beginning teachers in the Canadian province where we work, who leave within their first 5 years. And in our semi-structured interview study with teachers in their second or third years of teaching, she, like many others, is one of the individuals we see as uncertain about whether they will stay in teaching. Marie, however, was quite clear, at least in what she said to Jean in that particular time and place. While she was leaving to teach in an international school in the next school year, she did not tell a story of herself as still teaching in 5 years. Listening to the future plans of the 40 beginning teachers we are talking with, who are still teaching across our large Canadian province,¹ appears to confirm the trend that 40 % or so of early career teachers will leave within their first 5 years of teaching.

¹C. Aiden Downey, Emory University, was the Horowitz Postdoctoral Fellow for the Centre for Research for Teacher Education and Development in 2007–2008. He continues to work with us on this project.

As we look across the transcripts of our interviews, we realize that some beginning teachers are leaving because they are not being given permanent contracts, and some are leaving because of funding cuts caused by economic uncertainty that have resulted in fewer teaching positions. But many who have contracts already, and who know they have jobs waiting for them, are also considering leaving. We see that the situation is more complex than whether or not one has a teaching position and a contract.

There are numerous studies, mostly in the US, Britain, and Australia that show large numbers of teachers leaving teaching in the first 5 years (Ingersoll 2001; Ingersoll and May 2011; Guarino et al. 2006). This high rate of early career teacher attrition raises questions for policy makers around the economic costs of teacher education, both preservice and induction, as well as the costs in terms of the quality of education in schools (MacDonald 1999; Alliance for Excellent Education 2005).

In our (Schaefer et al. 2012) review of the relevant literature around early career teacher attrition and retention, we noted the high rate of early career teacher attrition is most often seen as a problem associated either with the individual teacher or teaching context. For example, the individual factors usually identified with early career teacher attrition are burnout, a lack of resilience, and/or personal demographic features such as age, race, or sex. The contextual factors usually cited are support, or a lack of support, from those in the beginning teacher's context, salary, professional development, collaboration, nature of the context (that is, high poverty, rural, urban, suburban), student issues, and teacher education. For example, Ingersoll and Strong (2011) note the U.S. data shows that "beginning teachers, in particular, report that one of the main factors behind their decision to depart is a lack of adequate support from the school administration" (p. 202).

As we read the many studies, we wondered whether the foci of the studies were too narrow and whether the data was too decontextualized. When the research focussed on the individual characteristics of teachers, contextual factors that may have been in play were not visible. At other times, individual factors appeared to be dismissed as the study focus was on contextual factors. Rinke (2006) spoke to the dichotomy apparent in beginning teacher attrition literature between locating the problem of attrition within individuals (such as burnout) or within contexts (such as support). Even though these areas have a close relational interaction, they are, at times, treated as separate. Rinke called for future research to simultaneously inquire into both contextual conceptualizations and individual conceptualizations. As we read the studies, we noted two additional concerns, beyond those Rinke identified, with how the research frames early career teacher attrition.

Firstly, we rarely saw the particularities of each beginning teacher's life contexts, both in school and out of school. Secondly, most often early career teacher attrition was characterized as a singular event, something that happened at one moment in time. Few studies characterized beginning teacher attrition as a process unfolding over time. In work done (Clandinin et al. 2009) we discussed the possibilities of conceptualizing teacher attrition as a process that develops in, and over, time. Our metaphor of teachers standing at a bus stop waiting for their bus to come by, and transport them away to a new place, offered an imaginative way to think about the intentions of beginning teachers related to staying in teaching or leaving teaching.

The literature raised many questions for us, particularly as we realized that despite the relatively high salaries for beginning teachers in our province and the proliferation of induction and mentoring programs in local school districts,² the high rate of early career teacher attrition persisted. Talking with early career teachers in our study continued to puzzle us, particularly as many of them spoke of leaving teaching, or of not being certain they were staying in teaching, despite having permanent contracts. In what follows, based on our literature review, and our earlier studies, we offer three different approaches for the kinds of research that might offer new understandings of the experiences of early career teachers.

15.2 Reconceptualizing Research Directions in Early Career Teacher Attrition

15.2.1 Studying Beginning Teachers' Intentions in Relation to Teaching

In our review of the literature we found some researchers were beginning to explore beginning teachers' intentions (Olsen and Anderson 2007; Olsen 2008; Smethen 2007). Smethen, Olsen, and Anderson found that beginning teachers' intentions to stay in, or leave the profession, varied when examined prior to their beginning teaching or at different points in their first 5 years. Olsen looked at beginning teachers' careers in a temporal manner by inquiring into their personal and professional histories to decipher if their reasons for entering teaching linked to their intentions to stay in, or leave, teaching. Although these studies were not able to follow the participants to see if they actually stayed in the profession, it is interesting to consider how beginning teachers' intentions, as they enter teaching, may shape whether they stay in teaching.

15.2.2 Adopting an Identity Framework

In our current study, we work from an idea shared with Flores and Day (2006), that is, the idea of conceptualizing teacher attrition with a focus on teacher identity, and the processes of becoming a teacher, as identity making. This allows us to attend to both individual and contextual factors within the complex negotiation of identity.

There is a long history of work in teacher identity, which began from a view of learning a new identity, that is, an identity as teacher rather than learner. This view

²Ingersoll and Strong (2011) report that in the U.S. "the percentage of beginning teachers who report that they have participated in some kind of induction program in their first year of teaching has steadily increased over the past two decades – from about 40 % in 1990 to almost 80 % by 2008" (p. 202).

was reflected in the early work of Lortie (1975), and has been picked up again in relation to the problem of early career teacher attrition. Recently, McNally et al. (2009) discussed identity negotiation, and pointed to the importance of being attentive to how beginning teachers' identities are negotiated within the relational dimensions of the school. Often times these relational dimensions were situated within informal spaces; these informal spaces were important to identity negotiation and to daily teaching life (Lovett and Davey 2009; McNally et al. 2009).

Flores (2006) spoke to the challenges beginning teachers faced as they re-framed their identities within the cultures of their new school settings. Flores and Day (2006), in their study of 14 teachers in Portugal, worked from a notion of identity making as an ongoing and dynamic process that entails the making sense of, and reinterpretation of, one's own values and experiences. They identified three main shaping forces: prior influences, initial teacher training, and school contexts.

While we share an interest in framing the problem as one of identity making and identity shifting, we adopt a more explicitly narrative view. By this we (Clandinin and Connelly 2000; Clandinin and Rosiek 2007) mean, we understand experience as the "fundamental ontological category from which all inquiry – narrative or otherwise – proceeds" (Clandinin and Rosiek 2007, p. 38). We see experience as "a changing stream that is characterized by continuous interaction of human thought with our personal, social and material environment" (Clandinin and Rosiek 2007, p. 39). In thinking narratively, we are attentive to thinking with stories in multiple ways: toward our stories, toward others' stories, toward all of the social, institutional, cultural, familial, and linguistic narratives in which we are embedded, as well as toward what begins to emerge as we share and inquire into our lived and told stories.

Over many years, Connelly and Clandinin developed some key terms to express our narrative understandings, terms such as personal practical knowledge (Connelly and Clandinin 1988; Clandinin 1985, 1986), storied professional knowledge landscapes (Clandinin and Connelly 1995, 1996), and, most importantly for this chapter, the concept of stories to live by (Connelly and Clandinin 1999), a narrative term for identity. We understand that from a person's vantage point, knowledge and context are entwined with identity. A narrative way of thinking about identity speaks to the nexus of a person's personal practical knowledge, and the landscapes, past and present, in which a person lives and works. A concept of 'stories to live by' allows us to speak of the stories that each of us lives out, and tells of, who we are, and are becoming. This highlights the multiplicity of our lives – lives composed, lived out, and told around multiple plotlines, over time, in different relationships, and in different landscapes.

Our focus on lives in motion, life composing, life writing, has been part of Jean Clandinin's work for many years now. The work that Connelly and Clandinin began so many years ago links backward to the philosophy of John Dewey (1938), and to curriculum scholars such as Joseph Schwab (1970, 1971, 1973, 1983). In earlier work Clandinin and Connelly (1995) wrote that living an educated life involved cultivations, awakenings, and transformations. For them, cultivation is "the living and telling of life stories. But education also involves change in these stories. It involves

retelling through awakenings and reliving through transformations” (p. 158). They noted, however, that “while every cultivation, awakening and transformation is part of an individual’s education, they are not always educative” (p. 158) in the sense Dewey (1938) defined. These ideas of cultivation, awakenings, and transformation appear particularly relevant as we hear of the experiences of early career teachers.

This narrative theoretical frame allowed us a way to explore early career teachers’ experiences over time, and in context, and as having embodied, emotional, moral, and cognitive dimensions. As Clandinin, Downey, and Huber worked with the stories of the teachers who had left teaching, they suggested teachers’ stories to live by gradually shifted until they found they were no longer able to sustain who they were, and were becoming, on school landscapes. They saw their work on teacher identities as a way to understand beginning teacher attrition as a life making process. Adopting such a view offers insight into the life/career span of a teacher, with the process of becoming a teacher as linked with the process of leaving teaching.

15.2.3 Shifting the Discourse of Early Career Teacher Attrition from Retaining to Sustaining

In our current project around early career teacher attrition, we noted that the discourse, as it is currently constructed, keeps the focus on seeing the problem as one of only retaining teachers, rather than sustaining beginning teachers in a profession where they will feel fulfilled and see themselves as making a strong contribution. In recent work (Clandinin et al. 2009; Young et al. 2010; Nelson et al. 2010; Nieto 2003) there are studies of what keeps teachers teaching or what sustains them. Schaefer and Clandinin (2011) adopted this discourse in a study of two beginning teachers, Shane and Kate, in order to try to understand what sustained them in their first year of teaching. In work alongside these two beginning teachers, they learned that their stories to live by bumped against the stories shaping their professional knowledge landscapes. “As stories bumped, both Kate and Shane shifted their stories to live by in order to catch glimpses of their imagined stories...Although they both had sustaining moments that came out of these shifts on their personal and professional landscapes, it is difficult to tell if these sustaining moments will turn into stories that will sustain them in teaching” (2011, p. 291).

15.3 Studying Early Career Teacher Attrition in Order to Learn About Teacher Education

In much of the research on early career teacher attrition, we (Schaefer et al. 2012) noted the focus on individual factors and contextual factors that directed attention toward the *why* of leaving. In this generalized view, the experiences of the people involved may be stripped away, in the hopes of revealing a general solution to the

perceived problem of early career teacher attrition. We suggest the need to shift the conversation from one focused only on retaining teachers toward a conversation about sustaining teachers throughout their careers. Working alongside beginning teachers and working from a narrative conceptualization of both identity, and school contexts, provides a way to understand what sustains beginning teachers, to offer new insights about preservice teacher education, and about the kinds of continuing spaces needed on school landscapes to sustain and retain beginning teachers.

In this chapter, our question is what might we learn from such an inquiry for teacher education in preservice teacher education, in induction, and in professional development. How might we shift the work of teacher educators? Do we need to reimagine the support that is provided as student teachers move into teaching? What does it mean to live out a transition from student teacher to teacher? What does it mean to compose, over time, and in multiple contexts, a life as a teacher?

Writing about teacher education some number of years ago, and working with Clifford Geertz's (1995) metaphor of a parade to describe school contexts, Connelly and Clandinin wrote,

The changing landscape and teachers' and researchers' professional identities, their stories to live by, are interconnected. Just as the parade changes everything – the things, the people, the relationships, the parade itself – as it passes, so, too, do teachers' and researchers' identities need to change. It is not so much that teachers and researchers, professionals on the landscape, need new identities, new stories to live by: they need shifting, changing identities, shifting, changing stories to live by as the parade offers up new possibilities and cancels out others. (Connelly and Clandinin 1999, p. 128)

Later Clandinin, Downey and Huber wrote that work as teacher educators

is to create teacher education spaces for helping teachers compose stories to live by that will allow them to shift who they are and are becoming as they are more attentive to shifting social contexts, to children's, youths', and families' lives, as well as to shifting subject matter...Part of learning to compose stories to live by that are fluid is learning to think narratively about lives and about school contexts as knowledge landscapes. (Clandinin et al. 2009)

What is clear from this way of thinking about the experiences of beginning teachers is to see that the move from preservice teacher education to teaching involves transitions. Adopting a narrative view of identity as stories to live by, we see a multiplicity of transitions within the experiences of each beginning teacher. In most everyday conversations when the term transition is used, it is taken to mean leaving one place, and arriving at another; leaving secondary school, arriving at work; leaving teacher education institutions, and arriving in teaching and so on. In the everyday use of the term, transitions are times and places to be passed through. However, this may suggest to policy makers, administrators, teacher educators, and beginning teachers that you can successfully transition if you have enough skills, enough resilience, enough support. It is all a question of preparedness on both the part of the individual and the school context in which the student teacher/becoming teacher is arriving into.

However, the dictionary defines transition as a "change or passage from one state or stage to another: the period of time during which something changes"; or in

music “a movement from one key to another; modulation; a linking passage between two divisions in a composition; bridge” (Collins English Dictionary). Taking up this definition of transition makes it more evident that a transition is change or passage from one state to another, one thing or person becoming another. There is a sense that transitions are temporal, a sense of bridging between or across.

As we think about the way beginning teachers are described as transitioning into teaching, there is a sense that there are a series of steps or stages. There is little sense of lives in transition, or someone becoming otherwise. With our interest in a narrative view of understanding experience and lives narratively, we also feel uneasy with how the word transition, too often, is used to focus our attention on an event, a discrete happening, or occurrence. The dis/ease is also with the focus on the event of transition rather than on the person experiencing the transition. In the way transition is taken up in policy and practice discussions around early career teachers, there is a sense that beginning teachers should “just get on with it”, “get skilled up”, and become teachers.³ There is an accompanying sense from others that all of us who are teachers went through it, and that if you are well prepared, then you will survive. Thinking in this way also reminds us that transitions involve liminal spaces and we are troubled by how the word transition frames, or is framed by, a technical discourse and, as a consequence, shapes research, practice, and educational policy in technicist ways. A number of years ago Vivian Paley, a well known U.S. early childhood educator, spoke of transitions as the most challenging time in a classroom because children had no story of how to move from centre time to recess time or from story time to snack time, from one activity or place to another activity or place. Transitions were story-less times, she said. Clandinin, following that conversation with Paley, became fascinated by the idea of story-less times and story-less places, and about the ways people, whether children, youth, or adults, compose their lives in those transitional spaces. Clandinin wondered what stories they composed to live in such spaces. Drawing on the work of Carolyn Heilbrun (1999), Clandinin linked story-less times and story-less places to the idea of liminality.

Limen in Latin means threshold and anthropologist Victor Turner attended to the experiences of people as they pass over the threshold from one stage

³Some U.S. researchers (for example, Henry et al. 2011) link student achievement scores to early career teacher attrition. They note that, when teacher effectiveness is defined by student success on standardized achievement tests, “teachers who leave after 3 or 4 years are less effective” (p. 278). They argue that schools should more rapidly enhance teachers’ effectiveness (defined by student achievement scores) and change teacher education programs in order to increase student teachers’ effectiveness when they begin teaching. To improve student teachers’ effectiveness they suggest adding more time in schools and more training on the specific content teachers will teach. Their argument appears to be that we should quickly counsel early career teachers who do not raise students’ achievement test scores out of teaching and do a better selection of those we allow in to teacher education. Such a focus glosses over the experiences of early career teachers and appears to focus only on effective teaching in relation to student test scores. In our study we learned that beginning teachers frequently teach in many subject areas, at different grade levels, and are asked to take on assignments at the last minute. We are not certain that the suggestions of Henry et al. speak to the contexts in which the beginning teachers in our study work.

of life to another. The liminal stage or state is an in-between space, neither here nor there, and thus the form and rules of the earlier state and state-to-come neither work nor apply. In liminality, one is in an indeterminate state, what we now call a story-less state, what Heilbrun calls “in between destinies” (p. 102). It is a space of much possibility, a space where Heilbrun writes, we can write our own lines, compose our own plays and stories.

Steeves’ (2000) work draws attention to these in-between spaces as spaces between destinies, where we need to be open to imagination and improvisation. The in-between spaces are spaces of becoming, spaces open to imagination, open to our embodied sense of ‘what if’ that are embedded in our stories to live by. Transitions, understood in this way, open the possibility of change. If we stop and think narratively about transitions as liminal spaces, we see that each person is engaged in a process of, as Maxine Greene (1995) suggests, becoming otherwise.

With this as a theoretical frame, that is, thinking narratively about identities as stories to live by, and times and places of transition as liminal spaces, we have a different standpoint from which to begin to understand the experiences of beginning teachers as they leave the university and enter schools and begin teaching. It is through listening to the stories that teachers in their second and third years of teaching are telling of their experiences that we are learning of their struggles to make sense of what is happening to them, to who they are becoming as they compose their lives on their personal and professional landscapes.

15.3.1 Wondering About Preservice Teacher Education and Induction Teacher Education

We wonder if we asked student teachers to inquire into their imagined stories of who they would be as teachers, what each of them might learn about their stories to live by. What stories are they telling themselves, stories shaped by their own childhood stories, by their experiences with teachers and schools when they were positioned as children and/or parents in relation with teachers and administrators? What would become visible if each student teacher attended to how their stories might, or might not, be possible to live by when they began teaching? We wonder if we have created spaces for such autobiographical inquiries as part of preservice teacher education. We wonder if Marie had an opportunity to look back on, to inquire into, stories she lived and told on her early landscapes as she engaged in preservice teacher education. We wonder if induction programs open up such spaces for beginning teachers to inquire into their experiences in their teaching. We imagine that if these inquiries are not started in teacher education programs that the contexts in which early career teachers live might not allow such inquiries.

We wonder if student teachers imagined as they left the university as students to become teachers in school contexts that they would make a smooth comfortable transition to living a life as a teacher. We wonder if in our teacher education programs we give them a sense of promise that a smooth transition, without tensions,

change, dis/ease, is what is desired and possible. We wonder if they have a sense of staying awake to what might happen during the transitional spaces, in these liminal spaces of becoming otherwise, as they begin teaching. We wonder if induction programs work with early career teachers to help them set in place ways to deal with the interruptions, and disruptions, in their stories to live by as they begin teaching. We wonder if there are people who come alongside to remind beginning teachers to attend to their lives both in and out of schools, to stay attentive to relationships that sustain them, and to attend to their needs for healthy living such as rest, food, and physical activity. As one teacher told us, "I know that there is a balance for me, that was the hardest part, I'm expected to coach four teams on top of teaching all these different subjects...there were some points this year where I was just ready to go 'This is it, I can't do this.'". In the stories that we are hearing, the early career teachers often tell us that, until their health or relationships totally disrupt them, they frequently work to the exclusion of attending to other aspects of their lives.

We wonder if teacher education programs portray a teacher's personal life and professional life as easily separated; a portrayal with a sharp and discernible divide between their lives in school, and their lives out of school. We wonder if they are awake to how their lives outside of school will be shaped by their lives in school. As Kate, one of the beginning teachers in Schaefer's study described, she realized how the tensions on the school landscape were creating tensions on her personal landscape. "She was not who she wanted to be on either landscape" (Schaefer and Clandinin 2011, p. 286). In the stories we are hearing, the early career teachers are experiencing disruptions in their family lives, their personal landscapes. One beginning teacher spoke of needing to make appointments to spend time with her children because otherwise she did not have time to be with them.

We wonder if teacher education programs create a sense of seeing a teaching life as an ongoing act of improvisation, one in which there is no certainty, a life lived at least to some extent in liminal spaces of uncertainty. We wonder if somehow teacher education programs allow beginning teachers to foreclose their capacity to wonder about their work of teaching and of becoming teachers. We wonder if their teacher education programs allow them to see the process of becoming a teacher as a gradual one stretched over time. The process of becoming is an ongoing process, a process that Maxine Greene described when she said, "I am what I am not yet."

We wonder if teacher education programs discount the emotional, moral, and physical work of teachers in order to focus on the cognitive and organizational work. What might it mean if in teacher education programs we acknowledged the complex layers of teaching which link identity making with teacher knowledge and teaching contexts? What happens when the focus of teacher education is only on pedagogy and subject matter? What is ignored in those programs of teacher education? With only a focus on pedagogy, what remains hidden from view? As the beginning teachers are telling us, they are learning how much of teaching is work outside of what they see as teaching in the classroom such as Individualized Program Plans, supervision of clubs and activities, coaching, preparing school-wide performances on top of their meetings with parents, colleagues, staff meetings, professional development, induction sessions, marking, grading and report cards.

15.4 Ways Forward

We have not come to any easy solutions to what is a persistent and recurring problem with huge costs to teacher education institutions, school districts, beginning teachers, children and families. We hope what we are engaged in with our conversations with early career teachers who are still teaching will enable early career teachers to add their voices to the conversation that has, for too long, not heard them speak of their experiences. We think that the stories of early career teachers, such as Marie, need to be heard in order to begin to more fully engage not only the reasons for leaving but the experiences of early career teachers as they become teachers. Perhaps in this way their stories can better inform the ways forward for preservice and induction teacher education.

As we think about what we are learning about preservice teacher education and induction programs in our conversations with these early career teachers who are still teaching, we are reminded of the importance for teacher educators and those who work in schools to be attentive to the shifting knowledge landscapes in order to work with early career teachers to create spaces for pushing back against dominant narratives that narrow the spaces for teachers to engage in thoughtful and educative ways with children, youth and families, “spaces that sustain them in teaching and living the kinds of respectful relationships with children, youth, and families that they imagined” (Clandinin et al. 2009, p. 12) when they chose to begin to live their lives as teachers.

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Chapter 16

Professional Learning as a Moral Drive from Critical Discourse

Ora Kwo

Abstract This chapter builds on comparative studies based on my edited book (Kwo O (2010a) Teachers as learners: a moral commitment. In: Kwo O (ed) Teachers as learners: critical discourse on challenges and opportunities. Hong Kong: Comparative Education Research Centre, The University of Hong Kong and Dordrecht, Springer, pp 313–333) which summarizes some challenges and opportunities in the major thrusts of *what*, *where* and *how* teachers can learn. While considering questions about the values and purposes underlying the push for teacher learning, I have found it necessary to reach beyond institutional and sectoral boundaries to re-visit the fundamentals of education in a quest for the meaning of morality. This chapter presents a broadening vision of professional learning as a moral drive that can be cultivated from critical discourse over sustainability of human values.

Keywords Teacher development • Teachers' sustainable learning

16.1 Research Perspectives on Teachers as Learners

On my entry to a university career in teacher education some decades ago as an experienced school teacher, I was grateful to a mentoring colleague who was willing to listen to my queries about the impact of our curriculum design for initial teacher education based largely on the model of disciplines in foundations of education. I respected him for his established view that, as teacher educators, we should

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not see ourselves holding responsibility for teachers' choices in their classroom practice. Rather, he suggested, we could only do our best to educate student teachers' minds with theoretical inputs.

However, my respect for this colleague did not over-ride some of my concerns about the gap between theory and practice. I found myself embarking on a very different track in pursuing my role as a teacher educator in a quest for an alternative vision from learning about teaching. Accepting that I was not responsible for my student teachers' choices in their teaching stances, I nevertheless chose to be responsible for what I knew as much as for what I did in seeking integration between theory and practice. While reviewing my own path of research and teaching, I rediscovered the course of my professional pursuit. My research interest has been guided by my curiosity and desire to understand issues related to teachers as learners rather than teachers as teachers. Joining other scholarly and professional associates who care for the liveliness of teachers' learning, it has been exciting to trace some strands of critical discourse in the literature on professional learning.

A seminal discussion on theory and practice for professionals was presented and developed by Schon (1983, 1987, 1991). He outlined widespread crises of confidence in professional knowledge and professional education as rooted in the prevailing epistemology of practice, namely technical rationality. He queried the assumption underlying much of the research that held practitioners as instrumental problem solvers who can select technical means best suited to particular purposes. In this light, he envisioned new premises in the artistry of professional practice. Professional expertise, he argued, does not, should not, and ultimately cannot depend on the application of general theoretical knowledge to particular problems. Instead, he declared, professional expertise must depend on experience-based knowledge. Schon's 'reflective turn' has been associated with a major alternative approach to research, focusing on the subtle and implicit artistry of professional practice.

For the teaching profession, Stenhouse (1984, p. 71) also critiqued a narrow view of research as science for informing and improving practice, and emphasized the significance of artistry in teaching:

All good art is an inquiry and an experiment. It is by virtue of being an artist that the teacher is a researcher. The point appears to be difficult to grasp because education faculties have been invaded by the idea that research is scientific and concerned with general laws.

Asserting a view of teachers as focus of research and development, he observed a 'teacher-as-researcher movement' in Britain from an alliance between some universities and teacher groups in breaking the tradition of 'psycho-statistical and nomothetic paradigm' on educational research. Researchers in this alternative tradition observe, describe, and illuminate the things teachers actually say and do. According to this view, improving education is not about improving teaching as a delivery system, but rather about the desire of the teacher-artist to improve practice. This visualization of a movement was also recognized by McKernan (1996, p. 6) in his identification of action research as an alternative paradigm of social inquiry in the research literature which aspires to bridge the gap between theory and practice, and which can be presented as various typologies and models.

However, even within the action research frame, the theory-practice gap is problematic because it assumes that what is thought, what is represented, and what is acted upon, can be delineated as a series of procedures that can be interpreted separately. In practice, they are all intertwined aspects of lived experiences. Probing into the way that action research is disseminated as published texts where research *practice* becomes known from the research *product*, Carson and Sumara (1997, p. xvii) queried the missed connections between the researcher and the subject of inquiry, and argued for clearer recognition of the complex and messy nature of action research as lived experiences. Participation in educational research requires more of the researcher than the application of research methods, as the investigation both shapes and is shaped by the researcher. Research is therefore not something that is *done*, but included in the researchers' lived experiences. The question of "How does one conduct educational action research?" is thus replaced with the question "How does one conduct a life that includes the practice of educational action research?" With this alternative question, *who the researcher is* becomes completely caught up in *what the researcher knows and does*. Essentially, the knowledge that is produced through action research is always knowledge about one's self and one's relations to particular communities. The interpretations are always in a state of becoming, and can never be fixed into predetermined and static categories such as theory-practice dichotomies. Associated with an action-research paradigm maturing through critical interpretations from different traditions, I am ready to seek a critical stance in a state of engaged reflections to reach beyond the initial state of understanding.

Related to this hermeneutic approach to consider action research are contributions on the nature of teacher inquiry (e.g. Clarke and Erickson 2003) and teacher educators' self-study as scrutiny of an individual's pedagogy in teaching about teaching (e.g. Loughran and Northfield 1996; Hamilton and Pinnegar 1998). Since the 'reflective turn' advocated by Schon (1983), teacher inquiry as a form of research has come a long way. Teachers are increasingly involved in inquiry into their own practice, and have contributed to the extensive teacher inquiry literature which, as observed by Clarke and Erickson (2003, p. 1), "not only attests to its importance for understanding the complex world of schooling but supports our contention that it is one of the defining features that distinguishes teaching as a form of professional practice and not as labour or technical work." The corollary is that, "without inquiry, practice becomes perfunctory and routinized" (Clarke and Erickson 2003, p. 5). Teacher inquiry usually emphasizes the initiating focus and the impact on changes in the teachers' own professional practice. It is also significant as an emergent discourse in communities of educators when the inquiry practice in private is conveyed for public understanding, as well as for critical scrutiny amongst professional peers. Inquiry, as embedded in professional practice, becomes most meaningful as a dynamic process of *knowing* in the developing discourse. Among various research communities in the teacher-as-researcher movement, an alternative pathway for theory-practice integration has emerged as a learning discourse for resonance to voices from research communities on teacher learning. In different cultural contexts and in varied research and professional experiences, inquiries into teachers as learners can be interpreted in the broader discourse of the related literature.

16.2 Teacher Learning Amidst Challenges

Deep meaning of learning can be reached against the background of numerous challenges. As such, challenges and opportunities become inseparable entities of the critical discourses for teachers working not only in schools but also in universities including in faculties of education as teacher educators. This section draws on comparative perspectives to address questions about what, where and how teachers learn.

16.2.1 *Orientations to Teacher Learning*

The five images of research and teacher education by Marilyn Cochran-Smith and Kelly Demers (2010) provide a useful frame for understanding orientation to teacher learning. With each chosen image, a reality can be created as self-fulfilling prophesy. It appears that the three images of research as ‘weapon, report card and warranty’ in the American context share a common perception of teachers’ inadequacy in the battlefield of competing powers that determine pathways to teacher qualifications and policy options. The ‘reality’ for teachers, under these images, seems simply to live within the battlefield as conformists to the political scene of the day where ‘learning’ is about conforming to the system and survival in the changing climate. By contrast, the images of research as ‘foundation and stance’ pose challenges to university-based teacher educators for teacher preparation with a knowledge base, and call for a culture shift that teacher educators become learners rather than traditional authorities in curriculum delivery. With a collegiate-based inquiry stance, teachers and teacher educators are engaged in multiple risks of not reaching consensus and certainty, and instead learn about questioning existing practices by making their struggles and learning accessible to others. Teacher learning therefore requires co-construction of perception of problems and changing understanding of long-established assumptions across the professional lifespan.

In a similar national context, teacher learning is viewed as pertinent to the teaching profession that will fundamentally shape the future of the world. Robert Yinger (2010) reviews the ambitious reform initiatives for the teaching profession and limitations to the concerted effort to establish national standards. Despite the growing consensus on how children learn and how best to teach them, much of such work was challenged by powerful conservative market-oriented policy voices that define the problems of education as due mainly to self-interested bureaucracies in schools and universities. In the USA, deregulations and competition in a free market system were recommended as solutions, as indicated in the No Child Left Behind Act. Querying the effect of a professionalization strategy based on professional knowledge and the internal professional control of standards, Yinger sounds an alarm about the federalization of a narrowly drawn school performance paradigm that measures a narrowly-drawn skills-based curriculum. Lessons are drawn from other professions, and professionalism is described as a cultural and political development rather than a collective mobility of professionals as agents of scientific change and technical rationality in modern

society. Yinger asserts that professional education must break beyond technical preparation to reach core values in nurture of professional character. He then advocates a renewed professional ethic emphasising social responsibility and public good for the traditional social and cultural communities being undermined by the extremes of consumerism and elite professionalism.

Amidst the vibrant documentation for curriculum reform initiated by the Hong Kong government since the change of sovereignty in 1997 came the challenge to teachers for a move towards a learning profession. Elsewhere I have presented a case of preparing student teachers for a move towards the learning profession in Hong Kong (Kwo 2010b). Teacher learning for the teacher educator is initially about opening up a space for co-construction of understanding with student teachers in a fundamental shift of relationship. Despite evidence of student teachers' responsive capacities for engaging in the inquiry as a community through the progressive learning dialogues and the constant practice of 'students-and-teachers evaluation of learning-and-teaching' (STELT), deep learning for the teacher educator comes with dissonance of data from the long-standing system of students' evaluation of teaching (SET). Teacher learning involves interpretation of dissonance from the latent knowledge and determination to accept complexity of the change process, given that a professional is held accountable for both the existing system and the call for reform. The commitment to the quest for improving the quality of teaching and learning may be considered in the light of Robert Yinger's concern for professional education that must reach core values in nurture of professional character.

Overall, the critical discourse invites reorientation to understanding problems that can be identified from the ways that challenges are observed in different contexts. Teacher learning can be based on unquestioned conformity to traditional culture and policy-driven systems, but equally, can be open to questioning validity of systems and initiating transformation. Whilst assessment systems challenge professional practice as external regulatory power, they can also be challenged when teachers engage in critical inquiry into new territories beyond the existing mindset and boundaries, from which to develop capacity to define professionalism. The deficit and hierarchical assumptions for teacher learning in an individualistic mode can instead be replaced by a sense of community where professional relationships are built and commitment to professional ethics supersedes elite professionalism. Instead of being confined by existing perception of problems as world-receivers, teachers can work on a new vision for re-defining problems and pursue collaborative opportunities to make differences as 'world makers'.

16.2.2 Locations of Teacher Learning

The location of teacher learning is found in innovative curricula for pre-service teachers with interflow of school and university settings, and yet the less visible and non-formal settings also provide channels for our understanding in a different light.

Cheng Man-Wai et al. (2010) recognize teachers' own classrooms as powerful settings for learning, and argue that artifacts of videotaped lessons can bring teachers' classroom practices to other locations for collaborative analysis. Using videotapes of exemplary teacher practitioners, teacher educators can create an inquiry environment to challenge and mediate prospective teachers for reflective practice. Through induction of self-regulated inquiry for pre-service science teachers with stimulated reflections on video material, the fast-paced complicated world of classrooms can be better understood in a secure and personal setting for private critical inquiry. University-based learning can be enriched with the use of artifacts from the practitioners' world and, in turn, contributes to professional learning beyond the formal university setting in practitioners' individual classroom contexts. When experiences are turned into teacher education curriculum, teacher educators necessarily get *involved* in understanding the complexity of teaching and learning rather than leaving student teachers' practice in schools with some form of supervision. In this case, they look at video as an educational tool for mediating student teachers' inquiry from experiences in former schooling, observation and reflections, to which they are actively engaged in collective interpretation. The locations of learning vary from student teachers' independent and peer inquiry tasks to teacher educators' collective focus in nurturing a safe inquiry environment, when experiences with observation of classroom teaching is no longer hostage to real life and real time.

The issue of learning environment is considered by Alex Moore (2010) as situated within the practitioner's ongoing philosophical and pedagogical repositionings and relocations in the face of their unfolding professional experience and expertise. Emerged principally from three related research projects involving the professional learning and development of teachers is an articulation of the tensions between teachers' own preferred pedagogies and those from externally-imposed education policies or practical constraints such as class size and student dispositions. Such tensions, as argued by Moore, often result in positions of compromise. By revealing that learning as readjustment is made within the context of various messages telling the teacher what to do in order to be deemed to be good at the job, Moore presents an argument for practitioners' reflexive stances toward their practice.

Such stances demand critical reflection not just on classroom experience itself but on the tensions and interactions between our 'private' and 'professional' selves, including understandings of reasons leading to experiences. Such reflexivity for repositionings finds a parallel in the discussion by Lily Orland-Barak (2010), as she reveals her understanding of mentors learning to participate in competing discourses of practice. Described as 'lost in translation', mentors have to locate their learning in the gaps between expressed beliefs and realized actions, and between the bottom-up discourse of dialogue in favor of collaboration in learning espoused by academic professional development orientation and the top-down discourse geared toward instructions for pupils' achievements. Just as the beginning teachers in the studies by Moore, mentors, as observed by Orland-Barak, experience dissonance and a sense of emotional burden under the influence of many players in the system. Through managing competing dialogues of practice, confronting controversies and dilemmas, as mentors are engaged in the internally persuasive discourse, the links

between mentoring and teaching works are to be established. Both Moore and Orland-Barak shed light on the location of teachers' learning as individuals in reflexivity and as members of the profession participating in competing dialogues for the chosen re-orientation to meet the complex challenges.

The concern for such an internal environment and open dialogues is expressed by Ying Dan-Jun et al. (2010) in their pursuit of self-understanding. In the context of joint effort for curriculum innovation, they learn from telling stories of their experiences. On stories from formal classroom settings, authentic learning can actually take place in non-formal settings of the kitchen – the communal area for family life and a place for free intensive exchange of thoughts. Such an engaging professional inquiry is vividly integrated into an everyday life of cooking, eating and washing up, from which teachers embark on the journey to understanding their identity and becoming aware of their teaching philosophies, the congruence or lack of congruence between beliefs and practices. Teacher learning, therefore, does not just take place in the context of practice: it is in the safety and authenticity of sharing stories lived and told that the language in recounting and reflecting on experiences can be re-visited. Such safety is signified by the bonding over the sustainable learning discourse where no one ever silences the other's voice.

The locations of teacher learning reveal the challenges of established routines and systems, multiple tracks of inherently conflicting discourses, and authoritatively imposing theories and assumptions that can threaten to reduce teachers' learning space to formal settings in structured modes. Yet it is precisely in confronting these challenges that the committed educators have brought alive the opportunities for breakthrough. The mutual echoing from different national settings demonstrates a global space for teacher learning to be understood. Together, the authentic professional stances emerge against the background of the often simplistic and officially sanctioned discourses of teacher learning by taking into consideration of the inner voices of teachers, where students are coming from, and the way that bonding takes place over learning. Highlighted is not just the desirability, but the feasibility of teacher learning when they break beyond institutional and mental boundaries to claim new focuses and embark on new paths.

16.2.3 Approaches to Teacher Learning

Given the resonance on the locations of learning beyond structured boundaries, there is considerable attention to scholarly re-construction of professional experiences to depict the ways that teachers learn.

Warren Mark Liew (2010) offers an insider's perspective of the complex realities of teachers' work, by presenting his memories as a participant-observer drawn from a personal 'database' of journal entries, field notes, official documents, email correspondence, newspaper articles, interviews and remembered incidents, all gathered over 5 years of teaching. Through imaginative accounts of a fictitious young teacher who is committed to learning, alongside review of related literature, he reveals a

process of making sense of the meanings embedded in the flow of experiences which carries tension between competing and conflicting demands. While the literature, as cited, shows burdensome expectations of teachers, Liew has vividly demonstrated a critically reflexive approach to learning, through a bold confrontation of vignettes of how the young teacher emerged through the siege in daily battles – a ‘flawed’ but realistic heroine who will go on with the struggles to identify professional priorities beyond the escalating accountability and performance pressures. Could a genuine sense of professionalism be embedded in the struggling response to the tall orders and high banners of educational reform? Liew’s fiction can be well linked to Alex Moore’s ‘working and learning under pressure’ and Lily Orland-Barak’s ‘competing discourse of practice’ for its realistic depiction of the struggles in a Singaporean context. It also provokes readers to make their own interpretation of whether such struggles in teacher learning can be commonly found in other cultural settings.

A major struggle for teacher learning is about living for beliefs in realities that do not readily bring a sense of congruence. Ruth Gorinski et al. (2010) provide another angle to view struggles within an institutional framework in which mentoring was organized as a mechanism for developing a community of reflective practitioners. As a form of self-study, the data collected by the teacher-researchers from colleagues in a non-hierarchical relationship reveal the learning experiences of new teachers who uncover the barriers to realizing the potential of mentoring in building practitioner capability. Instead of engaging in the expected relationship for critical reflection of practice and advancing mutual development, the new teachers can learn about perpetuating current practice within functional discourses and the concern for the practical outcome of a secure summative probationary assessment. The teacher-researchers learn that ambiguity surrounding mentoring roles and functions can result in task-oriented relationships that reinforce existing structures. Living between beliefs and realities, teachers can learn about the unintended, despite the well-intended institutional policy. Yet, to continue with the struggles without giving up the beliefs, teachers may query the nature of commitment. Should the institutional claim of commitment to mentoring practice be only a matter of implementing the intended plan with rational justification and simplistic anticipation? Could the plan have involved an institution-based collective confrontation of the reality of historical, contextual and structural practices not conducive to a discourse of mutuality and reflective praxis? Given the innovative attempt of an institution that reveals discrepancies between policy intention and practical reality, the findings speak to the struggles not exclusively owned by teachers but shared by all committed to learning.

Michael Aiello and Kevin Watson (2010) add another dimension to understanding teacher learning from frontline educators who tend to be subjects of research rather than the actual voices. They report on a program of continuing professional development as partnership between a university and a sixth form college in perseverance with the concepts of ‘teachers as action researchers’ and ‘communities of practice’. The gap between beliefs and reality and the question about the nature of commitments, as revealed in the study by Ruth Gorinski and associates, is actually

the core business of the headteacher who is actively involved in the design and delivery of the partnership program, supporting the teaching staff to acquire postgraduate qualifications. Designed with formal inputs from both the university staff and the headteacher to engage the teacher participants in action research projects of realistic issues in their college for formal presentation to the college governing body, the program accommodated the roles of the principal as teacher, assessor and chief executive. The concerns for academic freedom and internal politics were addressed with a firm positioning of the principal at the heart of learning in actualizing the belief in turning the college into a learning organization. The principal's involvement in creation and maintenance of a culture of openness and critical inquiry provided the significant support needed by the teachers, as evidenced in the evaluation by teachers as insider researchers. The nature of partnership in learning is elucidated – between university academics and the headteacher, and between the headteacher and the school teachers – as a tool of empowerment for teacher learning. It also sheds new light on commitment as a key to understanding challenges and opportunities.

A review captures that learning requires perseverance in going through the struggles, regardless of the physical locations. By considering different modes of challenges that teachers are facing, it is revealed that the initiatives of teachers as learners primarily depend on how teachers perceive these challenges. Equally critical is what they learn from the experiences of handling these challenges. Subtly and yet most significantly, it is often not the immediate outcome of the day-to-day performance that matters: teacher learning is about the processes of teachers' engagement to take challenges as opportunities for learning, with thoughtful reconstructions within their inner worlds to address the disequilibrium raised by the challenges. In this process, language is a vital tool for making explicit what is implicit. It is through the actualization of teachers' voices that learning is empowered as *recognised* struggles amidst internal and collegial dialogues. This observation further challenges the conventional mode of training for teacher development that may have disregarded the latent power of teachers to learn, the significance of the struggles, and the deep meaning of support needed.

16.3 Resonance on Challenges and Opportunities

Following this review of the major thrusts of the critical discourse, I can capture the converging tone that can metaphorically be taken as resonance of professional voices. With the initial focus on teachers as learners, a broad view of the teaching force emerges. Though teachers as frontline educators are expected to be change agents in professional response to policy development, the teaching force comprises educators from different sectors who must take a collective responsibility to confront complex challenges. Through the shared value and focus on learning, opportunities to tackle challenges emerge and consequently the desirable changes take place. The changes may not simplistically mean discovery of immediate solutions to the perceived

problems, but rather they are embedded in the changes of perception with informed understanding, and the motivation to seek further understanding.

Rather than holding teachers accountable to implementing top-down directives or transmitting inputs of knowledge from external authorities, this collection of voices from cross-national and cross-cultural settings reveals contextual and historical burdens that teachers should not carry in isolation. Instead, changes are grounded in sustainable processes of critical discourse in the space created by educators as learning partners. Globally, the discourse over this learning space must be rooted in deep values and belief in education as the hope for shaping the world. Experiences hold a significant part in the creation and sustainability of the learning discourse. As a form of co-construction of cognitive, social and affective experiences, grounded in actions of inquiry, the learning carries openness in a continuing quest for higher goals.

Such a discourse track, however, is not so visible in the mainstream practice, which is characterised by the gaps between university discourse and school discourse, and the perpetual conflict between the push for changes at the conceptual level and the pull of inertia at the practical level. Such a reality does not necessarily encourage teachers to become learners who are constantly engaged in critical inquiry, as the immediate concerns are more likely about going through routines in task-completion for conformity to the workplace traditions.

16.4 Engagement in a Moral Drive

As I listen to the convergence of viewpoints from the discourses, questions bubble in my mind. Why do some teachers persevere as learners, whereas many other teachers merely engage in routinized practice? What are the motivations for and consequences of committed learning? Personally I know of former graduates of teacher education programmes who chose to work part-time because, as they told me, it is difficult to maintain the learning pace with a full-time teaching job. It is worth seeking the fundamentals of education to understand the motivation of teachers who seek to be learners. Paradoxically, learning may not be an immediate concern in the push for most reforms, if the goal is conformity to set agendas without sustainable and genuine focus on educational aims. While educational reforms have been going on for decades, the quest for morality has long been articulated against the background of a managerial view of education. Just as Greene (1978, p. 60) pointed out:

Educators and educational reformers have been continually tempted to test the rationality of what they have done by the effectiveness or efficiency of what has been accomplished, not by looking critically at their presuppositions. They have (partly because of their felt obligations to school boards, taxpayers, and the like) looked towards social consequences in their efforts to justify what has been done in schools. They have seldom looked at the question of whether their actions were intrinsically right. Facts have been easily separated off from values; decisions have been made on grounds independent of moral propriety.

In her wide-ranging literary allusions for the landscape of learning, Greene described the human tendency to “perceive everyday reality as given – objectively

defined, impervious to change... It presents itself to us as it does because we have learned to understand it in standard ways” (p. 44). This philosophical observation seems to have captured the pattern of human activities which have remained consistent over decades. The human weariness of a sense of powerlessness in being programmed by organisations and official schedules is common until the question ‘why’ arises, which may accompany a perception of the insufficiencies in ordinary life, and often reform requirements external to teachers as agents without addressing such human tendency can only add to the weariness. Arguing that reality is to be interpreted in the wide-awakeness of our moral life, Greene pointed out that only as people learn to make sense of what is happening can they feel themselves to be autonomous. By contrast, the opposite of morality is indifference – an absence of concern when individuals are likely to drift on impulses of expediency. On morality, she further elucidated (Greene 1978, p. 49):

To be moral involves taking a position towards that matrix, thinking critically about what is taken for granted. It involves taking a principled position of one’s own (*choosing* certain principles by which to live) and speaking clearly about it, so as to set oneself on the right track... I rather doubt that individuals who are cowed or flattened out or depressed or afraid can learn, since learning inevitably involves a free decision to enter into a form of life, to proceed in a certain way, to something because it is right.

Without attending to the moral dimension of learning, it seems natural for reforms to be perceived by teachers as tightening of behaviour and focus for accountability to predefined competencies and skills, or testing scores of students, even though such control may not be the intended outcome. The acute difference amongst teachers, as suggested in Greene’s re-interpretation of reality, is situated in their readiness to enter a form of life. From my observation, Greene’s elucidation has wide applicability across time and space. The committed educators are invariably engaged in the quest as a moral endeavour regardless of the contextual differences. Such ‘liveliness’ in the quest resembles what Greene (1978, p. 49) described as wide-awake individuals:

They are not just creating value for themselves, they are creating themselves; they are moving towards more significant, more understanding lives.

Perhaps there is a deep question about whose responsibility it is to make it possible for all teachers to claim this life of morality. To this, I see connection to the queries raised by Pring (1999) concerning the neglected educational aims, as he critiqued what appeared to be a form of words (e.g. ‘moral, spiritual, personal and social development’) to counterbalance the pursuit of economic and social utility as the driving force behind reform documents. In reforms without the spirit of morality, teachers are naturally doomed to the motions in conforming to the requirements of the day and losing touch with the life of morality. In his alert of a language of education being borrowed from the language of management, he argued for a moral commitment to educational aims (pp. 159–160):

We need to question whether, in the pursuit of greater standardisation of educational output, the language of management and control, whereby efficiency can be gauged, is adequate to the moral purposes of education... What should be at the heart of the educational process can receive no recognition in the language of management. The language of efficiency is

not that of moral struggle, moral deliberation, the searching for what is valuable, the gradual and often faltering introduction to traditions of thought and feeling. Indeed, such a moral language challenges the very managerialism and control with which the pursuit of effectiveness is associated.

In re-visiting aims of education as involving the kinds of learning which pertain to the learner living a more distinctively human life, Pring (1999, pp. 62–63) iterated a view of the physical, social, aesthetic and moral worlds as constantly evolving through criticisms, new discoveries, and fresh insights. This progress, he suggested, was based on the articulation of purposes only half realised, and was far from being a body of knowledge to be acquired or a set of competencies to be gained. He emphasised that education is the initiation into a conversation between generations of mankind which do not work towards a pre-specified conclusion as the end is not known in advance. A good conversation, he added, transforms the very purpose as it is being pursued. Viewed in this way, education is essentially a moral activity – the introduction of young people to a world of ideas through which they come to see (tentatively, provisionally) what it is to be human, to live a distinctively human life, to aspire to a form of life which they believe to be worth pursuing.

16.5 Critical Discourse with a Global Vision

This view of education as a moral development in humanity can be associated with the vision of ‘learning to be’, recognised in a UNESCO endeavour in the early 1970s (Faure 1972, p. vi):

The aim of development is the complete fulfilment of man, in all the richness of his personality, the complexity of his forms of expression and his various commitments – as individual, member of a family and of a community, citizen and producer, inventor of techniques and creative dreamer.

This was later developed by UNESCO’s Delors Report (1996, p. 95):

Individual development, which begins at birth and continues throughout life, is a dialectical process which starts with knowing oneself and then opens out to relationships with others. In that sense, education is above all an inner journey whose stages correspond to those of the continuous maturing of the personality.

Of the four pillars of education identified in the Report – learning to know, learning to do, learning to live together, and learning to be – the Commission (Delors 1996, p. 86) recognised that formal education has traditionally focused mainly on learning to know and to a lesser extent on learning to do. The two others are to a large extent left to chance, or assumed to be natural products of the first two. With a broad encompassing view of learning, as recommended by the Commission, education should aim to enable each individual to discover, unearth and enrich his or her creative potential to reveal the treasure from within.

This global quest for aims in education requires going beyond an instrumental view of education to one that emphasizes the development of the complete person.

Essentially, education is to engage individuals in learning to be. Despite the explicit articulation at the global level on balancing the aims of education, the reality tends to be dominated by economics linked to the concerns of social efficiency (Rizvi 2007, pp. 87–89). Despite the market dynamics in the organisation of education around a view of education as a private good and the linkage of the purposes of education to the requirement of the global economy, it is possible to understand the facts of global interconnectivity and interdependence in radically different ways, with implications for rethinking educational aims that require educators to engage with transformations brought about by developments in information and communications technology in ways that do not prioritize the economic over all other human concerns. Rizvi (2007, p. 89) concluded that it is possible to imagine and work with an alternative form of globalisation that demands not ready-made technocratic solutions to problems of education but instead opens dialogue across cultures and nations. This perspective, with which many other people would identify, involves viewing education as contributing to both public and private goods, to both social and economic ends, and to both national and global concerns. It also encourages wider consideration of how relations within a community and across the world might be constituted.

Interestingly, the importance of conversation, as raised by Pring and Rizvi, was also observed by Greene (1978, p. 69) several decades earlier:

... liberating (students) to understand that the social reality they inhabit is a constructed one, educators ought to avoid, if possible, the high-sounding voice of expertise. They and their students might well enter a conversation with one another, the kind of conversation that allows a truly human way of speaking, a being together in a world susceptible to questioning.

With the convergent vision about preparing the younger generation for learning to be, teachers who aspire to be educators are morally engaged in development from the tradition of almost exclusive focus on learning to know towards greater degrees of autonomy for learning to be. They must achieve what Greene identified as wide-awakeness (as discussed earlier) to think about what they are doing and to take responsibility to be involved in the conversations in various domains and contexts. Essentially it is through teachers' own learning to be that students are inspired to engage in learning to be, within and beyond schooling.

16.6 The Quest of Education for Sustainable Development

In 2009, representatives of UNESCO member states gathered in Bonn, Germany, for the World Conference on Education for Sustainable Development. The call for action is well captured by paragraph two of the Declaration from that event:

A decade into the 21st century, the world faces substantial, complex and interlinked development and lifestyle challenges and problems. The challenges arise from values that have created unsustainable societies. The challenges are interlinked, and their resolution requires

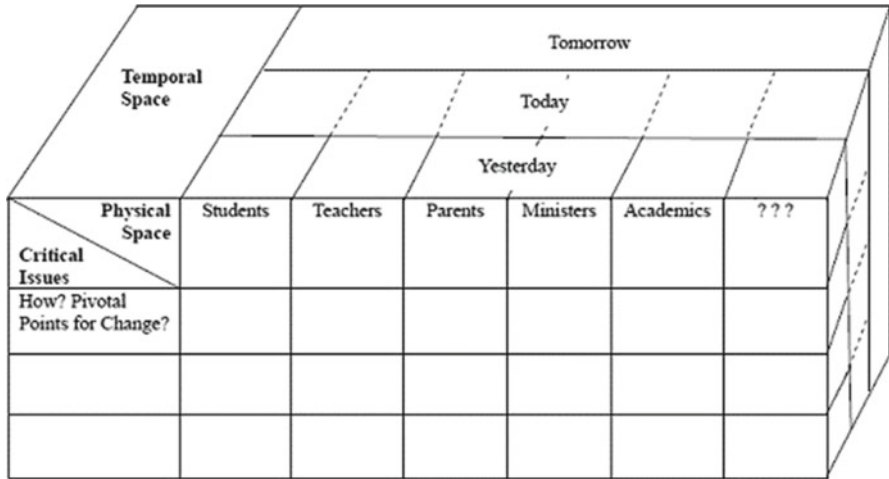


Fig. 16.1 Breaking boundaries for partnership: visualizing the space for inquiry (a)

stronger political commitment and decisive action. We have the knowledge, technology and skills available to turn the situation around. We now need to mobilize our potential to make use of all opportunities for improving action and change.

This statement calls for changes in values so that sustainable development can be upheld despite complexity of challenges. At the same time, the statement recognizes the need for policy commitment to actualize potential for desirable changes. From a review of global discourse on teacher education for sustainable development (Kwo 2011), I observed that UNESCO can play a strategic role to nurture leadership forces by creating spaces for inquiries among global communities where teachers can engage in partnerships of various modes to identify and address pivotal points for change. Primarily, such global spaces are visible beyond structural and institutional boundaries, as emerged in conferences. By giving attention to a diversity of voices from across geographical/income-level/social/cultural variations under a unified sense of global awareness, such spaces can be turned into an inquiry force, as conceptually illustrated in Figs. 16.1 and 16.2.

The two figures offer concepts of temporal and physical space for diversity of voices from which to develop policy and partnership in both action and inquiry. Goal-setting becomes the vital part of the dynamics, to be expressed as ‘critical issues’ regarding how they can be addressed as pivotal points for change. Such a framework places emphasis on the discourse of inquiry in a global community, with an assumption that leadership for carrying teacher education for sustainable development (TESD) demands cross-cutting strategic thinking not just confined to those involved in teacher education. How would participation beyond boundaries be ensured? The constraints linked with structural arrangements, time and information management need to be recognized, and the ways of overcoming them should be pursued in a sustainable manner. The most challenging aspect of partnership is situated in the breakthrough from structural boundaries.

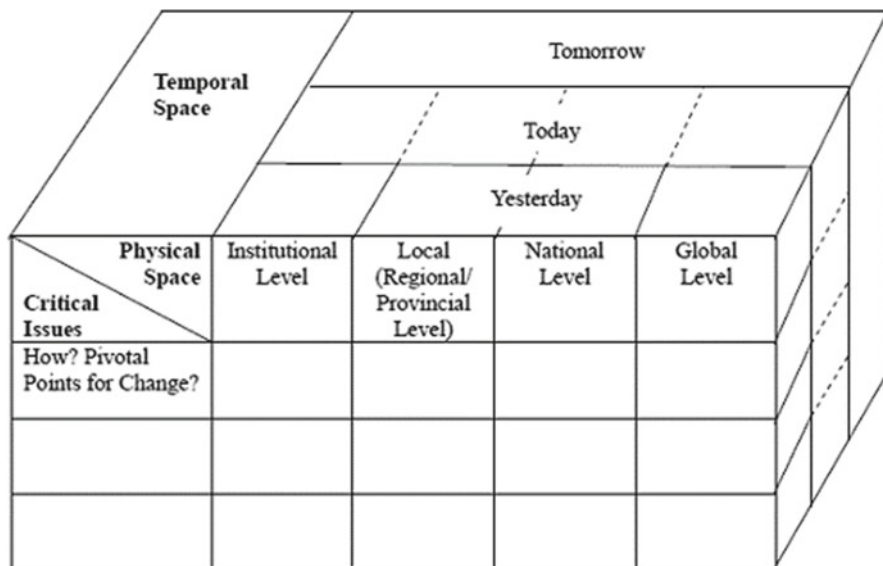


Fig. 16.2 Breaking boundaries for partnership: visualizing the space for inquiry (b)

These visual images of cross-cutting inquiries place sustainability in the temporal space which avoids dichotomy between success and failure in simplistic terms and minimizes a deficit view by giving recognition of progress through strategic thinking and knowledge products. Essentially, such leadership over a TESD community inquiry model stands a better position to contribute to the progress of Decade of Education for Sustainable Development amidst conflicts between traditional thinking and innovations.

16.7 Conclusion

In this exploration of why teachers may or may not be learners, I have come to see an ongoing educational scenario of reforms and tensions between the visible and the less visible, the immediate and the visionary, the managerial and the philosophical in our temporal and physical space of educational practice. For the committed learners, the core business of teaching and learning is education, and the tensions are often experienced as battles between the documents and reality. The exhortation of the importance of dialogues suggests that the quest for learning to be is like a timeless goal for moral quest in humanity, which is articulated, re-visited and reinforced in the hearts of the committed educators whose persistent moral choices for learning demonstrate a form of living. Perhaps it is the questioning of the meanings of systems and orders and the responsive voices for the well-being of humanity that bring together educators across generations and cultural traditions. The long-term effect

may be significantly situated in the open dialogues among critical masses on identifying shared visions, rather than the apparent expedient motions of the mainstream educational workers on tight schedules of the here-and-now agendas.

This chapter recognizes the learning stances of teachers as educators, amidst the ongoing tension and paradoxes brought about by educational reforms, who are differentiated from mainstream workers who diligently conform to the systems. Sustainable learning is a form of engaged living of educators as moral beings concerned with questioning and making choices through which they can stimulate their students to learn to break with what can be too easily taken for granted. On becoming educators, teachers can be re-defined beyond the classroom roles. I can see a vision for a new relationship among all educational workers who are willing to redefine agendas through cross-boundary collaboration and engage in critical discourse as sincere learners for a moral commitment to education, hence emergent as a leadership force.

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Part IV
Social and Cultural Perspectives
of Teacher Education

Chapter 17

Social Justice and Teacher Education: Where Do We Stand?

Elizabeth Spalding

Abstract Teacher education for social justice is a topic that has gained a passionate and committed following among US teacher educators, particularly over the past two decades. The aim of this paper is discuss current efforts by US teacher educators to prepare teachers who will implement pedagogy that is both socially just and culturally responsive. The paper will review empirical studies of teacher educators and preservice and inservice teachers who are implementing socially just pedagogy in order to present a portrait of where the profession stands. As teacher education moves into the twenty-first century, it is essential that teachers possess both the pedagogical skills and the professional dispositions to address social problems that are increasingly globalized and instruct students who are increasingly culturally diverse.

Keywords Social justice • Teacher education

If some individuals still believe that teacher education for social justice is a fuzzy term lacking conceptual clarity, that includes all manner of touchy-feely processes but ignores the role of knowledge in education, they haven't been paying attention to the substantial and growing body of literature in the field (Cochran-Smith et al. 2009). Since the term "social justice" came to be widely applied in teacher education over the past two decades, much progress has been made in answering the above critiques. We have theoretical tools, conceptual frameworks, concise definitions, case studies of social justice teacher education programs and courses, empirical evidence of practices that are effective in educating teachers for social justice, and thick descriptions of what social justice teaching looks like in k-12 classrooms. Much has been accomplished, but much remains to be done by those who support teacher

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education for social justice. In this paper, I will review those accomplishments, point out questions that remain to be answered, voice some concerns about, and make suggestions for the future of teacher education for social justice in the United States and elsewhere.

17.1 The Tools We Have

The literature suggests that there is general (although certainly not unanimous) consensus around a definition of social justice as it applies to teacher education. The definition is bifurcate. The first part views teachers as agents of social justice who teach so that all learners, especially those least well served by schools, can achieve. Thus, marginalized communities will be equipped with “strong future leaders,” who will be prepared to succeed, thereby correcting “current inequalities” (Westheimer and suurtaam 2009, p. 590). The second part views students themselves as agents of social change. The teacher’s role is to provide students with the knowledge, skills, and dispositions they will need to bring a more just society into being. Westheimer and suurtaam (2009) argue that both parts of the definition are needed for a teacher education program that enables candidates to teach both *for* and *about* social justice (p. 590).

Social justice teacher education aims to prepare teachers to recognize, name, and combat inequity in schools and society. This aim is generally shared among educators and researchers in a variety of fields, including critical race theory (Ladson-Billings and Tate 1995; Milner 2008), whiteness studies (Leonardo 2009), anti-oppressive education (Kumashiro 2004), culturally responsive teaching (Gay 2002), culturally relevant pedagogy (Ladson-Billings 1992), feminisms (North 2008), and lesbian/gay/bisexual/transgender (LGBT) education (Sears 2005). All these fields provide powerful tools for bringing about social justice by striking blows against racism, ableism, sexism, and the other ideologies that marginalize students in schools. Inequitable treatment of students is compounded by social class (Anyon 1981; Oakes 1985) and poverty, which Hodginkson (2002) has called the “universally handicapping condition” (p. 103).

The rationale for social justice in teacher education in the U.S. is grounded in what is commonly called the “demographic imperative” (e.g., Cochran-Smith 2004; McDonald 2007; Zeichner 2009). In the United States, the demographic imperative refers to (1) a swelling student population taught by a shrinking teaching force, resulting in teacher shortages in some areas, such as math, science, ESL and special education and in questionable staffing practices in some schools; (2) the growing disparity between mostly White, monolingual, English-speaking, middle class teachers and teacher educators and the k-12 students who differ from them in race/ethnicity, language, social class, and other dimensions of identity (Zeichner 2009). These facts have contributed to both a gap in the quality of education students in the most needy schools—primarily urban and rural—receive and a gap between the achievement of these students and White, middle class students in more affluent

schools. Advocates of a social justice agenda for teacher education argue that schooling and teachers can and should play a major role in bringing about a more just society (Zeichner 2009).

Several scholars have offered conceptual frameworks upon which to design teacher education programs for social justice. McDonald (2005), for example, synthesized sociocultural theory, social justice theory, the recommendations of multicultural education scholars over the past two decades, together with her study of two teacher education programs with a commitment to social justice in order to create a framework that allows teacher educators to raise questions about the extent to which their programs address social justice. Chubbuck (2010) has proposed an individual and a structural framework “to inform the content and teaching strategies teacher educators use to instruct preservice teachers in socially just education” (p. 197). We have explicit descriptions of what White teachers need to know in order to accomplish equity goals (although what teachers of color may need to know has been less clearly limned) (Richert et al. 2009; Sleeter 2001). Promising practices for educating preservice and inservice teachers in social justice have been identified and programs that implement these practices portrayed in case studies (Mirra and Morrell 2011; Skinner et al. 2011; Zeichner & Flessner 2009). Social justice teacher educators have risen to the challenge of fleshing out their vision of teacher education for social justice. Yet, as Carl Grant (2009) has pointedly asked, “Where are the teachers?... Teachers (and here I am including teacher educators), with a few exceptions do not seem fully engaged in the active struggle for social justice” (p. 654). In the next section, I examine some recent empirical studies that have attempted to answer Grant’s question and suggest how these studies have contributed to our knowledge of social justice in teacher education.

17.2 Studies of U.S. Preservice and Inservice Teachers Teaching for Social Justice

A recent issue of the *Journal of Teacher Education* (Volume 61, Number 3) was dedicated to the theme of social justice and teacher education. This theme was not one identified by the editorial team in a call for manuscripts. Rather, it emerged from the manuscripts that were submitted to the journal for review. It was clear to the editorial team (of which I was a member) that researchers/teacher educators in the field were engaged in studies of social justice in teacher education. The articles that appeared in that issue are representative of the promising directions research on teacher education for social justice has taken as well as challenges that research still needs to address.

Pollock, Deckman, Mira, and Shalaby (2010) described their work with preservice teachers, who wondered whether simply teaching their subjects well was adequate anti-racist work, whether everyday acts really do combat racism, and whether the problem of racism is so big that nothing can be done. Pollock and her colleagues showed how teacher educators could pose a single question with three different

inflections (What can I *do*? What *can* I do? What can *I* do?) in order to use productively the tensions inherent in anti-racist teaching and to launch teachers into ongoing inquiry into their practice. The study is noteworthy for providing a window into pre-service teachers' thinking about race and racism, and for positing the idea that "core tensions...on race...are here to stay...[and] may be necessary tensions that require explicit and ongoing attention in [professional development]" (p. 221).

Agarwal, Epstein, Oppenheim, Oyler, and Sonu (2010) followed elementary preservice teachers who graduated from a social justice-oriented program into their beginning teaching placements and examined the ways in which they enacted social justice curricula. The authors described the three novice teachers' attempts to put conceptions of social justice into practice as an "uncertain journey" (p. 237). While avowing a commitment to teaching for social justice, the teachers operationalized that commitment quite differently, often struggling with contextual issues and their own self-confidence for teaching. This study highlighted the need for teacher educators to treat learning theories of social justice and the development of the practice of teaching for social justice as concomitant activities. Furthermore, the study made very clear the need for a support system for teachers, especially novice teachers, attempting to "pursue their justice-oriented ideals in the classroom" (p. 246).

Young (2010) provided additional evidence of how complicated learning to teach for social justice can be in school settings, even when a support group is in place. She described the workings of an inquiry group, composed of teachers, administrators, and researchers in an urban school setting committed to understanding and implementing culturally relevant pedagogy. Classroom observations of the teachers teaching what they perceived to be culturally relevant lessons highlighted the dissonance between a theory as it is outlined in the literature and as it is applied in the classroom. Young noted that culturally relevant pedagogy is theorized as a tool to empower students intellectually, socially, emotionally, and politically; however, she found underdeveloped understanding, confusion, and frustration at the district, school, and classroom levels as teachers attempted to use it. She concluded, "Raising educators' race consciousness is not something that can be done in one college course, in a professional development seminar, or, in this case, in 8 weeks of inquiry group sessions over the course of 3 months" (p. 258).

McPherson's (2010) study of web-based communication among preservice teachers from a single teacher education program, their university-based teacher educators, and inservice teachers from a variety of school settings with diverse student populations in Winnipeg, Canada had the advantage of bringing together a variety of participants from multiple contexts through online conversations about "critical intercultural incidents identified by the teacher candidates[s] during their practicum experiences" (p. 274). Inductive analysis of the data produced a framework for intercultural teaching coursework with field experience components.

Finally, Galman, Pica-Smith, and Rosenberger (2010), three White female teacher educators, combined focus group data and self-study data to shed light on the effectiveness of fostering antiracist teaching among participants in and graduates of a teacher education program not explicitly focused on social justice. They candidly

concluded, “Fundamentally, it is hard for us to help students do the difficult work of interrogating race and power when we collectively have so much of our own work to do as white teacher educators” (234). The authors developed a reflection and action plan for themselves, but were realistic about the institutional constraints (e.g., activities valued for tenure and promotion) that prevent faculty from engaging in authentic race work and dialogue.

The studies described above represent only a limited sampling of recently published empirical studies of socially just teaching (e.g., Bender-Slack 2010; Chubbuck and Zembylas 2008; Fitts and Weisman 2010; Frederick et al. 2010; Olafson et al. 2011; Ukpokodu 2010). They are, however, illustrative of the strengths and challenges of the emerging body of empirical research on social justice teacher education.

An obvious strength is that so many researchers are answering the call to develop a “diversified and rigorous program of empirical research regarding teacher education that rationalizes and operationalizes social justice as an outcome” (Cochran-Smith 2004, p. 163). The studies included in Volume 61(3) of the *Journal of Teacher Education* provided thick descriptions of teachers and teaching in a variety of settings at a variety of career stages, preservice and inservice. The authors described an array of practices and methods that are effective in educating preservice teachers about social justice. They acknowledged the discomfort of confronting one’s own prejudices and privilege, and the complexity of teaching for social justice both at the university and the k-12 level, yet they are cautiously optimistic about their own and their students’ abilities and dispositions to implement antiracist, culturally relevant, and intercultural teaching.

At the same time, these studies exemplified challenges of the rigorous research program Cochran-Smith and others advocate. Courses, seminars, and short-term projects are the ubiquitous settings for teacher education research. Research on teacher education for social justice needs to transcend these settings with longitudinal, multi-context studies that follow teachers through preservice programs, the novice years, and beyond. Research conducted in single courses do not yield much insight into how such courses fit into larger programs or how other program components might influence teachers in a single course. Reports of change in dispositions and beliefs as a result of course or field experiences do not provide insight into what happens when a teacher actually enters the profession. Case studies of classroom teachers teaching for social justice should include description of how those teachers’ beliefs developed and their perceptions of the influence of their teacher education programs on their beliefs.

Cochran-Smith (2004) has called for “studies that map forward from teacher preparation to pupils’ outcomes as well as those that map backward from successful outcomes for pupils to quality and kind of teacher preparation” (164). Only through such studies can we gain a clear understanding of how a commitment to social justice teaching develops and is sustained. This kind of research will become even more critical as the national agenda for linking teacher performance to student outcomes and for identifying “measurably effective” teaching moves forward.

17.3 Teacher Education for Social Justice: Beyond U.S. Borders

The struggle for social justice is not confined within the borders of the United States. U. S. research on teacher education for social justice has built upon and benefitted from the work of scholars in other nations, particularly Canada, Great Britain, and Australia. Especially influential have been action research studies for social justice (Atweh et al. 1998) and self-study as a method of transforming teacher education practice and programs (Loughran 2006). Like the United States, the general focus of studies of teacher education for social justice in countries such as Canada (e.g., MacPherson 2010), England (e.g., Farnsworth 2010), and Australia (Butcher et al. 2003; Hatton 1998; Mills 2009) has been on influencing the beliefs and practices of preservice and inservice teachers regarding students with diverse backgrounds. However, as we move into the second decade of the twenty-first century the need for a global perspective on social justice and teacher education has become apparent (Apple et al. 2005; Ball and Tyson 2011). As Apple (2011) recently argued

It has become ever more clear that education cannot be understood without recognizing that nearly all educational policies and practices are strongly influenced by an increasingly integrated international economy that is subject to severe crises; that reforms and crises in one country have significant effects in others; and that immigration and population flows from one nation or area to another have tremendous impacts on what counts as official knowledge,...as a responsive and effective education, ...as appropriate teaching (222–223).

Furthermore, Ball and Tyson (2011) have pointed out that from a global perspective “poor students, students of color, and underserved students are viewed as the majority population rather than as ‘minorities’” (411). Finally, current US educational policy is being driven by the perceived need for our students to equal or surpass the educational achievements of students in other countries so that they will possess the knowledge, skills, and abilities to succeed in a global economy (Zhao 2010). U. S. social justice teacher educators need to keep a watchful eye on government policies geared toward enhancing students’ global competitiveness so that “should they decide that the government policies and mandates are in fact detrimental to the education of their students, ...[they will] have the courage and ability to speak up and defend their students’ future” (Zhao 2010, p. 426).

All these developments call for transnational collaborations among social-justice oriented researchers and teacher educators. For example, Gandin and Apple (2004) described the work of the Citizen School in Porto Alegre, Brazil and identified the implications of this project for a “more socially conscious model of teacher education” (p. 176). Such teacher education would foster the growth of teachers with commitments to: (1) critical understanding of who benefits from the ways our societies are organized now; (2) negotiation between local needs and the larger “democratically arrived at” goals of a society; (3) communities, especially oppressed ones; (4) the community’s critical scrutiny of their teaching practice; (5) ongoing reflection and the teaching of teachers by teachers (p. 196).

We need more comparative studies of how social justice teacher education is carried out in various countries. For example, Cook-Sather and Youens (2007) compared and contrasted the ways in which their teacher education programs, one in the US and one in England, enacted and supported teaching social justice. Their study revealed both common commitments and challenges, as both programs were embedded in national policy contexts of increasing prescription and standardization.

Finally, more collaborative studies of common problems arising from globalization, such as urbanization, immigration, technology integration, and language minority students, are needed (Ball and Tyson 2011). For example, He, Chan, & Phillion (2008) compared the schooling experiences of Asian American and Asian Canadian immigrants, presenting a more nuanced picture of the interaction of culture, language, identity, and power in two different national contexts.

17.4 Movements for and Challenges to Social Justice Teacher Education at Home

Grant (2009) had good reason to ask where the social justice teachers and teacher educators are. “Teaching against the grain” (Cochran-Smith 1991) requires a level of energy and commitment that the majority of teachers and teacher educators are not likely to be able or willing to sustain over the long haul. Nevertheless, there are plenty of indications that the teachers *are* out there.

In July 2011, several thousand teachers, parents, school administrators, policy makers and educational activists assembled in Washington, DC for the Save Our Schools March. The purpose of the march was to protest the test-centric nature of the Obama administration educational initiative, Race to the Top (Strauss 2011). Diane Ravitch, Deborah Meier, and actor Matt Damon were among the speakers who critiqued the punitive measures that scapegoat teachers for society’s failures.

More and more bloggers are speaking out and being heard on issues of educational equity and justice. Susan Ohanian (www.susanoanian.org) has been publicly critiquing educational injustice for most of the twenty-first century. Her blog informs that she has 1768 followers on Twitter and 318 fans on Facebook. Facebook allows teachers and teacher educators committed to social justice to quickly publicize events of concern and to network with like-minded friends. Nings also allow social justice teachers and teacher educators to share common cause. Jim Burke’s English Companion Ning (www.englishcompanion.ning.com) has over 30,000 members with groups constantly evolving. The Social Justice group currently has 276 members, and other groups, such as LBGT Literature also discuss how to address social justice issues in k-12 classrooms. The National Writing Project (NWP), one of the largest and longest-running professional development networks in the United States, supports teacher inquiry projects in urban and rural schools and in support of English language learners. NWP teacher inquiry projects often focus on barriers to equitable teaching and learning in school.

Organizations such as Rethinking Schools (www.rethinkingschools.org), the Southern Poverty Law Center (www.splcenter.org), and the AntiDefamation League (www.adl.org) offer curricular and professional development materials for social justice teachers. Professional journals such as *Multicultural Education* publish articles by and for practitioners of social justice education. Academic centers and institutes, such as the Penn GSE Center for Urban Ethnography, support practitioner research on social justice issues.

It is clear that many support networks and curricular materials have become available to support social justice teaching and teachers in the twenty-first century. Yet serious challenges to a social justice agenda in teacher education remain and may be growing, perhaps the most worrisome of which is the current generation of preservice teachers entering the profession and the climate in which they are learning to teach.

Since the mid 1990s standardized testing has increasingly influenced what goes on in k-12 classrooms. Thus, it is likely that many if not most individuals entering teaching in 2011 have spent their entire k-12 experience in high-stakes classrooms. Today's apprenticeship of observation (Lortie 1975) includes an unhealthy dose of test preparation and test taking. Brown (2010) studied the impact of these experiences (in Texas, a state with a long history of high stakes testing) on preservice teachers' conceptions of teaching and learning. He found that test preparation had loomed large in the preservice teachers' own educational experiences, and they questioned whether they would be capable of preparing their own students to do more than pass tests. Brown suggested strategies that teacher educators might use to enable preservice teachers with similar backgrounds to work within contextual constraints but warned that such educational histories might limit preservice teachers' ability to "believe that they can or even need to engage in instructional strategies that help their students become... 'critically' aware citizens" (488). Given the enduring finding that the long-term influence of teacher education on preservice teachers' beliefs about diversity is minimal (e.g., Irvine 2003), this situation is especially disturbing. The gap between how teacher educators for social justice (many of whom came of age in the 1960s, an era of social activism in the U.S.) define learning and preservice teachers' beliefs and dispositions about teaching may be widening.

At my institution I work with Teach for America (TFA) English language arts teachers who have been assigned to the neediest (i.e., lowest performing on test scores) middle and high schools in Las Vegas, the fifth largest school district in the U.S. with a "minority majority" school population. These idealistic yet inexperienced teachers espouse the first part of the two part definition of social justice education cited above: they view themselves as agents of social justice who teach so that all learners, especially those least well-served by schools, can achieve. Their mission, as they understand it and as I interpret it from our discussions, is to help their students exceed whatever standards are set by the local school district. The teachers' success will be evident in the rising test scores of their students. These young teachers are intelligent and courageous but, most, coming from privileged backgrounds and graduating from elite colleges and universities, lack knowledge of the communities in which their students live and the cultures, languages, and

identities they bring to school. In their zeal to improve the life chances of their students, they emphasize the importance of individual character and “grit” (see Tough 2011), while perhaps underestimating the power of the home cultures of students and the insidious forces of racism. And, sadly, because they, like so many teachers, believe that the key to test success is practice, practice, practice, they perceive they do not have time to help students write to authentic audiences for authentic purposes, such as expressing their opinions to public officials on issues like immigration, or to conduct inquiries into topics that affect their lives in the here and now. Teach for America is only one of a proliferating number of alternative route programs that aim to “fast-track” individuals with varying academic and professional backgrounds into high-need classrooms. Many alternative route teachers have never been formally introduced to the ideas and issues taken up in social justice teacher education nor do many stay in the classroom long enough to make a lasting impact in their schools or communities.

Even when preservice and inservice teachers are disposed to teach for social justice, teaching against the “(new) grain of standardized practices that treat teachers as interchangeable parts and—worse—reinscribe societal inequities” (Cochran-Smith 2001, p. 4) may be more difficult than ever before. It does not take long for the contexts of the school, community, and the culture at large to destabilize even a robust commitment to social justice. Often, when teacher educators **are** successful in preparing teachers to teach for social justice, teachers’ efforts at social activism may get them into trouble. On November 1, 2011, Westboro Baptist Church, renowned for its members’ rabid homophobia, is scheduled to picket Clark High School in Las Vegas (<http://www.godhatesfags.com/schedule.html>), where a former student of mine who is chair of the English Department sponsors a Gay Straight Alliance group. Recently, members of the community of another local high school nationally recognized for excellence attempted to block the school’s production of the award-winning plays *Rent* and *The Laramie Project* because they require students to play gay characters. These are local examples of the disconnect between the profession’s and the public’s visions for education. As U. S. society becomes more socially conservative, how can teacher educators respect community values as they work toward social justice and contribute to the inclusion rather than the alienation of the public at large?

Whiteness remains an “overwhelming presence” in teacher education (Sleeter 2001, p. 102) and one of the challenges to learning to teach for social justice. Preparing predominantly white teacher candidates to teach an increasingly diverse student population involves more than simply equipping them with neutral pedagogical knowledge and skills. And despite strenuous efforts to recruit and retain teachers and teacher educators who reflect more closely the demographics of school populations, their numbers have not increased significantly. This is true, at least in part, because while K-12 students have no choice but to attend school, their teachers elect to be there.

The disincentives to enter and stay in the profession continue to mount as its substantive rewards continue to dwindle in comparison to other professions. The situation is exacerbated because evidence suggests that prospective teachers of

color may be even more motivated by altruism than by a desire for money or prestige (Nieto 2005). Yet, the current constraints of schooling—pacing guides, scrimmage tests, real tests, adequate yearly progress (AYP), scripted curricula—work against teachers' needs to establish caring relationships with their students and limit their creativity, responsiveness, and intellectual curiosity.

The increasing rigidity of schooling and a narrow definition of accountability as test scores do not make teaching an attractive career choice for idealists committed to social change. This is ironic in light of the fact that many would claim that the standards and accountability movement was established precisely to bring about social justice by leveling the playing field for students of color and low socioeconomic status. I am not nostalgic for some “good old days” of teaching that never were: There have always been competent and incompetent teachers and educational environments that are more and less restrictive. Nevertheless, it seems that economic, political, social, and demographic factors are converging to turn teachers into “widgets”(Weisberg et al. 2009).

17.5 What's Ahead for Social Justice in Teacher Education?

Recently, advocates of teacher education for social justice have expressed concern that social justice teacher education is in danger of becoming a mere slogan that teacher education programs apply to existing practices that do not really challenge the status quo (Cochran-Smith et al. 2009; McDonald and Zeichner 2009). Given the current political climate in the U. S. and twenty-first century educational policies so far, social justice teacher educators should perhaps be more concerned about becoming irrelevant.

The most recent edition of the InTASC Model Core Teaching Standards (2011) states that while knowledge and dispositions are still important to effective teaching, performance is foremost: “The next step of the work is to take these standards and translate them into a developmental continuum and performance rubrics that can be used to assess performance at key points along the teacher’s career. Simultaneously, we must build the infrastructure of accountability and support to match the new vision of teaching” (p. 7). By contrast, the 1992 version of these standards was prefaced by a rousing preamble proclaiming the document’s support for “a learning environment in which all children can learn and achieve their own kind of individually configured excellence – an environment that nurtures their unique talents and creativity; understands, respects, and incorporates the diversity of their experiences into the learning process; and cultivates their personal commitment to enduring habits of life-long learning” (CCSSO 1992, p. 12). This document featured knowledge first, dispositions second, and performance third. Clearly, the message of what is valued in teaching has changed and is changing still.

It is perhaps unrealistic to expect that the majority of teachers or even of teacher educators will join the struggle for social justice. However, it might be possible to do a better job of convincing preservice and inservice teachers that teaching for

social justice is, as Ladson-Billings (1995) has said of culturally relevant teaching, “just good teaching.”

In our current climate of political scandal and economic deceitfulness, perhaps the term “integrity” may resonate more with the public and the educational establishment than “social justice.” Ball and Wilson (1996) called “integrity” in teaching the intersection “between the knowledge and moral dimensions of practice” (p. 185). In this article, the authors modeled using two lenses to examine their teaching practice in elementary mathematics and in U. S. history. The lenses were: (1) teaching as the application of pedagogical content knowledge; (2) teaching as moral work. They concluded that “in teaching, concerns for the intellectual and the moral are ultimately inseparable” (p. 155). This suggests a method and a message that might be palatable to the public and compatible with the characteristics of preservice teachers, who generally bring little understanding of racism, discrimination or social injustice into teacher education programs (Sleeter 2001; Zeichner 2006) and often exit multicultural education courses having learned to avoid those topics while speaking with political correctness. Perhaps building on the concept of integrity, which brings together preservice teachers’ deep interest in teaching content with their feelings of altruism would be a beneficial approach (Brookhart and Freeman 1992; Nieto 2005; Zumwalt and Craig 2005). DeFreitas and Zolkower (2009), for example, have described how they integrate discussion of content with moral issues in their mathematics teaching methods courses to show preservice teachers the relationships between mathematics and social justice.

People enter teaching because they care. Like “integrity,” perhaps “caring” is a concept that may have more appeal to the public and to our clientele. A predisposition to care might serve as a foundation for building a commitment to teaching for social justice. In a review of the literature on teacher preparation, social justice and equity, Wiedeman (2002) identified seven key themes that contribute to conceptions of learning to teach for social justice. One of these is care theory. As Noddings (1988) has defined it, an ethic of caring is built upon interpersonal relationships, and a school system founded upon an ethic of caring would look very different from the existing system. Caring is critical to effective teaching: “...[S]tudents need and want teachers to care for them as persons and to convey this care through listening and responding to their expressions of concern.... It matters to students whether or not they like and are liked by their teachers” (Noddings 2003, p. 244). Caring teaching is multidimensional. It includes pedagogical, moral, and cultural caring, which necessitates understanding students who are, more often than not, culturally different from their teachers (Isenbarger and Zembylas 2006). This requires teachers to display respect and responsiveness to students’ needs and capabilities, encourage discussion and self-reflection, and engage students in meaningful learning situations (Rogers and Webb 1991).

Ball and colleagues (2009) have suggested that teachers need access to practices that can be rehearsed and developed in the field and subsequently assessed and refined over time. Just as in the practice of teaching a subject such as mathematics, learning to teach for social justice needs to become part of “a reliable system of preparing

many ordinary people for expert practice” (Ball 2008, p. 43). This would entail theorizing learning to teach for social justice grounded in beliefs and backgrounds while making operational strategies to be practiced and implemented in the field. Integrity and care could provide a solid foundation for building such a system.

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Chapter 18

Who Are the Teachers and Who Are the Learners? Teacher Education for Culturally Responsive Pedagogy

Geri Smyth

Abstract The focus of this chapter is a response to the publication of *Teaching Scotland's Future* (Scottish Government 2011a) a review into teacher education in Scotland. The author argues that teaching in this future will need to evolve to be more responsive to linguistic and cultural diversity in the schools of Scotland. This chapter draws specifically from the Scottish experience to consider what teacher education for diverse classrooms might consist of. The chapter incorporates data from three research projects conducted by the author in Scottish Schools in the twenty-first century to investigate the implications of this situation regarding teacher demography and teacher education in Scotland and the education of culturally and linguistically diverse pupils. The author argues for a greater exposure to and understanding of diversity throughout the pre service and inservice education of teachers.

Keywords Linguistic and cultural diversity • Scotland • Teaching profession • Linguistic capital

The focus of this chapter is a response to the publication of *Teaching Scotland's Future* (Scottish Government 2011a) a review into teacher education in Scotland. The report confirmed the importance of maintaining teacher education in universities, recognised the career long nature of teacher education, urged greater partnership between universities and schools and recommended that pre-service teacher education became more widely focused than the current pedagogical content. The Scottish Government subsequently endorsed the recommendations of the report (Scottish Government 2011b) and changes in the nature of teacher education at all levels are currently underway. Neither the report nor the government response made mention of what 'Scotland's Future' might look like and the author argues that teaching in

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this future will need to evolve to be more responsive to linguistic and cultural diversity in the schools of Scotland.

Across Europe there is increasing ethnic, cultural and linguistic diversity due to a range of political and economic factors including the expansion of the European Union and the arrival of refugees from a wide range of Asian and African countries. This diversity is reflected in learner populations in schools across the continent. The EU (Commission of the European Communities 2008) *Schools for the twenty-first Century* acknowledges this increasing diversity throughout its report and reminds that *Every classroom is a place of diversity: of gender, socioeconomic groups, ability or disability, mother tongues and learning styles. Improving competences means teaching learners in a more personalised way. Better tailoring teaching to each child's needs can increase student interest and engagement in learning activities and improve their results, but its benefits should reach all students equitably.* (2008:6) The report recognises that *Teachers require specific training to work effectively in diverse classrooms (ibid).*

This chapter draws specifically from the Scottish experience to consider what such teacher training or education for diverse classrooms might consist of. However it is clear from the work of the international Diverse Teachers for Diverse Learners research group (see for example Ragnarsdóttir and Schmidt 2013) that the statistics and experiences described here are replicated across Europe and the Anglophone world.

Schooling in Scotland is free and compulsory for all young people aged 5–16 years. In addition there is free nursery school provision between the ages of 3 and 5 years old and young people may stay in school until the age of 18 years old. Further and higher education in colleges and universities is free of charge for those resident in Scotland for more than 3 years prior to entering college or university. Compulsory schools are organized in two cycles: 7 years of primary education and up to 6 years of secondary education. The curriculum across the nursery, primary and secondary sector is the Curriculum for Excellence 3–18¹ which aims for all young people to become successful learners, confident individuals, responsible citizens and effective contributors. These are laudable aims but the differentiated routes to achievement need explored and all teachers require to have an understanding of the linguistic and cultural diversity of the pupil population.

Table 18.1 shows the ethnicity of pupils in Scottish schools. Ethnic categories are drawn from the UK Census categories. The additional complexity in this table indicates how these pupils identify in terms of nationality in addition to ethnic identity. So, for example, while 1,158 of the 2,491 pupils of Asian- Chinese ethnicity in Scotland identify as of British nationality, 586 pupils of Asian- Chinese ethnicity identify as Scottish.

Table reproduced from <http://www.scotland.gov.uk/Topics/Statistics/Browse/School-Education/suppupils2011>

¹Curriculum for Excellence: see <http://www.ltscotland.org.uk/understandingthecurriculum/whatiscurriculumforexcellence/index.asp>.

Table 18.1 Ethnicity of pupils in Scottish schools by national identity, 2011

	Scottish	English	Northern Irish	Welsh	British	Other	Not known/ not disclosed	Total
White – Scottish	475,153	9,831	421	347	92,546	1,156	7,995	587,449
White – Other	6,800	3,890	148	165	10,498	9,804	913	32,218
White – Gypsy/Traveller	551	45	*	*	91	22	*	737
White – Polish	*	*	–	–	16	2,157	71	2,291
White – Irish	62	*	92	–	51	175	*	411
Mixed	3,807	236	8	9	2,241	540	146	6,987
Asian – Indian	864	61	5	–	1,233	1,179	221	3,563
Asian – Pakistani	3,326	147	*	*	5,321	1,233	861	10,896
Asian – Bangladeshi	159	*	*	–	310	135	35	650
Asian – Chinese	586	33	6	–	1,158	562	146	2,491
Asian – Other	344	44	–	–	866	1,784	239	3,277
Caribbean/Black	129	30	–	–	162	181	56	558
African	286	103	*	*	862	2,157	373	3,790
Arab	*	*	*	–	99	207	31	363
Other	425	*	*	–	447	1,295	483	2,678
Not known/not disclosed	3,301	168	9	8	1,493	612	6,285	11,876
Total	495,854	14,639	708	534	117,394	23,199	17,907	670,235

Table 18.2 Languages spoken by pupils in schools in Scotland

Language	Number	Language	Number	Language	Number
<i>Number of languages</i>	136	Malayalam	511	Tamil	246
		Russian	479	Hungarian/Magyar	216
<i>Number of pupils</i>		Lithuanian	446	Swahili/Kiswahili	214
English	642,498	Chinese (Mandarin)	434	Romanian	212
Polish	6,249	Tagalog/Filipino	426	Shona	185
Urdu	4,523	Slovak	416	Pashto	174
Punjabi	4,398	Latvian	407	Sign language	162
Arabic	1,793	Turkish	406	Bahasa Malaysia	150
Cantonese	1,467	Hindi	331	Thai	149
French	825	Portuguese	321	Kurdish	142
Gaelic (Scottish)	606	Farsi/Iranian/Persian	274		
Bengali/Bangala	593	Scots	265	Not known/ not disclosed	2,090
German	560	Italian	257		
Spanish	522	Somali	251	Other	2,611

The wide ethnic diversity of the pupil population is not mirrored in the teaching population. The teaching profession in Scotland is predominantly white, female and Anglophone. The Scottish Government publishes demographic statistics concerning the gender, age and ethnicity of teachers in Scotland by school sector (<http://www.scotland.gov.uk/Publications/2011/12/06114834/9>). In 2011 only 2 % of all teachers were from a minority ethnic group, with only 1 % in primary schools not being from a white ethnic group. It is also interesting to note that 92 % of primary school teachers and 62 % of secondary teachers in Scotland were female in 2011.

Data from England shows a higher number of ethnic minority teachers but this is in a population with higher overall ethnic minority numbers. DCSF² data on teachers in maintained schools in England shows that just 5.6 % of the teaching population identified themselves as belonging to an ethnic minority group. In primary schools in England, 23.3 % of the pupil population belong to an ethnic minority group, whilst in secondary schools the percentage is over 19.5 % of the pupil population.

The increased ethnic diversity in the pupil population has in turn led to an increased diversity in the pupils' home languages. Table 18.2 indicates the most common languages spoken by pupils in schools in Scotland. In 2010, there were 136 languages spoken by pupils in Scottish schools. The five most common languages after English which are spoken by pupils in Scottish Schools are Polish, Punjabi, Urdu, Arabic and Cantonese. None of these languages have any official recognition in the taught curriculum in Scotland although it is possible to take leaving certificate examinations in Urdu, Arabic and Cantonese.

²DCSF: Department for Children, Schools and Families.

There are no centrally gathered statistics regarding the languages spoken by teachers but the ethnic makeup of the teaching profession as earlier described can lead to an assumption of overall monolingual use of English among the teaching workforce. The linguistic assumptions of teachers are based on children who use English in school, go home and use English with their parents, watch English language television and read English language texts. A focus only on supporting children's acquisition of English as an Additional Language will not enable the linguistic capital of the multilingual children in Scottish schools to be utilized. Nor, by ignoring the linguistic skills of pupils will it help these young people to achieve their potential.

The 2009 PISA Survey of students in Scottish schools indicated that school students in Scotland were generally satisfied with the quality of the student-teacher relationship. For example, 85 % of students reported that they get along with their teachers, 68 % reported that teachers really listen, 76 % reported that teachers treat them fairly, 88 % report that teachers are available if students need extra help and 79 % reported that their teachers are interested in their well-being. What is important to consider in relation to the theme of this chapter however is the ethnic, linguistic and gender make up of the proportion of school students who were dissatisfied. Scotland can not be complacent if, as this data indicates, 32 % of learners in school do not believe that teachers really listen to them. Given the heterogeneous nature of the teaching workforce in comparison to the diversity found in the pupil population it might be that this in part accounts for pupils belief that they are not really listened to by their teachers. If their teachers do not share their home language and do not have an understanding of their home culture could this lead to unresponsive teachers, or at least to perceptions by pupils that their teachers are not really listening?

Internationally there has been increasing concern about the requirement for a culturally responsive pedagogy (CRP) to facilitate and support the achievement of all students, particularly when the teacher does not reflect the background of the majority of the learners as has been shown to be the case in Scotland. This CRP is defined by Gay (2000) as using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively. Internationally, research has demonstrated that the academic achievement of ethnically diverse students will improve when they are taught through their own cultural and experiential filters (Au and Kawakami 1994; Foster 1995; Hollins 1996; Ladson-Billings 1994). Richards et al (2007) emphasise that if teaching reflects the cultural and linguistic practices and values of only one group of students, then the students who are not part of this group are denied an equal opportunity to learn. Could this be the case in Scotland, and elsewhere, where the teaching profession is predominantly monolingual, monoethnic and monocultural?

Responding to pupil diversity is not explicitly mentioned in The Standard for Initial Registration as a teacher in Scotland (General Teaching Council for Scotland 2006) although the standard requires teachers to *Value and demonstrate a commitment to social justice, inclusion and protecting and caring for children* (2006:15). This of course must mean that all children's cultures and languages are valued in the

classroom but where the workforce is predominantly monolingual this may be difficult to achieve.

Teaching in Scotland is an all degree profession and there are only limited routes to qualify as a teacher: Primary teachers can either do a 4 year Bachelor of Education (B.Ed³) degree or do a 3/4 year degree in any subject followed by a 1 year Professional Graduate Diploma in Education. Secondary teachers must have a 4 year degree in the subject they will teach followed by a 1 year Professional Graduate Diploma in Education. During their education all student teachers undertake placement experiences but there is no guarantee that these placements will be in diverse settings and all placements are in schools in Scotland. This can lead to monocultural experiences which reinforce the monolingual norm and do little to increase student teachers' ability to respond to the needs of pupils with linguistic and cultural backgrounds which differ from their own experience. There is no guarantee that student teachers in Scotland will be explicitly educated during their pre-service experience in issues of linguistic and cultural diversity. In some universities where there are staff with particular interests in these areas optional courses for students may be offered. It can not be said at this time that Scotland is meeting the recommendations of the EU 'Schools for the 21st Century' report.

The next part of this chapter incorporates data from three research projects conducted by the author in Scottish Schools in the twenty-first century to investigate the implications of this situation regarding teacher demography and teacher education in Scotland and the education of culturally and linguistically diverse pupils. The data presented comes from researcher field notes and interviews with teachers.

The first project (Smyth 2003), was an ethnographic study with 12 experienced primary school teachers who were themselves monolingual in English and were not familiar with teaching students from linguistic or cultural minorities. The teachers worked in six primary schools in areas of Scotland which were predominantly white and monolingual but which had recently experienced a changing demography. In each of the 12 classrooms studied there were four or less pupils from linguistic minority backgrounds. It was found from an analysis of the teachers' discourse, in both observed interactions with pupils and interviews, that the teachers' limited interactions with such pupils led to an overarching belief that in order to achieve, pupils from a minority linguistic background would require to become monolingual in English, the language of the classroom. This was manifested in limited understanding of learning norms in other cultures and a 'non-hearing' of languages other than English.

Prior to the conversation offered here as an example of this, the researcher had observed a 5 year old boy of Chinese origin making marks on paper which resembled Chinese writing. The researcher commented on this with the class teacher who had not seen the way in which the child had copied a star and then begun to make Chinese symbols. The researcher then wished to query with the class teacher how the child used his home language in the class to make sense of his learning.

³This will change to a BA in Education in some universities from 2013.

R (Researcher): Does he ever use Chinese in class?

T (Teacher): Very occasionally. I think that there was once we were watching television and there was something about some Chinese celebration, I don't know if it was the Chinese New Year and they were obviously speaking words and J (the child) was saying 'Oh, I know what that is'. That was nice because he could say to the other children so he was trying to teach the other children wee words in Chinese but there aren't very many occasions when he uses that.

R: I wondered if he sometimes used any Chinese words when he didn't have the English for it?

T: He doesn't usually no, he used to point to something and get quite frustrated if you weren't picking up what he was saying and he would try and explain in Chinese but he doesn't do that anymore.

This teacher had some awareness that the child had linguistic knowledge beyond English but she did not positively encourage him to use Chinese nor did she appear to hear the Chinese that he did use as a skill. Rather the teacher seemed to consider that Chinese had been a passing phase for the child which was no longer required and had no benefit for his learning.

A further example of this limited understanding of ways of learning came from another teacher who was worried about how to explain to Chinese parents how the class homework should be done. In many Scottish primary schools pupils who are beginning to read work with graded texts from commercial schemes and these are sent home on a nightly basis. Teachers indicate the pages of text to be practised at home for the following day. The Primary two class teacher in this case expected parents to listen to the child reading these pages aloud and was concerned that the parents of a Chinese speaking child were not doing this but the child was bringing in copies of the text neatly written out several times:

T: Somebody at home is making him write it out, the pages you set. They are all written out. Not just once but he writes the sentence about four times. Should I not send it home? It would be nice to know. Am I doing the right thing?

Both these teachers were concerned and experienced. They valued their children and cared 'to do the right thing' but their limited exposure to learners who did not match the monolingual, monocultural norm of the Scottish pupil population meant they did not have an understanding of language acquisition or differing cultural learning practices. The parents of this child had learned to read Mandarin in a very different way from which their son was learning to read in English. Their reading acquisition had been closely linked to their writing acquisition and they wrote in Mandarin to practice the formation of characters alongside the reading. No-one

from the school had explained the practices used in literacy acquisition in the Scottish context. In both these cited cases, the learners were Chinese, but similar findings were found amongst teachers of children from other ethnic groups. The teachers were unsure of the language spoken by their pupils, the cultural norms and values and the benefits of linguistic transfer.

The second project from which data is offered (Smyth 2006) was another ethnographic study, this time in one school where children from families seeking asylum in the UK were being educated. This time the whole school population changed almost overnight from being monolingual to having pupils with 17 different home languages. The rapid change forced the teachers to rethink approaches to teaching and to reconsider their preconceived ideas of language and literacy achievement. The researcher spent 18 months in the school investigating the creative responses of the newly arrived pupils to a new language, culture and education system. Participant observation was recorded in extensive field notes and accompanied by pupil and teacher interviews.

The Primary six teacher in this school annually undertook an environment based project on Scotland with her 10 year old pupils. As usual this year she began this series of lessons by asking the children to tell her the names of places in Scotland they thought visitors would like to visit and told the class they would be making tourist brochures for Scotland. The change in ethnic composition of her class this year quickly became apparent as the children did not have as many ideas as she expected. This year, her 30 children came from 10 different countries, with only 11 of the children having been born in Scotland. She started to suggest some further places the children might include in their tourist brochure and realised most of the children had not heard of these places. One boy then said

Miss, we want to be tourists.

This was a turning point for the teacher who recognised the assumptions she was making and the limited cultural capital of the children in her class in this context of a new country, new language and new education system. Reflecting on this she told me:

T: I threw the curriculum out of the window at that point and realised that of course they did not know about Robert Burns or Edinburgh Castle. In fact it helped me realise that many of the Scottish children did not know these things either. I had put my assumed knowledge onto the children and they were not going to accept it. So instead the children planned and funded a tourist trip for themselves and they learned so much more and so did I.

The teacher was very prepared to change her perceptions and her approach but this was brought about by having a critical mass of learners who did not meet her expectations. Had there only been one or two such children in the class (as in the schools in the earlier cited project) she may not have noticed the varied cultural knowledge and these learners would have been disadvantaged and assumed to have under performed.

The teachers in this school were initially overwhelmed at the prospect of teaching large numbers of pupils who had limited English, the language of the classroom. However the positive leadership and community approach to learning and teaching enabled the teachers to overcome their trepidation and find new ways of teaching and assessment. A particularly significant teaching moment (Woods and Jeffrey 1996) occurred when the Primary 7 class were working to construct group poems about space. A linguistically and ethnically mixed group of 4 eleven year old children were trying to construct a poem about what they might see, hear, taste, smell and feel in space. Ivan, a boy who had recently arrived in Scotland from Russia, suddenly said:

A Russian man was the first in space.

Another pupil from a Farsi language background asked Ivan: *Do you know his name?* and Ivan replied that he would write his name 'Yuri Gagarin' in Russian in the poem.

The teacher told me afterwards:

I have to say that up until that point I hadn't been thinking about them knowing other languages and other ways of writing. I had just been thinking how can I get them to learn English quickly and I used lots of strategies like games and collaboration and buddying. Then I realised that of course they knew lots of other things that would help them to learn and I didn't know those things so they would have to help me to know what I didn't know.

The teachers in this school were all female, Scottish and monolingual in English. They shared these 'teaching moments' with each other and developed a culturally responsive pedagogy for these young children from a wide range of linguistic and cultural backgrounds. I ultimately characterised the school as working as a highly effective multilingual conference where the teachers were the keynote speakers but the pupils often took over the stage to contribute their knowledge and skills as translators of language and interpreters of meaning.

In both these studies the teachers were all white, and monolingual. The third project was a study with teachers from countries across Asia and Africa who had arrived in Scotland as asylum seekers and wished to regain their professional identity by teaching in Scotland (Smyth and Kum 2010). 370 teachers in total registered with the RITeS⁴ project, funded by the Scottish Government, 2005–2011. Data was collected about their country of origin, gender, languages, teaching qualifications and teaching experiences. In addition 23 of the teachers, representing a demographic range, were interviewed about their past teaching experiences, their present situation and their hopes for the future.

The survey data indicates a rich source of linguistic and cultural capital which could greatly enhance the teaching profession in Scotland. However the interview

⁴RITeS: Refugees into Teaching in Scotland.

data tells an unfortunate story of loss of professional identity among this group of teachers, all of whom are committed to teaching and education but feel that structural and institutional barriers are placed in the way of finding an opportunity to practice that commitment in their new country. Most of our respondents had a genuine desire to be able to teach in the UK and connected this closely with their identity:

I am a teacher. I want to remain a teacher. I haven't done any other thing outside teaching. I don't see myself doing anything else apart from teaching. I want to bring my contribution to this country through teaching (Male Secondary teacher from Congo Brazaville).

They say once a teacher always a teacher. That's what I love doing. I enjoy it. And I would hope that at one point I will be able to do that but I have faced a lot of challenges and difficulties (Male Secondary teacher from South Africa).

All the teachers recognise that a teaching qualification from one country does not automatically entitle one to teach in another system. The teachers are humble about how much they have to learn before they can become employed to teach in Scotland. However they all felt that some of the barriers to achieving this reprofessionalisation were difficult to surmount:

I think there is . . . quite a range of barriers. As far as I am concerned, first the qualification I had from home was not recognized as an equivalent so they asked me to do 1 year teacher training programme . . . The second barrier was about language. . . if English is not your first language, you struggle. . . Another barrier was the education system . . . you had to familiarize yourself with . . . how the system is organized, . . . (Male Secondary teacher from Democratic Republic of Congo).

Several of the teachers reported direct discrimination from both fellow teachers and also from parents:

When teachers hear you are a refugee, a black for that matter, it looks like they want you to go for cleaning jobs. That is where they think you belong. They see your efforts to teach as straying into an area that is their domain and where you do not belong to. It is ignorance, it is racism and it is not healthy for a multicultural community where my children belong. (Female Secondary teacher, Burundi).

This teacher is referring to existing teachers as ‘they’ in this interview extract. Her belief that teachers in Scotland see teaching as their exclusive domain is a powerful one that needs challenged if the hopes expressed in Teaching Scotland’s Future (Scottish Government 2011a) are to be realised by ensuring school and teaching are positive places for all learners and teachers and not just those from the hegemonic white, monolingual mainstream.

This discrimination was not only faced by visible minority teachers as in the case above but also by others who were not perceived as fitting. So field notes of a discussion with a white female primary teacher from Albania revealed:

She said that some schools and parents have prejudices against foreigners. She cited an incident when last year, a parent came to school and said in front of other teachers and students ‘you should not be teaching here’. . . . She felt very low and intimidated and the parent apologized 3 months after. But that did not change anything because the statement had been made, her personality hurt and the notion that she was not liked remained.

The demographic gap between the teacher workforce and the pupil makeup is very slowly changing. It is not suggested that the only response is to diversify the teaching profession. Apart from the reductionist position that such an argument implies, it would take many decades for this to be achieved. Rather, what is required is a much greater exposure to and understanding of diversity throughout the pre service and inservice education of teachers.

In order to achieve this there needs to a consideration of student placements across their initial teacher education to ensure that student teachers are placed in diverse settings which do not necessarily replicate the known and familiar. This diversity in placement needs to consider linguistic, cultural, ethnic and socioeconomic factors. While reflective teaching has long been encouraged and pursued in the literature and in the practice of teacher education, this reflection may need guidance to consider diversity – to consider what the teacher takes into the classroom and how this may differ from what the student takes into the classroom. The invisibility of difference needs to be countered and that difference valued, celebrated and utilised in the classroom. As one of the refugee teachers said in interview, *if you don’t use it you will lose it*, referring to the way in which teaching skills were being wasted. Similarly the students who are not heard or understood will suffer and lose the knowledge and skill they already possess if they are not empowered in classrooms globally to utilise their existing cultural and linguistic capital and enrich the teaching and learning environment. Utilising the available linguistic and cultural capital of teachers and learners will lead to an enhanced professionalism for teachers and increased educational involvement for learners.

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Chapter 19

The Making of Teachers for the Twenty-First Century: Australian Professional Standards and the Preparation of Culturally Responsive Teachers

Ninetta Santoro

Abstract The nature of teachers' work and knowledge has undergone enormous change in the last two decades in Australia. Such change is due to a wide range of factors including increasingly complex student demographics, developments in information technology and the ways in which knowledge is produced and transmitted. Australian classrooms are more culturally diverse than ever before, students are more technologically savvy and school curricula is increasingly complex and expansive. These changes have given rise to ongoing debates about what constitutes quality education and quality teachers and how best to prepare professionals for the twenty-first century.

The newly developed National Professional Standards makes explicit the knowledge and practices expected of teachers across four stages of their careers. In this chapter I provide an overview of the seven standards and how they reflect the changing social and political landscape of Australia, as well as discourses of 'quality'. I focus on the first of the standards; *Teacher Knowledge About Students and How They Learn*, especially in regards to students with diverse linguistic, cultural, religious and socioeconomic backgrounds. Given the increasing cultural and socioeconomic diversity that characterises student populations in Australia, it is imperative that all teachers are responsive to the learning needs of students from diverse linguistic and socioeconomic backgrounds. I conclude by making recommendations for preservice teacher education.

Keywords Australian teacher standards • Teacher knowledge • Cultural diversity • Teacher education

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19.1 Introduction

The nature of teachers' work and knowledge has undergone enormous change in the last two decades in Australia and in other parts of the world. Such change has occurred in response to a wide range of factors including developments in information technology, the ways in which knowledge is produced and transmitted as well as pressing and urgent issues about the state of the world's environment and the need to educate for global citizenship and sustainability. One factor that has had significant effects on teachers' work and the knowledge they require is increasingly complex student demographics. In many parts of the world the ethnic and cultural make-up of school communities has undergone rapid and radical change (Chong 2005; Leeman 2008; Liddicoat and Diaz 2008; Osler and Starkey 2006; Schmidt 2010; Smyth et al. 2009; Westrick and Yuen 2007). These changes have occurred in response to unprecedented levels of global mobility caused by conflict, natural disasters and what Stanley calls "development-induced migration" (Stanley, 2004 in Goodwin 2010, p. 21). Such forced and voluntary migration has meant that the boundaries defining national, ethnic and cultural belonging have become blurred. Nations that have been relatively homogenous are becoming increasingly diverse. While Australia has a long history of cultural diversity with 23 % of school children having a language background other than English and 4 % of children being Indigenous (Hartsuyker 2007), the demographic nature of this already culturally diverse population is changing further. For example, recent government policies on refugee and humanitarian resettlement mean that increasing numbers of refugees, the majority of whom are from African nations, are settling outside major urban areas (McDonald et al. 2008) where cultural and ethnic homogeneity has long characterised predominantly white communities.

Such cultural and ethnic diversity has increased the complexity of teachers' work. All teachers, regardless of their location, need to be able to work productively with culturally and linguistically diverse children. This professional imperative raises questions about what characterizes effective teachers, what constitutes effective teaching and how might initial teacher education best prepare teachers for such work?

19.2 Producing Quality Teachers for Culturally and Linguistically Diverse Students: The Role of Teacher Professional Standards

In Australia, debates about what constitutes 'quality teaching' and 'quality education' have dominated education discourse for the last decade. Concerns about environmental sustainability, the need to better prepare Australian young people to be part of a globally competitive economy, and concerns about the widening gaps in educational achievement between students from some social groups have prompted

calls for a better quality education system. A number of government driven reforms involving curriculum renewal and teacher professional standards have either been implemented, or are planned for implementation across all compulsory and post-compulsory education sectors. At the same time, there has been a proliferation of accountability measures and mechanisms introduced in order to monitor and oversee the provision of education, develop standardized national curriculum, quality assure providers of higher education and control teacher accreditation and registration (O'Meara 2011). However, while the term 'quality education' has entered the public realm in Australia as common discourse and taken on meanings closely associated with accountability, measurement and regulation, for most researchers and scholars, defining 'quality' is not straight forward and there can be no definitive set of practices that constitute 'quality' in all education contexts. Therefore, it remains a contested term. Nonetheless, despite the complexities inherent in the term and the difficulties of defining it, a wide range of scholars and educators generally agree that teachers are vital to students' education success and therefore, make a significant contribution to the provision of quality education. According to Darling-Hammond et al. (2001) "... teachers' qualifications, based on measures of knowledge and expertise, education and experience, account for a larger share of the variance in students' achievement than any other single factor, including poverty, race and parent education" (p. 10). "Of all school variables ... it is teachers who have the greatest effect on student learning outcomes" (Lingard 2005, p. 174), particularly for students from disadvantaged backgrounds (Lingard 2005).

Given the increasing cultural diversity that characterizes student populations in Australia, there is a need to "prepare new teachers who can respond to the needs of today's changing communities and capably meet the imperatives presented by a shifting global milieu" (Goodwin 2010, p. 21). However, in general, teachers feel unconfident and under-prepared to teach students whose cultural values and beliefs are different from the dominant cultural majority (e.g. Allard and Santoro 2006; Mills and Ballantyne 2010). High teacher turnover in schools with significant populations of culturally diverse students signify that teachers find these settings challenging (Cochran-Smith 2004; Santoro et al. 2011). Furthermore, in Australia the education outcomes of students from some particular ethnic groups lag behind those of their peers from the cultural majority. For example, Indigenous students are generally well below those of non-Indigenous students (Aird et al. 2010; Nolan et al. 2010; Steering Committee for the Review of Government Service Provision 2007) and they are also more likely than non-Indigenous students to be inappropriately placed in special education classes (De Plevitz 2006) because their needs are misdiagnosed. Other groups that experience similar disadvantage in Australia are African students, those of Arabic and/or Muslim background and those from some Pacific Islands. These groups are less likely to gain university entrance and more likely to be unemployed or employed in unskilled occupations (Betts and Healy 2006; Kamp and Mansouri 2009; Teese and Polesel 2003; Windle 2004; Gifford et al. 2009; Thomas and Kearney 2008). Increasingly, the focus is shifting away from viewing these students as less academically capable to acknowledging that mainstream curricula, teaching and assessment practices work to marginalize and disempower particular groups of students.

Discussions about what constitutes quality teachers and quality teaching for culturally diverse contexts are often accompanied by concerns about what knowledge teachers need in order to be culturally responsive practitioners. According to Goodwin

arguments about what teachers should know and be able to do are perennially salient and become evermore perplexing as they are played out on the world stage. [...], globalization introduces new factors that demand consideration in any discussion about quality teachers, and promises to change fundamentally the very nature of teacher preparation. So, what might quality teaching mean? How might it look, in a global context? What should globally competent teachers know and be able to do? (2010 p. 20)

As is the case in many places in the world, such as in the United States, New Zealand, various provinces in Canada, England and various locations in Europe, teacher professional standards are playing an important role in the ‘quality’ education reform in Australia. They serve a number of functions including accountability measures that contribute to the regulation of the profession. They also make explicit the knowledge and skills required by teachers, thereby providing a framework for preservice teacher education curriculum and for graduate teacher professional development. In Australia, The National Professional Standards¹ “are a public statement of what constitutes teacher quality. They define the work of teachers and make explicit the elements of high-quality, effective teaching in 21st century schools that will improve educational outcomes for students” ([Australian Institute for teaching and School Leadership 2011a](#), p. 2). These Standards are “...the centerpiece of national reforms being implemented under the National Partnership on Improving Teacher Quality” ([Australian Institute for teaching and School Leadership 2011b](#)). They aim to “promote excellence in teaching and provide a nationally consistent basis for recognizing quality teaching” ([Australian Institute for teaching and School Leadership 2011c](#)). The standards were developed by government during 2010 and in consultation with a wide range of key stakeholders such as teachers, teacher educators and education curriculum and policy writers.

The seven standards stipulate what teachers at various stages of their careers need to know and do. These career stages are: Graduate Teachers; Proficient Teachers; Highly Accomplished Teachers and Lead Teachers. The standards are concerned with three domains of teaching: (1) Professional Knowledge; (2) Professional Practice and (3) Professional Engagement. In relation to professional knowledge, these standards specify teacher knowledge about: the learner; processes of learning and cognition; subject matter; assessment and professional ethics and participation in professional communities at various stages of a teacher’s career. Teacher registration and accreditation is closely tied to the demonstration of these professional standards. Therefore, they impact on the content of initial teacher education. The seven standards are:

- 1: Know students and how they learn
- 2: Know the content and how to teach it
- 3: Plan for and implement effective teaching and learning

¹Over the next couple of years these National Standards will gradually replace state level professional standards.

- 4: Create and maintain supportive and safe learning environments
- 5: Assess, provide feedback and report on student learning
- 6: Engage in professional learning
- 7: Engage professionally with colleagues, parents/carers and the community

In this chapter I focus on the first of the broad National Professional Standards; ‘Know Students and How they Learn’. I draw on my research over the last 10 years to highlight and problematize what often constitutes the ‘knowing’ of students who are identified in the standards as having “diverse linguistic, cultural, religious and socioeconomic backgrounds”. I also discuss how teacher education can better assist preservice teachers come to know these students and how they can facilitate graduate teachers’² acquisition of “teaching strategies that are responsive to the learning strengths and needs” (Australian Institute for Teaching and School Leadership 2011a, p. 8) of culturally and linguistically diverse students.

19.3 What Does it Mean to ‘Know Students’?

Knowing students is a complex business — and possibly the most important element of teaching. It is pivotal to developing meaningful and relevant curriculum, assessment practices, effective student-teacher relationships and is, in fact, important to everything a teacher does. ‘Knowing students’ includes knowing what it is they already know and building upon it, knowing what they still need to know and how they learn best — and, knowing them as people. To know students is also to understand the “informal, cultural, or personal curricula that children embody — the curriculum of home, the curriculum of community/ies, the curriculum of lived experiences” (Goodwin 2010, p. 25). Teachers must know how what I call students’ ‘out-of-school’ lives, shape them as learners. This requires teachers to have knowledge of their students’ cultural traditions, values and practices, and to be able to move beyond their own worldviews in order to develop and understand their students’ perspectives. Delpit claims, “If we do not have some knowledge of children’s lives outside the realms of paper-and-pencil work, and even outside their classrooms, then we cannot know their strengths” (1995, p. 173). It is necessary “to really see, to really know the students we must teach” in order to engage with, and address their learning needs (Delpit 1995, p. 183).

While these ways of knowing students apply in all education contexts, there are particular challenges for teachers of culturally and linguistically diverse students. They must understand aspects of their students’ lives that are probably unfamiliar to them — in general, teachers do not share the same cultural values and practices as their culturally and linguistically diverse students. This means teachers have to understand what is culturally relevant to their students and recognise when existing curriculum fails to build on, or acknowledge the cultural knowledge students bring

²The professional standards define ‘Graduate Teachers’ as novice teachers who have recently graduated from an accredited teacher education course.

to their learning. All too often however, teachers struggle to really know their students and to understand the complexities of their students' cultures. It is not always the case that even teachers who work with students of ethnic difference on a daily basis have acquired, simply through experience, the complex knowledge needed for effective culturally responsive practice. There is a risk that without an understanding of the complexity of culture and cultural subjectivities, teachers will essentialize students' cultures, that is, reduce them to their essence, simplify them to recognizable and generalisable traits and understand them as unitary, fixed and stable (Santoro 2009; Allard and Santoro 2010; Allard and Santoro 2006). Cultures are however, multifaceted and evolving — and encultured subjectivities are “are never unified ... [but are] increasingly fragmented and fractured; never singular but multiply constructed across different, often intersecting and antagonistic, discourses, practices, and positions” (Hall 1996, p. 4). Subjectivities are always being produced, in a state of becoming, changing and shifting in response to different social contexts and dynamics. There is no single performance of the encultured student subject. For example, the subject, ‘Indian student’ is complex and shaped by a multitude of factors including geographic location and origin, religion, gender and social class — and in ways that are inextricably intertwined. Indian students, for example, ‘become’ who they are by taking up subject positions and being positioned within the range of social situations and contexts in which they participate.

Simple and unsophisticated understandings of culture lead to the essentialization of culture and can mean that teachers often come to know students as the ‘exotic other’ or the ‘deficit other’ (Santoro 2009). First, to know them as exotic is to know them and position them as embodying and practising particular aspects of a culture, that is, the most novel, striking, colourful and the most ‘interesting’ aspects. Although cultures are diverse, multifaceted and contemporary, the exotic elements are often seen as representative, in total, of the practices of a particular cultural group. While some culturally and linguistically diverse students do identify with some traditional and exotic elements of their culture, others do not. By ignoring and making silent those elements or characteristics of cultures that are not deemed by members of the dominant majority to be ‘interesting’ or attractive, exoticism contributes to the construction of some cultures as worthy and others, as unworthy. Teachers who construct some culturally and linguistically diverse students as ‘exotic’ might regard this as a celebration of culture and difference. However, it can inadvertently commodify particular cultures because of their value and potential to enrich the lives of those from the dominant majority. ‘Multicultural Days’ that showcase students’ culture, are often held in Australian schools as a way to acknowledge the diverse nature of the student population. However, they frequently highlight *only* the exotic aspects of culture and simply reinforce culturally diverse students as the ‘exotic’ other. Speaking about the Netherlands, Leeman (2008) claims that attempts at intercultural education “suffered from an exotic glorification of other cultures and was often superficial. Whilst striving for ‘recognition’ of diverse cultures and identities, it had a stereotyping effect...” (p. 54) that can lead teachers to expect particular behaviours from some students on the basis of their membership of particular cultural groups. Minnaard suggests “exoticism can be

considered as a form of epistemological imperialism. It produces knowledge that works to support and justify the imperialist project and that helps to legitimate the accompanying power relations” (2010, p. 76).

On the other hand, teachers who know culturally and linguistically diverse students as the ‘deficit other’ draw on negative stereotypes of students’ cultures and regards cultural difference as shaping students in negative ways. They often focus on what they think students *don’t* know in comparison to students from the dominant culture. Therefore, these “students can be seen as ‘problems’ that need to be ‘managed’ so they fit in with the beliefs and values of the dominant ethnic majority” (Santoro 2009, p. 41). In these situations, cultural difference is seen as a hindrance to successful assimilation. By paying insufficient attention to the cultural knowledge students bring to their learning and the ways in which it can be a resource on which to draw and build, teachers risk their teaching practices being irrelevant to the needs of culturally and linguistically diverse students. Dantas refers to the “...the damaging impact of deficit beliefs and stereotypes about what counts as learning [...] combined with the invisibility and disconnect of what diverse students bring as funds of knowledge in classroom assessment and instructional practices” (2007, p. 78).

In some ways, it is not surprising that teachers struggle to really know their students and to know the complexities of culture and how cultures shape learners. Preparation during preservice teacher education is often fragmented and superficial in regards to the teaching of culturally and linguistically diverse students — it frequently consists of short and discrete units of study ‘added on’ to core subjects that do little more than focus on the cultural characteristics, histories and traditions of particular ethnic groups and reinforce misperceptions that such knowledge can be acquired easily and quickly. Insufficient attention is paid to understanding the complexities of culture and that all cultures are multifaceted and changeable — although students can have common experiences associated with their membership of a particular ethnic group, within each ethnic group, there are also different experiences, depending on a range of other factors such as gender, social class and so on.

A strategy sometimes used in the preparation of teachers for culturally diverse students is to provide preservice teachers with opportunities for direct contact with people from different cultures. Some research (Cushner and Brennan 2007; Walters et al. 2009) suggests that direct experience and interaction with culturally diverse ‘others’ is one way to assist preservice teachers come to know the cultural other and to develop understandings of what constitutes cultural diversity. Therefore, in Australia, Europe and North America, opportunities for cultural exchange, or study tours are increasingly being made available to preservice teachers as a way to achieve this (Rapoport 2008; Dooly and Villanueva 2006; Hill and Thomas 2005; Dantas 2007). However, unless these programs are accompanied by academic work that engages with scholarship around white privilege, nationhood, the complexities of culture and ethnic belonging and culturally responsive pedagogies, they are of limited benefit in preparing teachers to understand the complexities of their students’ cultural subjectivities because they can simply reinforce existing stereotypes and attitudes about the ‘cultural other’. A study I conducted with a colleague that investigated what had been learned by 15 Australian preservice teachers who had

participated in an overseas teaching experience in either India or Korea raised concerns about how the preservice teachers understood the world they had come to see and experience. Findings suggest that the preservice teachers understood their host cultures as either exotic or deficit, had existing stereotypes reinforced and took up teaching subjectivities embedded within discourses of charity and benevolence (Santoro and Major 2012).

Far too often, in its concern to address questions about *who* it is that teachers must know, teacher education neglects a key question; *who* is it that is doing the knowing? Teacher education usually focuses on developing preservice teachers' understandings about 'the other' without providing opportunities for the simultaneous development of understandings about the 'self'. Knowledge of self and knowledge of others are mutually constitutive — each builds upon, and is dependent on the other to make meaning. Palmer, referring to the connection between good teaching, knowledge of students and knowledge of self suggests, 'When I do not know myself, I cannot know who my students are... and when I cannot see them clearly I cannot teach them well' (Palmer in Hinchey 2004, p. 1). Taking Palmer's thoughts a little further, teachers need to know themselves as encultured if they are to understand their students. This means understanding how their membership of the dominant cultural majority shapes their teaching selves, their classroom practices, their relationships with students who are members of cultural minorities and their expectations of these students. However, Australian preservice teachers, most of whom are drawn from the cultural majority, frequently lack awareness of their own ethnic positioning and enculturation (Aveling 2007; Santoro 2009). Often, they do not consider they have an ethnicity and consider ethnicity as something only relevant to those who are not members of the dominant majority (Santoro 2009). 'Anglo-Celtic Australian' becomes an invisible category of identity, and therefore, the privilege associated with this membership goes unexamined (Santoro 2009). I am reminded of an interview I conducted with a young Australian preservice teacher who was a participant in a research project that investigated how preservice teachers, drawn from the dominant cultural mainstream in Australia, understood their own ethnic identities and how they experienced teaching in culturally diverse inner city schools during practicum (Santoro and Allard 2005). When I asked her to describe her ethnicity, the preservice teacher hesitated for a moment, looked surprised (as though I had asked a ridiculous question) and replied, "I don't know.... I haven't got an ethnicity, I'm just normal I guess.... I'm just Australian". In assuming she is free of ethnicity and culture, it becomes impossible for her to interrogate how her teaching is shaped by her cultural values.

An ongoing consideration for teacher education is how to make visible to preservice teachers what is invisible, and to make explicit to them the 'investments that... have been woven into the everyday fabric of what is considered common sense' (Boler and Zembylas 2003, p. 111) and to help them understand the complexities of understanding the 'other' in relation to self. This however, is difficult and can be confronting because it requires preservice teachers to interrogate what are often deeply held views about themselves (and others). Goodwin (2010) refers to this as a domain of teacher knowledge; ie. personal/autobiographical knowledge.

Developing autobiographical knowledge means understanding that the way teachers teach is not only a demonstration of the skills they have learned through teacher education or ‘on the job’, but it is also knowing how their biographies, hopes and aspirations shape their work (Maguire and Dillon 2001, p. 8). It is therefore important for each individual to acknowledge that the personal knowledge, attitudes, biases they bring with them to their professional contexts are shaped by their culture and to consider how these shape, in turn, the various aspects of their teaching.

19.4 Addressing the Professional Standards and Developing Nuanced Understandings of Difference and Diversity

That teachers struggle, in general, to address the education needs of culturally and linguistically diverse students raises a number of concerns, particularly because the professional imperative to know students and to work productively with them has been a part of teacher professional standards in Australia in one form or another for many years. That Australian teachers graduate having been deemed to have the knowledge required to teach culturally diverse students suggests that graduate teacher standards are not a guarantee of ‘quality’. Maybe this is not surprising. The complex knowledge needed by culturally responsive teachers is not made explicit in the professional standards. The requirement to ‘know culturally and linguistically diverse students and how they learn’ is broad and lacks detail. It doesn’t acknowledge the complexities inherent in the identities of such learners and neither does it stipulate *what* it is that must be known. Nor does it specify *how* preservice teachers should come to learn it. This raises questions about whether it is possible, or even desirable, for professional standards to adequately account for the complex professional knowledge required by teachers in general. Some scholars (e.g. Zeichner 2005; Goodwin 2010) assert that professional standards cannot take account of the multiplicity of knowledges required by teachers. Furthermore, if Professional Standards are too detailed and prescriptive, there is a risk they may lead to the de-skilling of the profession — the very thing they seek to avoid — and that teacher educators will have less autonomy and less flexibility to devise teacher education curricula that is meaningful and develops place and location specific knowledge and practice. As it is, the pressure to meet accreditation and registration requirements and other externally imposed accountability measures have resulted in the elements of teachers’ work that are relatively easily monitored such as technical skills, being increasingly prioritised over less measurable aspects (Hebson et al. 2007).

Professional Standards should only ever be seen as a framework for good teacher education, not a prescription. As Goodwin asserts, Professional Standards

lay out the knowledge, skills, and dispositions quality teachers ought to embody and perform.[...] but producing the globally competent teacher will require more than “covering” a defined set of requirements [...] As teacher educators we need to conceptualize teaching knowledge in ways that transcend the practicalities (and limitations) of

discrete teaching skills and tools, to develop in our students ways of thinking about and approaching teaching and learning that promote the application of a professional repertoire to a vast array of problems and dilemmas, most of which cannot possibly be anticipated beforehand (2010, p. 22).

Teacher education that seeks to prepare culturally responsive practitioners must not provide preservice teachers with ‘recipes’ of practice for culturally diverse ‘others’ through which they can demonstrate what they think they have learned. It must develop skills of problem solving through closely articulated theory and practice. It needs to provide ample opportunities for preservice teachers to: (a) reflect on their own assumptions and beliefs concerning the lived experiences of students; (b) test their assumptions about which pedagogical approaches work for which students; and (c) adapt, reshape and retrial teaching strategies in light of their analyses. In similar ways to the proposal for teacher education reform developed by Ball and Forzani (2009), teacher education for culturally diverse contexts needs to be “Redesigned around practice [and] include at its core opportunities to learn to perform a repertoire of teaching tasks and to choose among them with deliberate attention to pupils, as well as opportunities to acquire content and foundational knowledge centrally important to the work of teaching” (p. 507). It also needs to find spaces for ongoing reflection as part of practice. By sharing their knowledge, challenging each other’s assumptions, reflecting on their own mistakes, pre-service teachers can better understand that there is never *an answer*, or *a right way* of teaching culturally and linguistically diverse students, but rather an ongoing commitment to drawing on a vast array of strategies. Preservice teachers need to be able to think about the assumptions they make about students’ cultural subjectivities, be willing to take risks, learn from each other and work together to raise troubling questions and challenge each other’s beliefs concerning stereotypes. This can only be good for their students and their development as culturally responsive practitioners.

19.5 Concluding Remarks

With the introduction of the Australian National Professional Standards and the revisions to teacher education curriculum that will be prompted by their implementation, it is prudent for teacher education to address in earnest, the preparation of teachers for culturally diverse student populations. To continue to teach preservice teachers *about* culturally diverse students in the hope they will come to know them, is counterproductive. What is required is teacher education that produces flexible and reflective practitioners who have nuanced understandings of what constitutes difference and diversity and can respond to changing diversities in a global world. Such flexibility is vital because what is certain, is that culturally diverse classrooms of the future will not look the same as culturally diverse classrooms today and knowing the students of today, will not be the same as knowing the students of tomorrow.

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Part V
Teachers' Knowledge and Characteristics
and the Quality of Teaching
and Teacher Education

Chapter 20

Mathematics Knowledge for Teaching and Its Influential Factors: An Analysis of Chinese Elementary Mathematics Teachers

Jian Wang

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Abstract Sound mathematics knowledge for teaching is crucial for developing teachers' effective mathematics instruction and thus, improving their student mathematics learning. What are the characteristics of such knowledge? What are the influences of teachers' training in mathematics and mathematics specific pedagogy, mathematics teaching experiences, and study of curriculum materials for teaching particular mathematics topics with their colleagues on the quality of such knowledge? These two questions have not been appropriately explored and understood. Chinese elementary teachers are found to have deep mathematics knowledge for teaching and their various professional backgrounds and curriculum contexts provide a unique situation to examine these questions. This study analyzes the open surveys with 25 Chinese elementary mathematics teachers from three elementary schools in an urban metropolitan context and curriculum data that they used for their teaching. It found that the participants' mathematics and mathematics specific pedagogy training or their mathematics teaching experience alone had limited influences on the quality of their mathematics knowledge for teaching. Their reconstruction of understanding of mathematics concept that they need to teach under the centralized curriculum with their colleagues shaped importantly the quality of their mathematics knowledge for teaching.

Keywords Mathematics education • Teacher knowledge • Chinese teachers

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Teachers' understanding of what they teach presumably shapes the quality of their instruction and consequently their student learning (Ball 2000; Ball and McDiarmid 1989; Shulman 1987). Such an understanding is defined as teachers' mathematics knowledge for teaching, which comprises their competence in explaining mathematics terms and concepts to students, interpreting students' mathematics ideas, assessing conceptions and suggestions of textbook, using representations accurately in the classroom, and offering students examples of mathematical algorithms or proofs (Hill et al. 2005).

This assumption becomes an important base for various mathematics teacher education reform policies in many countries (Tatto et al. 2008) and an important focus that drives cross-national mathematics teacher education study (Blomeke et al. 2011). In US, a number of teacher education and professional development policies have been initiated and implemented to improve teachers' subject knowledge for teaching (Interstate New Teachers Assessment and Support Teaching Consortium 1992; National Board for Professional Teaching Standards 2002). These policies are pushing many programs of teacher preparation and professional development to change their contents and approaches to improving teachers' subject knowledge for teaching (Darling-Hammond and Bransford 2005). Similar teacher education reform focus and patterns have been identified in other countries (Schmidt et al. 2011).

However, the influences of teachers' understanding of mathematics for teaching have not been consistently found on their mathematics teaching (Levine 2011) and student performance (Hill, et al. 2005; Kersting et al. 2010; Tchoshanov 2011). The proper understanding about following two questions has not been soundly developed. What are the characteristics of teachers' mathematics knowledge for teaching? What are the influences of teachers' training in mathematics and mathematics specific pedagogy, mathematics teaching experiences, and study of curriculum materials for teaching particular mathematics topics with their colleagues on the quality of such knowledge? The proper answer to the first question will offer important knowledge bases upon which the curriculum necessary for developing teachers' mathematics knowledge can be designed (Ball et al. 2008). The adequate answer to the later will provide the necessary knowledge base for designing programs, processes, and instructional activities that allow teachers to acquire such knowledge (Feiman-Nemser 2001). Drawing on survey and relevant curriculum data from Chinese elementary mathematics teachers, this study examines the above two questions in hope to contribute to such knowledge bases.

20.1 Theoretical and Empirical Bases

20.1.1 *Theoretical Framework*

Cochran-Smith and Lytle (1999) propose three conceptual assumptions about how effective teachers' knowledge for teaching can be developed, which are used here to frame the focus, questions, and inquiry process of this study. The first is the

knowledge for practice assumption, which assumes that teachers' knowledge for teaching effectively is scholarly and conceptual in nature and can be developed through their university coursework first and then transform it into their teaching practice (Grossman 1990; Grossman 1992). Implied in this conception is that university subject matter and subject specific pedagogy courses are the important source for teachers' subject matter knowledge for teaching (Cochran-Smith and Lytle 1999; Martin 1999). However, teachers' mathematics courses at university level is seen ineffective in helping develop their mathematics for teaching because what teachers learned from these courses is not teaching specific (Hill et al. 2008) and needs to be unlearned or relearned in relation to the context of teaching (Ball 1996). Thus, it is necessary to examine whether and to what extent the subject content knowledge that teachers acquired at university level can be transformed into their subject matter knowledge for teaching. Part of this study examines the influence of Chinese elementary teachers' mathematics and mathematics specific pedagogy training at university level on their mathematics knowledge for teaching.

The second is the *knowledge in practice* assumption. It presumes that the knowledge teachers need for teaching effectively is personal and practical in nature and its development needs to be embedded in their actions, decisions, and judgments in the context of their teaching practice and can only be acquired through their accumulation of, reflection about, and inquiry into their teaching experience (Elbaz 1983; Grimmer and MacKinnon 1992). Following this conception is the suggestion that the more experiences that teachers accumulate in teaching a particular subject matter through their reflection on teaching and emulation of their more experienced colleagues, the more likely that they will develop their knowledge for teaching effectively (Cochran-Smith and Lytle 1999). This assumption is criticized as seeing teacher learning as a conservative process in which teachers' accumulative experiences and reproduction of exiting teaching through emulation of experienced colleagues play a central role (Cochran-Smith and Paris 1995), which leaves a little space for new comers to innovate and transform (Kardos et al. 2001; Putnam and Borko 2000). Thus, it is important to examine whether and to what extent the amount of teachers' experiences in teaching can help develop their mathematics knowledge for teaching effectively. This study also explores the influences of Chinese elementary teachers' mathematics teaching experiences on their mathematics knowledge for teaching.

The third is the *knowledge of practice* assumption, which stresses that instead of through the transmission of scholarly developed knowledge into teaching, accumulation of practical knowledge through their individual teaching experiences or emulation of their more experienced colleagues, teachers' construction and reconstruction of knowledge for teaching particular topics and concepts in the professional learning community is the important source for their knowledge development (Borko 2004; Hiebert et al. 2002). Following this conception, teachers' mathematics knowledge for teaching has to be constructed and reconstructed through their systematic and constant examination of the curriculum materials that they need to teach with their colleagues in their teaching context (Gamoran 2001; Romberg 1992; Stigler and Hiebert 1999). Therefore, it is important to understand whether

and to what extent teachers' examination of their curriculum for teaching in collaboration of their colleagues can help develop their mathematics knowledge for teaching effectively. This study checks indirectly the influence of Chinese elementary teachers' study of their curriculum with their colleagues on their mathematics knowledge for teaching.

20.1.2 *Empirical Bases*

It is necessary to note that the differences between these three assumptions of teacher knowledge development is often conceptual and in reality, teachers can be exposed to multiple influences in developing their subject knowledge for teaching (Cochran-Smith and Lytle 1999). In spite of this complication, the empirical support for each of the above three approaches is anecdotal, fragmental, or contradictory.

First, the relationship between what teachers learned in their mathematics and mathematics specific pedagogical courses, their knowledge for teaching, and their teaching practice has not been established empirically based on a systematic review of literature (Wilson et al. 2001). The anecdotal studies seemed to suggest that university mathematics courses and teachers' major in mathematics had little impact on their mathematics understanding for teaching. In a study surveying second-school teachers, Zazkis and Campbell (1996) found that although participants agreed that their university level mathematics courses influenced their purposes and confidence of mathematics teaching, these courses had little influences on their content specific mathematics understanding of teaching. The research on effective elementary teachers (Levine 2011) indicated that those teachers who produced the higher gains in students' mathematics achievements did not necessarily hold advanced qualifications in mathematics. In addition, Chinese elementary teachers were found to have received less mathematics training at the college level, but their procedural and conceptual knowledge for mathematics teaching was stronger and deeper than that of their US counterparts (Ma 1999; Zhou et al. 2006). These studies casts some doubts on the direct relationship between what teachers learned about mathematics at the college level and their mathematics knowledge for teaching anecdotally without direct comparison of those who received university mathematics and mathematics specific pedagogy training with those did not receive such a training on their mathematics knowledge for teaching in the same context. This study conducts such a comparison to verify the assumption of *knowledge for practice*.

Second, the empirical evidence for the relationship between teachers' mathematics teaching experiences and their mathematics knowledge for teaching is conflicting and fragmented. Researchers (Borko and Livingston 1989; Li and Huang 2008; Livingston and Borko 1990) found substantial differences in the lesson focuses, planning, and instructions between experienced and inexperienced mathematics teachers, which implied that the longer a teacher teaches mathematics may lead to a better understanding of mathematics for teaching without direct

comparison of experienced teachers' mathematics knowledge for teaching with that of their inexperienced colleagues. Other researchers (Schram et al. 1990) showed that the differences of understanding mathematics teaching between experienced and inexperienced teachers was more likely in their pedagogical knowledge aspect rather than in their understanding about mathematics content drawing on clinical interviews with US elementary teachers on their thinking about re-grouping and its teaching without consideration of other mathematics concepts. The present study further explores the influences of the length of teachers' mathematics teaching on their mathematics knowledge for teaching on a range of mathematics concepts in the elementary curriculum by comparing the mathematics knowledge for teaching directly between experienced Chinese elementary teachers and their inexperienced colleagues and verifies the assumption of the knowledge in practice.

Third, the empirical evidence supporting the *knowledge of practice* assumption is still underdeveloped. Three fourth of U.S. eight grade teachers were found to use one textbook all or most of time and covered at least three fourth of the textbook in their mathematics teaching in a given year, which suggested that teachers might study their mathematics curriculum intensely for teaching (National Research Council 2001). However, the study examining the relationship between teachers' use of textbooks in their classrooms and student performances at middle school level (Tarr et al. 2008) showed the no significant statistical relationship between the two when the relevant kind of learning environment created by teachers was not considered. The study did not examine whether teachers' study and use of their mathematics curriculum will influence their understanding of mathematics for teaching.

Chinese teachers developed a stronger understanding about the mathematics content that they teach (Ma 1999; Zhou et al. 2006), were more likely to use direct instruction to help students understand procedural and conceptual mathematics (An et al. 2004), and relied more heavily on their knowledge of textbooks and relevant examination for teaching mathematics than their U.S. peers (Cai and Wang 2010). Working under the contexts of centralized curriculum requirements and contrived collaboration among colleagues, they were also able to focus on and articulate about mathematics concepts that they were required to teach in their conversation about teaching with their colleagues (Han and Paine 2010; Wang and Paine 2003; Wang et al. 2004). These studies indicated a possible relationship between Chinese teachers' curriculum study with colleagues, their mathematics knowledge for teaching, and their mathematics teaching but the direct and specific relationship between Chinese teachers' mathematics knowledge for teaching and their study of the curriculum materials has not carefully examined and identified. This study explores the influences of teachers' current study of their curriculum on their understanding of mathematics for teaching by comparing those Chinese elementary teachers who were teaching particular mathematics concepts with those were not teaching the concepts on their knowledge for teaching these concepts in the context of the centralized curriculum system and teaching organization where they were required to work with each other for teaching.

20.2 Methodology

20.2.1 Participants and Contexts

The participants of the study involved all 25 Chinese mathematics teachers from three elementary schools in the same district of a large metropolitan area in South China. These participants were relatively young with average age of 32 year-old. The average years of teaching experiences of this group were 10.7 and the average years of mathematics teaching was 9.9 years, which showed that these participants had a stable teaching field in mathematics. Except for four beginning teachers, all these teachers taught mathematics at four or more elementary grade levels over the years. This group included 21 female and 4 male teachers resembling the situation in many elementary schools where female teachers were dominant. These participants and the contexts of their mathematics teaching provided a unique situation to examine my research questions.

First, these participants came to teaching mathematics with various teacher preparation backgrounds, some with mathematics and mathematics specific pedagogy training while the other did not have such training and many only received normal school education which was equivalent to the high school education with additional pedagogical courses like many Chinese elementary mathematics teachers documented in the literature (Fang and Paine 2000; Paine 1995). Such background differences allowed me to examine whether or to what extent these participants received or not mathematics and mathematics education training influence their understanding of various mathematics concepts for teaching, as suggested by the *knowledge for practice* assumption (Cochran-Smith and Lytle 1999).

Second, they also had a range of mathematics teaching experiences. Some were seen as experienced mathematics teachers as they had taught mathematics various grade levels six or more years while others were inexperienced teachers who had only taught five or fewer years based the norms of Chinese elementary schools. Such differences in their mathematics teaching experience allowed me to examine whether or to what extent the experienced participants were able to develop their mathematics knowledge differently from their inexperienced colleagues, as suggested by the *knowledge in practice* assumption (Cochran-Smith and Lytle 1999)

Third, all the participants taught under the centralized mathematics curriculum system with their colleges in the following manner. They were required to teach particular mathematics content following a set schedule, sequence, and requirements (Wang 2001; Wang and Paine 2003) and held accountable for their mathematics teaching by the same curriculum-based examinations (Eckstein 1993; Ma et al. 2006). Like most of Chinese teachers (Paine et al. 2003; Paine 1997), they were also required to work in the teaching research group in their school where mathematics teachers plan, observe, and reflect on each other's lessons, and discuss teaching and examination on a regular schedule based on the centralized curriculum

materials and content that they had to teach at the particular grade level and time. This context offered me a chance to examine whether and to what extent participants' mathematics knowledge for teaching is different when they were required to study certain mathematics concepts in their required curriculum with their colleagues for teaching and when they were not required to study these concepts for teaching with their colleagues suggested by the *knowledge of practice* assumption (Cochran-Smith and Lytle 1999).

20.2.2 Data Sources and Instrument

The data of this study came from a larger study that explores the relationship between the mandated curriculum and formal teacher organization, teachers' mathematics knowledge, mathematics teaching practice, and student mathematics performances in China. These data included three kinds.

The first consisted of participants' answers to questions about their professional training, mathematics teaching experiences, and current teaching tasks on a survey instrument. This data provided information upon which participants could be grouped for analysis based on their mathematics relevant training in college or teacher preparation, mathematics teaching experiences, and mathematics teaching tasks.

The second included participants' answers to a series of open-ended questions related to student misconceptions about several mathematics concepts in the elementary school curriculum on the same instrument including multiplication involving place value, division involving zero, rectangle perimeters and areas, and fraction division. These questions not only asks participants to demonstrate their mathematics understanding about these concepts but also their assessments of students' understanding about and approaches to addressing their misunderstanding of them as conceptualized by mathematics knowledge for teaching in the literature (Hill et al. 2005). Their answers to these open-ended questions were used for analyzing the patterns and characteristics of participants' mathematics knowledge for teaching. These survey questions are shown below:

(1) Questions about Multiplication Involving Place Value

Some teachers noticed that several of their students were making the same mistake in multiplying large numbers. In trying to calculate

$$\begin{array}{r} 123 \\ \times 645 \\ \hline \end{array}$$

the students seemed to be forgetting to “move the numbers” over on each line. They were doing this:

$$\begin{array}{r}
 123 \\
 \times 645 \\
 \hline
 615 \\
 492 \\
 738 \\
 \hline
 1845
 \end{array}$$

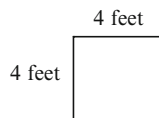
- While these teachers agreed that this was a problem, they did not agree on what to do about it. What would you do if you were teaching and you noticed that several of your students were doing this?
- What if some student asks, “Why do we have to move the numbers over? I thought we were always supposed to line the numbers up in math.” How are you going to answer the student?

(2) Questions about Division by Zero

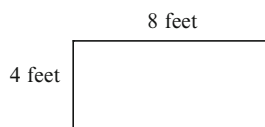
- Suppose you have a pupil who asks you what 7 divided by 0 is, how would you respond?
- Why would you do that?
- If the student said, “It seems that if you divide by nothing, you don’t divide and so you would still have 7,” how would you respond and why?

(3) Question about Rectangle Perimeter and Area

Imagine that one of your students comes to class very excited. She tells you that she has figured out a theory that you never told the class. She explains that she has discovered that as the perimeter of a closed figure increases, the area also increases. She shows you this picture to prove what she is doing:



Perimeter = 16 ft. Area = 16 square ft.



Perimeter = 24 ft. Area = 32 square ft.

- How would you respond to this student?

4) Questions about Fraction Division

Division by fractions is often confusing. People seem to have different approaches to solving problems involving division with fractions. For example:

$$13/4 \div 1/2$$

- Many people find this hard. In your view, what makes this especially difficult?
- What would you say would be a good situation, a story, or a model for $13/4 \div 1/2$?

Both kinds of data were collected through the survey instrument adopted from the questionnaire developed and validated by the National Center for Research on Teacher Education (Kennedy and Ball 1993). I decided to adopt this questionnaire for data collection because it had been used with U.S. and Chinese teachers in examining their mathematics knowledge for teaching (Ma 1999; National Center for Research on Teacher Learning 1991). Thus, the result of this study can be compared with those from the existing studies.

The third kind of data contained the centralized mathematics textbooks that each participant used for their mathematics teaching in the semester of data collection and the semester before. These textbooks were used to examine whether the mathematics concepts in the survey were covered in the curriculum materials that the participants used for teaching or not at the time.

20.2.3 Participant Grouping and Data Analysis

Participants were grouped in three ways to examine the research questions of this study. First, the participants were categorized into the groups with and without mathematics and mathematics specific pedagogy training in college to examine the influences of having or not mathematics and mathematics specific pedagogy training on participants' mathematics knowledge for teaching as implied by the *knowledge for practice* assumption.

Second, the participants were then divided into the group of inexperienced participants with five or fewer years of mathematics teaching and the group of experienced participants with more than 5-years of mathematics teaching. The purpose of this grouping was to examine whether and to what extent the length of mathematics teaching experiences exerted any influences on participants' mathematics knowledge for teaching as indicated by the *knowledge in practice* assumption.

Third, they were also grouped into the first-fourth grade and the fifth-sixth grade groups based on two considerations. The mathematics curriculum at the first-fourth grade levels did not cover the fraction division while that at the fifth-sixth-grade level covered it. The first-fourth-grade curriculum covered directly the concepts of place value in multiplication, division with zero, and rectangle perimeter and areas

while the fifth-sixth-grade curriculum covered indirectly. For example, multiplication and division are used in the part of ratio and fraction contents and rectangle ideas were incorporated into the other geometric contents even though these concepts were not listed as the required concepts for teaching in the curriculum materials at fifth-sixth. Such an integration of different mathematics concepts in the earlier stages or grades into the content for the later stages or grades is seen as an important feature of Chinese elementary mathematics curriculum in the literature (Li et al. 2008; Li 2000; Zhou and Peverly 2005). This grouping was used to examine whether the participants showed any differences in understanding those mathematics concepts covered directly, indirectly, or not by their curriculum materials as suggested by the *knowledge of practice* assumption.

The answers that each participant generated to the questions related to each of the four mathematics concepts were coded, combined, and categorized based on the levels of their mathematical reasonableness and mathematics teaching specificity as suggested (Merriam 1998). Then, these coded answers from each participant were then grouped under each mathematics concept for further analysis in the following steps.

First, the different coded answers that all the participants generated to the questions related to each of the four mathematics concepts were calculated and then compared. This analysis was conducted to identify major characteristics of mathematics knowledge for teaching of the participants in the study.

Second, the different coded answers that were generated by the groups with and without mathematics and mathematics specific pedagogy training to the questions on each mathematics concept were calculated and compared with each other to identify their similarities and differences. This analysis verified whether and to what extent participants' mathematics and mathematics specific training influenced their mathematics knowledge for teaching.

Third, the different coded answers that the inexperienced and experienced groups generated to the questions relevant to each of the mathematics concepts were calculated and compared with each other to identify their similarities and differences. This analysis examined whether and to what extent participants' levels of mathematics teaching experiences influenced their mathematics knowledge for teaching differently.

Fourth, the different coded answers that the first-fourth grade groups and the fifth-sixth-grade group generated to the questions related to all the fourth mathematics concepts were calculated and compared with each other. This analysis examine whether and to what extent participants' study of current curriculum materials with their colleagues shaped their mathematics knowledge for teaching those concepts that were covered directly, indirectly, or not covered by their curriculum materials.

The Fisher Exact tests were conducted in each of the above steps to check whether the differences between different groups in each step of analysis were statistically significant. Since the data of this study were non-parametric and samples were small, the Fisher Exact tests were selected for the data analysis as suggested (Fisher 1925). PASW Statistics 18.0 for Mac was used to conduct the above Fisher Exact tests with sample weighting in each step of analysis.

20.3 Study Findings

20.3.1 Response to Student's Misunderstanding of Place Value in Multiplication

General Characteristics of Participants' Responses. Four kinds of responses to the student's misunderstanding of place value in multiplication emerged from my coding process. The first kind of responses demonstrated correct understanding of place value in multiplication using concrete examples and approaches to addressing such a misunderstanding. For example, Ms. Song, a fifth grade teacher¹, wrote that she would like to “let students understand the meaning of the result each time you multiply, 615-ones, 492-tens, 738-hundreds” and “we eliminate 0 s when we multiply second and third times.” In this answer, Ms. Song stressed the differences among 615, 492, and 738 that student obtained in multiplying each time based on place value and asked her student to distinguish these differences in multiple-step multiplication calculation.

The second kind of response showed the direction in which the participant tried to help the student without using any specific example involving both mathematics ideas and pedagogical process. As Ms. Yen, a second grade mathematics teacher, responded, “We learned addition and subtraction earlier, now we are learning multiplication, one rule does not able to apply to other situations.” Although in this response, Ms. Yen claimed that she was going to compare addition and subtraction with multiplication in helping the student, it was not clear what specific mathematics ideas she would use and how to use them.

The third kind of answers pushed the student to follow the rules in calculation without specific clarification of the meanings of the rules. Ms. Kang, a second grade teacher, responded that she would help students “understand the first multiplier and its position and second multiplier and its position, where the second multiplier should be placed, practice more.” In her answer, Ms. Kang focused on the rule of multiplication and its practice with little attention to the ideas of place value and how to help students understand the role of place value in multiplications. The last kind of responses was unable to provide any clear response to the student's misunderstanding

My analysis about the above kinds of responses across different participants revealed that the majority of participants were able to respond to the student's approach to multi-digit multiplication problem with the correct and concrete place value ideas. As Table 20.1 below demonstrated, 80 % of the participants were able to use place value correctly and concretely in responding to the student's idea. About 12 % of them were able to use place value abstractly. In contrast only 4 % of them stressed the rule following and 4 % were unable to offer clear responses. The Fisher Exact test showed the statistical significant difference between the participants who were able to offer correct and concrete response to the student's misunderstanding about multiplication involving place value and those who were not as $\chi^2 (1) = 18.000, p < 0.001$.

¹Pseudonym is used here and other places of the paper for a particular teacher in order to protect the participants.

Table 20.1 How participants respond to open questions of mathematics knowledge for teaching

	All participants		Math & math education		None math & math education		Inexperienced participants		Experienced participants		Grade 5–6 participants		Other grade participants	
	N=25	N=13	N=13	N=12	N=8	N=8	N=8	N=17	N=17	N=9	N=9	N=19	N=19	
Place value questions	4 %	0 %	0 %	8 %	0 %	8 %	0 %	6 %	6 %	11 %	11 %	0 %	0 %	
No clear responses														
Follow rule use	4 %	0 %	0 %	8 %	0 %	8 %	0 %	6 %	6 %	11 %	11 %	0 %	0 %	
Use place value abstractly	12 %	15 %	15 %	8 %	25 %	8 %	25 %	6 %	6 %	0 %	0 %	19 %	19 %	
Use place value concretely	80 %	85 %	85 %	75 %	75 %	75 %	75 %	82 %	82 %	78 %	78 %	81 %	81 %	
Division questions	8 %	0 %	0 %	17 %	0 %	17 %	0 %	12 %	12 %	11 %	11 %	6 %	6 %	
Unable to respond reasonably														
Able to respond reasonably	92 %	100 %	100 %	83 %	100 %	83 %	100 %	88 %	88 %	89 %	89 %	94 %	94 %	
Geometry questions	12 %	8 %	8 %	17 %	13 %	17 %	13 %	12 %	12 %	11 %	11 %	13 %	13 %	
Praise without challenge														
Praise but need to explain	28 %	31 %	31 %	25 %	38 %	25 %	38 %	24 %	24 %	22 %	22 %	31 %	31 %	
Challenge with examples	60 %	62 %	62 %	58 %	50 %	58 %	50 %	65 %	65 %	67 %	67 %	56 %	56 %	
Fraction question 1	28 %	15 %	15 %	42 %	38 %	42 %	38 %	24 %	24 %	11 %	11 %	38 %	38 %	
Unable to identify reasons														
Identify reasons abstractly	52 %	77 %	77 %	25 %	63 %	25 %	63 %	47 %	47 %	44 %	44 %	56 %	56 %	
Identify reasons concretely	20 %	8 %	8 %	33 %	0 %	33 %	0 %	29 %	29 %	44 %	44 %	6 %	6 %	
Fraction question 2	64 %	69 %	69 %	58 %	75 %	58 %	75 %	59 %	59 %	33 %	33 %	81 %	81 %	
Unable to show right story														
Able to show right story	36 %	31 %	31 %	42 %	25 %	42 %	25 %	41 %	41 %	67 %	67 %	19 %	19 %	

Participants' Backgrounds and Their Responses. Emerging from the analysis of the relationships between participants' training, teaching, and contextual backgrounds and their responses were several findings. First, whether the participants had or did not have mathematics and mathematics specific pedagogy training did not influence differently their response to the student's misunderstanding about place clue in multiplication. Table 20.1 showed that about 85 % and 75 % of the participants with and without mathematics and mathematics specific pedagogy training were able to offer correct and concrete responses respectively. No significant statistical difference were found between the participants with and without mathematics and mathematics specific pedagogy training based on the results of the Fisher Exact test, $\chi^2(1) = 0.361, p > 0.05$.

Second, the length of participants' mathematics teaching also influenced little their responses to student's misunderstanding of place value in multiplication. Table 20.1 demonstrated that 75 % and 82 % of inexperienced and experienced participants correspondently responded the student's misconception of place value in multiplication using correct and concrete place values ideas. The difference between the inexperienced and experienced participants in offering concrete and correct response the student's misunderstanding about place value in multiplication problem was not statistically significant as Fisher Exact test showed, $\chi^2(1) = 0.184, p > 0.05$.

Third, whether or not participants were teaching the curriculum that covered multiplication calculation involving place value directly or indirectly produced no differences in their responses to the student's multiplication problem involving place value idea. Again, Table 20.1 indicated that 78 % and 81 % of the fifth-sixth-grade group and first-fourth grade participants respectively offered correct and concrete responses to the student multiplication misunderstanding about place value in multiplication. The Fisher Exact test on the difference between the first-fourth and the fifth-sixth grade groups in offering the correct and concrete responses to student's multiplication problem was statistically insignificant as $\chi^2(1) = 0.034, p > 0.05$.

20.3.2 Participants' Response to Student's Confusion of Division with Zero

General Characteristics and Patterns of Participants' Responses. The coding of participants' response to the student's confusion of division with zero led to two kinds of responses. The first was correct and concrete response that showed proper understanding of the meaning of zero in division in two ways. The responses used the idea of division as the reversed calculation of multiplication, such as the response from Ms. Chen, a sixth grade teacher:

Seven divided by zero is meaningless because its divisor is zero. The meaning of division is that we know the result of multiplication involving two numbers and one of the numbers

in the multiplication is known, we want to know the other number. That is $(?) \cdot 0 = 7$. How can any number $\cdot 0$ will equal 7?"

In the answer, Ms. Chen first reminded the student that division was the reversed calculation of multiplication involving two numbers and in the this case, the result and one of numbers in the multiplication were known, the goal was to know the other number. Then, she used the idea of multiplication that any number times zero can be anything but zero to show the student that 7 divided by 0 is meaningless.

The other responses used the logic of division itself to show that anything divided by zero is meaningless. As Ms. Zhang, a fifth-grade teacher, wrote:

I will ask the student the result of 7 divided by 1. 7 divided by 1 equals to 7. That is the student has a result of 7 in one group. So, it is impossible for one to divide 7 by 0 that he or she can still have 7. Since 0 represents there is no group, 7 is not divided. So, 7 divided by 0 is meaningless.

In this case, Ms. Zhang first let the student see that when 7 divided by 1, the result was 7 and then, challenged the student with the idea that 7 divided by 0 could still be 7 since 0 here indicated there was no group into which 7 could be evenly distributed. Thus, it was meaningless.

The second kind of responses failed to demonstrate correct and reasonable explanation about the role of zero in division. Such as the response from Ms. Huang, a first grade teacher to the student that *"he or she needs to know what is division, I will point out his answer has a problem."* In this answer, although Ms. Yen indicated that the student had a problem in understanding the division, she failed to clearly show what was the problem, what caused the student's confusion, and how to help student resolve his confusion.

The analysis of the above responses indicated that the majority participants were able to use reasonable and concrete ideas of multiplication and/or division to resolve the student's confusion about division with zero like their responses to the question of place value in multiplication. As demonstrated in Table 20.1, 92 % of the participants were able to use concrete and reasonable response in helping the student with confusion. The difference between the participants who were and who were not able to offer reasonable and concrete responses was statistically significant based on the Fisher Exact test, $\chi^2(1) = 35.280, p < 0.001$.

Participants' Backgrounds and Their Responses. The analysis about the relationships between teachers' training, teaching experiences, and grade level backgrounds and their responses led to the following findings. First, whether the participants received or not mathematics and mathematics specific pedagogy training influence little participants' responses to the student's confusion about division with zero. Table 20.1 illustrated that all the participants with mathematics and mathematics specific pedagogy training and 83 % of those without such training were able to offer reasonable and concrete responses. The Fisher Exact test showed insignificant statistical difference between the participants with and without mathematics and mathematics specific pedagogy training in offering concrete and correct responses to the student's confusion about division with zero as $\chi^2(1) = 2.355, p > 0.05$.

Second, the length of participants' mathematics teaching also played a limited role in influencing their responses to the student's confusion about division with zero. As shown in Table 20.1, all the inexperienced participants and 88 % of experienced participants responded the student's confusion about division involving zero reasonably and concretely. The Fisher Exact test showed insignificant statistical difference between the inexperienced and experienced participants as $\chi^2(1) = 1.023, p > 0.05$.

Third, whether or not participants were teaching the curriculum that covered division directly or indirectly did not make important differences in their responses to the student's confusion about division with zero. Based on Table 20.1, about 89 % of the fifth-sixth grade participants whose curriculum did not cover the division directly and 94 % of the first-fourth grade participants whose curriculum covered such a concept were able to offer reasonable and concrete responses to the student's confusion about division with zero. The difference among between the two groups was statistically insignificant based on the results of the Fisher Exact test, $\chi^2(1) = 0.522, p > 0.05$.

20.3.3 Participants' Response to Student's Misassumption of Rectangle Perimeters and Areas

General Characteristics and Patterns of Participants' Responses. Three kinds of responses came out of my analysis of participants' response to the student's misassumption of the relationship between rectangle perimeters and areas. In the first kind, the participants challenged the student reasonably with specific counter examples to show the inconsistent results following his assumption. Ms. Lou, a third grade teacher responded that she would like to "praise this student first, then give him several rectangles with the perimeters longer than 16 but with various lengths and widths, and then ask him to calculate the area of each rectangle until he find that as the perimeters of these rectangles increase, their areas do not necessarily increase." In this answer, Ms. Lou challenged the student misconception with various concrete rectangle examples each of which followed student's idea but together they yielded the results inconsistent with the student's prediction.

In the second kind of responses, participants praised the student for his thinking and then asked him to explain clearly his idea without showing how to challenge his assumption or help him find out the problem with his assumption specifically. Such as Ms. Fang, a fourth grade teacher, who would simply "praise him for his efforts and ask him to explain further." The last kind of responses simply confirmed the student's assumption and praise his thinking and effort without showing any further action towards the student's assumption.

The analysis showed that only a little bit more than half of the participants were able to challenge the student's misunderstanding about the relationship

between rectangle perimeter and area with specific counter examples. The total number of participants who were able to offer the reasonable and specific responses to the student's misassumption in this case was substantially lower than those who were able to offer the reasonable and concrete responses to the student's misunderstanding about place value in multiplication and to the student's confusion about division with zero. Only about 60 % of the participants were able to challenge the student to see the problem with his assumption using reasonable and concrete examples while about 28 % simply praised the student and asked him to further explain and 16 % only confirm the student's assumption. No statistical difference between the participants who were and who were not able to challenge the student's misunderstanding with reasonable and concrete examples as shown in the result of the Fisher Exact test, $\chi^2(1) = 2.000$, $p > 0.05$.

Participants' Backgrounds and Their Responses. The analysis about the relationships between teachers' training, teaching experience, and teaching tasks and their responses to the student misassumption of geometrical rule showed several findings. First, whether the participants received or not mathematics and mathematics specific pedagogy training did not influence participants' response to the student's geometrical misassumption differently. Table 20.1 showed that about 62 % and 58 % of the participants with and without mathematics and mathematics specific pedagogy training respectively were able to challenge the student's geometrical misunderstanding reasonably with concrete examples. The difference between the participants with and without mathematics and mathematics specific pedagogy training was not statistically significant in this case based the result of Fisher Exact test, $\chi^2(1) = 0.027$, $p > 0.05$.

Second, having more experience in teaching mathematics did not produce more positive influence on participants' responses to the student's geometrical misassumption. Table 20.1 showed that about 50 % of the inexperienced participants and 65 % of the experienced participants were able to respond to the student's geometrical misassumption reasonably with counter examples. The difference between the inexperienced and experienced participants in challenging the student's geometrical misassumption with reasonable counter example was statistically insignificant based on the result of the Fisher Exact test, $\chi^2(1) = 0.490$, $p > 0.05$.

Third, the participants who were teaching the curriculum that covered the rectangle perimeter and area directly seemed not different from those whose curriculum covered the concepts indirectly in responding to the student's geometrical misassumption. Based on Table 20.1, about 67 % of the fifth-sixth grade participants whose curriculum did not cover the ideas of rectangle perimeter and area and 56 % of the first-fourth grade participants whose curriculum covered these concepts offered reasonable counter examples to challenge the student's geometrical misassumption. The Fisher Exact test indicated no significant difference between the fifth-sixth group and the first-fourth grade group in offering reasonable challenges to the student's misassumption with concrete examples as $\chi^2(1) = 0.260$, $p > 0.05$.

20.3.4 *Participants' Response to Questions Relevant to Fraction Division*

General Characteristics and Patterns of Participants' Responses. Two questions relevant to fraction division were posed for the participants in the survey. The first centered on participants' understanding why fraction division is difficult to explain. The second asked the participants to propose a word problem that represents a situation of fraction division.

My coding of participants' response to the first question revealed three kinds of answers. The first answers explained specifically and reasonably the difficulties one had in understanding division fraction. As Ms. Tan, a sixth grade teacher, explained, "*whole number division makes the number smaller while fraction division makes numbers bigger, such a phenomenon is hard to understand,*" which clearly stressed the role of one's understanding about whole number division in interfering his or her understanding about the fraction division. The second responses stressed the reasons abstractly without specificity. As Ms. Guo, a first grade teacher, answered, "*Students do not know why we need to calculate in this way, it is too abstract,*" without clearly showing why. The third kind of responses was unable to identify any specific reasons for one's confusion and difficulty with division of fraction. As Ms. Cai, a second grade teacher, claimed, "*I have never taught higher grade level. I need to talk with teachers in these grade levels in order to know the reason,*" in which, having not taught the concept was used as an excuse for not knowing the reasons for one's confusion and difficulty in understanding fraction division.

Two kinds of responses were coded from the participants' responses to the second question that asked them to propose a word problem that representing a situation of fraction division. One was the concrete and correct representation of fraction division. For example, Ms. Shun showed the following world problem using the relationship between distance, time, and speed, which is typical responses in this kind although the characters and situations were varied:

A deer tries to figure out how fast it can run. It runs $1\frac{3}{4}$ kilometers using $\frac{1}{2}$ hour. How many kilometers can it run in 1 hour? Distance \div time = speed. Then, it can figure out the problem using $1\frac{3}{4} \div \frac{1}{2} = ?$ As $\frac{1}{2}$ hour = time, $1\frac{3}{4}$ thousands meters = distance, and how many kilometers it can run in 1 hour = speed.

The other was the response that failed to show the specific representation or incorrect representation of fraction division. As Mr. Fang, a fifth-sixth grade teacher, wrote, "*I will use line graphic to show the relationship,*" without showing any specificity and situations.

The analysis showed that not many participants were able to offer the correct and concrete reasons for one's difficulty with fraction division as asked by the first fraction division question and provide the concrete and correct representations of fraction division using a word problem as asked by the second fraction division question. Their concrete and correct responses to either fraction division question were substantially lower than their appropriate responses to the student's misunderstanding about place

value in multiplication, confusion about division with zero, and misassumption of the relationship between rectangle perimeter and area.

As Table 20.1 demonstrated, only about 20 % of the participants were able to explain one's difficulty with fraction division reasonably and concretely while 80 % of participants were unable to identify any specific reasons or mention only the reasons abstractly. Fisher Exact test showed the statistically significant difference between the participants who were and who were not able to offer concrete reasons, $\chi^2(1) = 18.000, p < 0.001$. Accordingly, only 36 % of the participants were able to offer the concrete and correct representation of fraction division using word problem while 64 % of them were unable to do so. Although no statistical difference was identified between the participants who were and who were not able to offer concrete and correct representations of fraction division using a word problem as $\chi^2(1) = 3.920, p > 0.05$, the p value in this case is closer to the significant level as $p = 0.089$.

Participants' Backgrounds and Their Responses. The analysis also showed the following findings about the relationships between teachers' training, teaching experiences, and grade level backgrounds and their responses to the two questions relevant to fraction division. First, having or not having received mathematics and mathematics specific pedagogy training did not influence differently participants' explanation of the reasons for one's difficulty about fraction division and their representation of fraction division using word problem.

Table 20.1 showed that about 8 % and 33 % of the participants with and without mathematics and mathematics specific pedagogy training respectively offered reasonable and concrete explanations for one's difficulty with fraction division. Fisher Exact test suggested insignificant statistical differences between the participants with and without mathematics and mathematics specific pedagogy training in offering reasonable and concrete explanation about the reasons as $\chi^2(1) = 2.564, p > 0.05$. Similarly, about 31 % and 42 % of the participants with and without mathematics and mathematics specific pedagogy training respectively provided reasonable and concrete representations about fraction division using a word problems. Fisher Exact tests showed insignificant statistical results as $\chi^2(1) = 0.027, p > 0.05$ between the two groups in offering reasonable and concrete representations.

Second, the experienced participants did not have any advantage over their inexperienced peers in offering correct reasons about one's difficulty with fraction division and reasonable and concrete representations of fraction division using word problems. None of inexperienced participants and 29 % of experienced participants offered the concrete reasons about one's confusion and difficulty with fraction division based on Table 20.1. The insignificant statistical difference between the two groups was found based on the Fisher Exact test result, $\chi^2(1) = 2.941, p > 0.05$. Similarly, about 25 % of inexperienced participants and 41 % of experienced participants who were able to show concrete and correct representations of fraction division using word problems. The Fisher Exact tests showed insignificant statistical difference between the two groups in this case as $\chi^2(1) = 0.618, p > 0.05$.

Finally, whether participants were teaching the curriculum that covered fraction division concepts or not influence differently their responses to both fraction

division questions. Table 20.1 demonstrated that about 44 % of the fifth-sixth grade participants whose curriculum covered the fraction division concept and only 6 % of the first-fourth grade participants whose curriculum did not cover fraction concept offered reasonable explanation about the one's difficulty with fraction division. The differences between the two groups in this case was statistically significant based on the Fisher Exact test result, $\chi^2 (1) = 5.252, p < 0.05$. Accordingly, about 67 % of the fifth-sixth grade participants and only 19 % of the first-fourth grade participants represented fraction division problem reasonably and correctly using a word problem. Fisher Exact test indicated that the difference between the two group in offering the reasonable and correct representation of fraction division was statistically significant as $\chi^2 (1) = 5.740, p < 0.05$.

20.4 Discussion and Conclusions

This study has several obvious limitations in light of its data and analysis. First, small sample size of participants presented a problem for further grouping participants and mathematics concepts in order to address its research questions more effectively. For example, the small sample size of this study made it impossible to form three subgroups of participants who had mathematics training, who had mathematics specific pedagogy training, and who had both within the group of mathematics and mathematics specific pedagogy training to check their differences in mathematics knowledge for teaching. Second, only a few mathematics concepts were used to measure participants' understanding about mathematics for teaching. Thus, the differences of participants' mathematics knowledge for teaching on the wider ranges of mathematics concepts could not be revealed through this study. Finally, the participants' mathematics knowledge for teaching were not measured based on the observation of their teaching practice and thus, it is not clear how their knowledge measured in the study play out in their teaching practice. These limitations together compromised the study findings, which make it difficult to generalize these findings to the larger population and the broader issues of mathematics knowledge for teaching. In spite of these limitations, this study does contribute to the understanding of its two research questions in several ways.

First, this study contributes to the existing understanding about the characteristics of Chinese elementary teachers' mathematics knowledge for teaching in two ways. It shows that Chinese elementary mathematics teachers were able to properly answers the questions related to students' misunderstanding about place value in multiplication, division with zero, and the relationship between rectangle perimeter and area. This finding resonates the existing findings about Chinese elementary teachers' stronger understanding of mathematics for teaching revealed in the studies that compared Chinese teacher with their US counterparts by measuring their mathematics knowledge for teaching at the elementary level (Ma 1999; Zhou et al. 2005). It further suggests that Chinese elementary teachers' quality of mathematics knowledge

for teaching may not be unbalanced as for those concepts appeared in the earlier grade level curriculum, they developed better understanding while for those concepts occurred in the later grade curriculum, their understanding was less well developed. As shown in the study, majority participants offered reasonable and concrete answers to the questions related to students' misunderstanding about place value in multiplication and division with zero. A little bit more than half of them offered the reasonable and concrete responses to the questions related to student's misunderstanding about the relationship between rectangle perimeter and area. Fewer than half of the participants provided reasonable and concrete answers to the questions related to fraction division. Such big differences in mathematics knowledge for teaching among Chinese elementary teachers have not been identified in the existing literature, which deserve further empirical exploration and careful theoretical interpretation.

Second, this study suggests that the distant mathematics and mathematics specific pedagogy training at college or in teacher education programs may play a limited role in shaping the quality of Chinese elementary teachers' mathematics knowledge for teaching. Based on the study, whether or not participants had received mathematics and mathematics specific pedagogy training in college or not influenced little their proper answers to all the questions relevant to student misunderstandings about all the four mathematics concepts. Considering Chinese teachers with mathematics or mathematics education majors from their college level education had to take most of the courses in mathematics (Fang and Paine 2000), such a finding challenges the *knowledge for practice* assumption in developing teachers' mathematics knowledge for teaching (Cochran-Smith and Lytle 1999). This assumption presumes what preservice teachers learn at university level could be transferred to the specific context of mathematics teaching where a particular concept of mathematics is taught (Grossman 1990; Grossman 1992).

Third, the length of Chinese elementary teachers' mathematics teaching may also play a limited role in shaping participants' mathematics knowledge for teaching. As shown in this study, the participants' length of mathematics teaching experiences did not influence differently their responses to the questions relevant to students' misunderstanding relevant to all the mathematics concepts. This finding seems to mirror the finding of the study based on interviews (Schram et al. 1990) in which experienced teachers had no obvious advantage over their inexperienced peer in developing better understanding of mathematics concepts in their curriculum although more efficient and skillful in implementing traditional pedagogical approach to teaching the concepts. Considering that most participants in the study actually taught mathematics using the same curriculum materials at the multiple elementary grade levels in the past, this finding challenges the *knowledge in practice* assumption in developing teachers' mathematics knowledge for teaching (Cochran-Smith and Lytle 1999). This assumption assumes that teachers can develop their mathematics knowledge for teaching and thus, effective mathematics instruction by accumulating their experiences in teaching or emulating the practice of their more experienced colleagues (Ballou and Podgursky 1999, 2000; Thomas B Fordham Foundation 1999).

Finally, the study demonstrates indirectly that Chinese elementary teachers' mathematics knowledge for teaching could be more likely shaped by their study of the relevant concepts covered in their curriculum with their colleagues that they were teaching. Based on the study, for the questions related to student's misunderstanding about fraction division, those participants who were teaching these concepts at fifth-six grade levels offered substantially more reasonable and concrete responses than those who were not teaching the concept at first-fourth grade levels. However, for the questions related to multiplication, division, and rectangle, those participants who were teaching these concepts indirectly at fifth-sixth grade levels were not much different from those who were teaching them directly at first-fourth grade levels in offering reasonable and concrete answers to the questions relevant to these concepts.

All the participants were working under the centralized curriculum contexts (Wang 2001) and hold accountable for their mathematics teaching by the same curriculum-based examinations (Eckstein 1993; Ma et al. 2006). They also were organized to work in the teaching research groups with other mathematics teachers in their schools to plan, observe, and reflect on each other's lessons, and discuss teaching and examination on a regular schedule regularly like many other Chinese teachers (Paine et al. 2003; Paine 1997). Thus, their better knowledge for teaching those concepts in the curriculum materials that they were teaching was more likely shaped by their chances to study or deliberate these concepts in the curriculum with their colleagues as shown in the literature (Han and Paine 2010). This finding seems to confirm the assumption developed based on the interview with Chinese elementary mathematics teachers (Ma 1999) and the observation of their lessons and their discussions about their lessons (Wang 2002; Wang et al. 2004) that Chinese teachers' study of centralized mathematics curriculum with their colleagues helped develop their mathematics understanding for teaching.

Together, the findings of this study imply that the development of mathematics knowledge for teaching may not simply be a process in which teachers develop their mathematics knowledge in the university coursework and then transmit it into their teaching context later (Cochran-Smith and Lytle 1999). Instead, this knowledge is often teaching-task specific bonded by relevant understanding of particular students and contexts (Ball 1993; Lampert 1988). Thus, teacher preparation at university level, no matter in subject matter knowledge, pedagogical content training, or both, should focus on helping students develop their competence of inquiry into specific issues of teaching instead of helping develop their concrete and applicable mathematics contents and pedagogies.

They also suggest that the amount of teaching experience alone may have a limited influence on teachers' mathematics knowledge for teaching as such knowledge is less likely to be generated through their accumulated or repeated experiences of teaching the relevant mathematics concepts. Instead, this knowledge could become inert even if it was developed earlier, which needs to be reactivated and reconstructed for specific teaching task (Cohen and Ball 1990). Thus, the substantial support for teachers to develop this knowledge should be structured in their context of teaching specific topic (Borko 2004; Putnam and Borko 2000).

These findings further indicate indirectly that some instructional contexts may be necessary for teachers' construction and reconstruction of appropriate mathematics knowledge for teaching. These contexts could be the powerful, specific, and consistent curriculum materials, the relevant accountable assessment system (Cohen and Spillane 1992), and a professional community that support, check, and co-experiment with teachers (Hiebert et al. 2002; Wang and Paine 2003).

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Chapter 21

Living Within the Tensions: A Narrative Inquiry into Teachers' Personal Practical Knowledge in the Midst of Chinese Curriculum Reform

Yucui Ju

Abstract A narrative inquiry was performed with high school teachers to learn about their experiences in the ongoing curriculum reform in China. Teachers were found to live within tensions between the expectations of the curriculum reform and their personal practical knowledge (Tension I), as well as the demands of curriculum reform and the high-stakes testing plotline (Tension II). Teachers' personal practical knowledge rather than knowledge for teachers should become the starting point of teacher education. Moreover, cooperation could be a powerful method for teachers to work together to make curriculum and to deal with the interrelated tensions.

Keywords Curriculum reform • High-stakes testing • Tensions • Narrative inquiry • Teachers' personal practical knowledge • Knowledge for teachers

21.1 Introduction

There is a popular metaphor in China, "If teachers want to give students a cup of water, teachers must have a bucket of water (knowledge)." With the recent changes in Chinese society, the metaphor may well now be described as "If teachers want to give students a cup of fresh water, they need knowledge flowing like tap water." The metaphor draws attention to two things: the first suggests that because the water in the bucket may be obsolete, teachers should continually refresh their knowledge; the second suggests that teachers' knowledge should always be on tap and should not be bounded in any way. Students can always turn on the tap and expect to

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receive knowledge (Chen 2001). These are common metaphors that seem to create a kind of metaphor to live by (Lakoff and Johnson 1980), which impact almost everyone, especially teachers. These social and cultural metaphors shaped, and continue to shape, teachers' personal practical knowledge from their experiences as students in school and onward as they learned to teach and as they taught. Teachers' knowledge, that is, their personal practical knowledge shaped by these familial, institutional, social, and cultural metaphors, is deeply embodied and not easy to change (Clandinin and Connelly 1992, 1995).

The current curriculum reform in China requires a massive shift in the landscape of schools with a move toward curriculum making, with a starting point of the student/learner rather than a starting point of subject matter and teachers. Furthermore, there was a shift in how teachers were to engage with students; they were to shift from working as knowledge transmitters to working as facilitators of learning and reflective practitioners. Thus, thinking narratively, teachers are being asked to relearn or recompose their knowledge of curriculum making (Clandinin and Connelly 1992; Zhong et al. 2001). However, teachers learned to teach prior to curriculum reform, when there was still a one-way street built around a metaphor of delivering ideas to teachers and of having teachers deliver the mandated curriculum to students in their classrooms (Connelly and Clandinin 1988). This shift was and continues to be a significant challenge for teachers.

There are, however, other complexities in the current professional knowledge landscape/milieu (Clandinin and Connelly 1995) within which teachers in China live. Even with the curriculum reform shift from a starting point of subject matter to a starting point of students, a high-stakes testing plotline continues to structure the landscape. The entrance examination for higher education (Gao Kao) is the most significant in the lives of students. To a large extent, the lives of students are determined by their performance on this examination. A small difference in score can make a big difference in whether a student enters a university or not as well as the university he/she enters. Both are connected to how he/she lives his/her future life. The furious competition around this examination impacts the lives of the students, parents, and teachers. Students focus all their activities around their performance on these examinations. Parents and families go to great extremes to create conditions in which their child can achieve at the highest level. Finally, for teachers, they focus their instruction on the examinations in an effort to help their students receive high scores.

Many teachers believe that lecturing, listening, remembering, and constant practice are the best ways to help students achieve high scores. The metaphor of a constant and endless source of water is consistent with these beliefs, which, as noted above, deeply shape teachers' personal practical knowledge, both in their experiences of schooling and within their current teaching landscapes.

Thus, teachers seem to live within tension due to this dichotomy. They are being asked to unlearn and relearn their personal practical knowledge to teach in ways that fit within the curriculum reform but also to ensure that their students do well on the achievement tests. Little research describes the lives of teachers in this complex context, thus making teachers' voices silent. This research puts eyes on the Chinese

teachers' daily life experiences to understand teachers' personal practical knowledge and their experiences in their curriculum-making practices.

While the context of this study is in China, curriculum reform is a global issue. The results of this study may therefore be relevant to understanding the experiences of teachers in other contexts during this reform era.

21.2 Literature Review

21.2.1 *The Demands of the Curriculum Reform*

In the past, pressures from high-stakes testing and the ways teachers taught as transmitters of knowledge created many problems for students, such as high stress from learning, hating to learn, a lack of creativity, going against democratic teacher-student relationships, and so on (Zeng 2009; Huang 1999). Using the water metaphor, the high-stakes testing and resulting curriculum as well as the teaching practices were therefore criticised. Curricular critiques included subject matter that did not engage the experiences of students as they lived within their social milieus, a teacher-centred focus, an overemphasis on textbooks, hindering the development of student creativity and their ability to practice, a sole assessment focus on test achievement, and neglect of student development as whole human beings (Zhong et al. 2001, p. 5).

In response to problems of the previous educational system, Shanghai took the lead in curriculum reform in 1988. The Chinese government issued a series of documents on educational reform from 1999 to 2001. The Communist Party of China (CPC) Central Committee and State Council (1999) put forward a plan that required educators to change their educational notions and teaching styles, adopt active elicitation and discussion approaches, and encourage students to think independently and innovatively. Teachers are now required to teach in ways that allow students to experience and understand the processes of knowledge production and development, develop their scientific spirits and habits of thinking innovatively, emphasise their abilities to collect and process information, develop their abilities to adopt new knowledge, analyse and solve problems, learn to express themselves, and to cooperate with others.

Subsequently, the State Council issued "*The decision of reform and development for basic education*" (2001), and the Ministry of Education (MoE) issued "*The guideline for curriculum reform of basic education*" (Trial edition, MoE 2001). The MoE guideline put forward three concrete goals of curriculum reform: (1) shifting the tendency of over-emphasising imparting knowledge to emphasising the shaping of attitudes toward active study, in which students learn basic knowledge and skills as well as learn how to learn; (2) shifting the habit of over-focusing on textbook knowledge to strengthening the connection between subject matter and the lives of students, current society, science, and technology development; in

this way, paying attention to the interests and experiences of the students; and (3) shifting the status quo of over-emphasising rote learning to encouraging students to participate actively, such that they enjoy inquiry and hands-on activity.

The curriculum reform of basic education launched by the Chinese central government at the turn of the twenty-first century is a significant and profound change from Chinese education in the second half of the twentieth century because it occurs alongside a transformational period in China's economic and political systems (Feng 2006). Some curriculum experts (Zhong et al. 2001) have interpreted "*The guideline for curriculum reform of basic education*". They argued that traditional classes overemphasised cognition objectives, while intelligence, ability, emotions, and attitudes were neglected, thus the student became a divided, stifled person. While teaching that emphasises conclusions but neglects process appears to be a shortcut, the vivid process of producing the conclusions is reduced to rote and results in "good students" who remember knowledge but do not think, question, criticise, and invent. If students are familiar with some "objective truths" but are not able to ask questions about those truths, students are not liberated, and instead are controlled and oppressed. They stated that inquiry and experience are very important for student development. Inquiry takes time and inquirers confront problems, confusion, and frustrations, which are inherent parts of both human development and an inquiry stance. This approach is effective in the long run. Self-regulated study and inquiry-based study are highlights of the curriculum reform.

This transformation of learning style is closely related to the transformation of knowledge theories, from modernism, empiricism, and scientism (in which knowledge is seen as objective, certain, and universal) to post-modernism and constructivism (in which the focus is on personal knowledge, contextuality and uncertainty of knowledge) (Shi 2001; Wang 1995).

Many researchers (i.e., Wang 2007; Zhang and Yang 2003) discuss the roles of teachers in the new curriculum. Teachers are the critical components of curriculum reform because the new curriculum is processed by them, and they are the central factors deciding the type of curriculum orientation will be used in their classrooms. The new theory of knowledge and new curriculum requires teachers to change their knowledge of classroom curriculum making and their work as being knowledge transmitters to facilitators of student knowledge construction. However, as Yang (2005) commented, there is a long and difficult journey for teachers to change their lived practices of curriculum making to meet the demands of the curriculum reform.

21.2.2 The Tension Between the New Curriculum and the High-Stakes Testing Plotline

Many objectives of the new curriculum, such as a spirit of creativity and practical ability, are hard to measure. The assessment of schools, teachers, and students still focuses on student achievement. Caught between the new curricular objectives and

the former methods of assessment, teachers find it difficult to live out the new ideas in their practice (Jin and Zhang 2004).

Zhou and Lei (2008) argued that norm-referenced tests, such as the entrance examination of higher education, which evaluates students according to their positions in a group, are not useful or helpful in assisting teachers to teach. They suggested that both criterion-referenced tests, which would help educators to assess student learning, and scales that test emotion and attitude should be developed. As in North America, this kind of achievement test system is a “long disputed matter” (Craig 2004). Some researchers believe it is a vehicle and a measure of school success. Some directly attribute student achievement and school improvement to the pressure of this kind of accountability system, whereas others are of the opinion that the achievement test plotline negatively impacts teaching and learning as well as stifles democratic discussions (Craig 2004; Eisner 2002; Zeng 2009).

Clandinin (2009) described the current system of high-stakes testing as keeping attention focused “firmly on knowledge for teachers and on a view of curriculum as the transmission of mandated curriculum down the metaphoric conduit” (p. 53). In this view, knowledge needs continual updating and is seen as something that can be packaged and given to teachers through training or practice sessions. It is also seen as something that can be applied directly, and in relatively standardised ways, in classroom practice. Teachers and students as learners are usually seen as the receptacles, or the endpoints, for the knowledge sent down the conduit. This focus on what knowledge teachers need to know has diverted the attention of educators away from the teachers’ personal practical knowledge, which finds expression in those practices, and curriculum making (p. 53). This view of knowledge, consistent with the system of high-stakes testing, however, conflicts with what the curriculum reform requests.

In the current curriculum reform context in China, with the system of high-stakes testing, there have been discussions on what teachers should do, should be, and should know as curriculum makers, while there is little discussion about what teachers know, what they are doing, what challenges they face, and what support they need to transform their practices and achieve reform goals. This is especially in view of the tension between the new curriculum and the student achievement test plotline.

21.2.3 Knowledge for Teachers or Teachers’ Personal Practical Knowledge

According to MoE (2001), “teacher in-service training should focus on the curriculum reform of basic education.” However, Bitan-Friedlander et al. (2004) demonstrated that “training towards the task of implementing an innovation is a lengthy enterprise because teachers go through various stages of assessing the task in terms of concerns, i.e., personal ability, consequences, cost and benefits, efforts and rewards, etc. Time may be a necessary condition but not a sufficient one” (p. 617).

Cao and Lu (2003) cited Richardson's (1998) idea that following the usual pattern in teacher education, experts from outside of the schools tell teachers to try different teaching methods, implement new curriculum, and change their attitudes toward students. When teachers appear reluctant to accept and implement the new ideas and methods, they are regarded as conservative and are blamed when the reform fails. Jiang (2005) cited Carter's (1992) review to show that many studies have found that when the beliefs of teachers did not match with curriculum reforms, most teachers continued to teach in their old ways. Zhao and Zhang (2005) noted that, even though teachers were familiar with the new notions, many did not apply them. This phenomenon was termed "false-knowing."

Many researchers and teacher educators focus on what teachers should do and should know, which were named by Clandinin (2009, p. 50) as "knowledge for teachers." Clandinin (2009) argued that knowledge for teachers and teachers' personal practical knowledge are different and get at different understandings of knowledge. Knowledge for teachers illustrates possession of things that teachers can acquire and know, while teachers' personal practical knowledge is a form of knowledge embedded in their lives that is acquired through living (p. 50).

Teachers' practical knowledge is an important kind of "knowledge" (Chen 2009). More than 20 years ago, Connelly and Clandinin (1988) argued that "It is the teacher's personal knowledge that makes all the difference."

Clandinin and Connelly (1995, p. 7) defined personal practical knowledge as "that body of convictions and meanings, conscious or unconscious, that have arisen from experience (intimate, social, and traditional) and that are expressed in a person's practices." Personal practical knowledge is dialectic between the personal and social life of each teacher. Clandinin and Connelly characterised the social of school, that is, school contexts, through the metaphor of a professional knowledge landscape:

A landscape metaphor... allows us to talk about space, place, and time. Furthermore, it has a sense of expansiveness and the possibility of being filled with diverse people, things, and events in different relationships (Clandinin and Connelly 1995, pp. 4–5).

The landscape metaphor draws attention to the relational, temporal, and shifting nature of school contexts. In 2009, Clandinin argued that Clandinin and Connelly's (1995)

imaginative reconceptualisation of knowledge has the possibility of shifting the discourse around teachers and knowledge from a discourse in which teachers are seen as holders of theoretical knowledge, as conduits for applying theory to practice, to a discourse of teachers as holders of personal practical knowledge. But teachers' personal practical knowledge which teachers construct and reconstruct in life and work contexts and that finds expression in their practices is given little or no attention in policy statements designed to reform curriculum (Clandinin 2009, p. 49).

In China, teachers' personal practical knowledge has been studied by researchers in recent years; however, most of the research is syllogistic, and far away from teacher and "practice". Few studies have investigated the practice of teachers (Wu 2007). When reforms do not attend to teachers' personal practical knowledge, educational reform and teacher education are not rooted in practice.

My research interest is to come to understand the lives and knowledge of teachers in their complex landscape and, in this way, to offer an understanding of their personal practical knowledge.

21.3 Methodology

I draw on Clandinin's (2009) view of personal practical knowledge as experiential, moral, embodied, and storied knowledge. She conceptualised

teacher knowledge in narrative terms, and described it in terms of narrative life constructions. The stories these narratives are built on are both personal, reflecting a person's life history, and social, reflecting the professional knowledge contexts in which teachers live (p. 50).

Ding (2003) argued that any theoretical framework would fall into the narrative tension because of the complexity, abundance, and diversity of educational experience. Clandinin and Connelly's (1998, 2000) methodology for studying teachers' personal practical knowledge within school contexts is narrative inquiry, which "is a way of understanding experience...is stories lived and told" (2000, p. 20). It focuses on contextuality, temporality, and inter-subjectivity of human experiences and pays attention to what happens in certain landscapes over time (i.e., how people think about, feel, understand, compose, and live their lives).

The research described here is a narrative inquiry into the experiences of teachers in the landscape of curriculum reform and high-stakes testing in a Chinese senior high school (Z school). The research purposes were social, practical, and personal (Clandinin et al. 2007). Social purposes were to narratively understand the daily lives and personal experiences of teachers, with a central focus on deepening the understanding of teachers' personal practical knowledge in the curriculum reform. The practical purposes were to share stories that might be helpful for teachers, school managers, teacher educators, and policy makers as they reflect upon and improve their own practice, and in efforts to renew teachers' personal practical knowledge. The personal purposes were to communicate with teachers face to face, to learn from them and to enjoy the journey as a narrative inquirer. Generally speaking, the purpose was to perform an inquiry into the experiences of teachers and to highlight their challenges rather than to assign blame.

There were two research topics: "What is the personal practical knowledge of the participants as they lived out the curriculum reform?" and "how was their personal practical knowledge informed?" These topics shaped the questions I asked the teachers and shaped my observations of their classrooms. For example, to compose field texts in response to topic one, I attended to how teachers prepared for teaching, what expectations teachers had for their classes, how they thought their classes went, what happened to the students in their classes, and how they felt about their classes. In response to topic two, I attended to the life experiences of the teachers and their responses in the interviews.

Six senior high school teachers with different educational backgrounds and teaching experiences participated. They all welcomed my participation as a researcher. At the time of doing the research, I was a doctoral candidate in the Department of Education Studies at East China Normal University while I taught educational psychology and philosophy of education in a teachers college. I taught botany in junior high school for 2 years after I graduated from the Department of Psychology at Beijing University at the beginning of the 1990s. A friend who worked at Z school introduced me to the principal and the other participants. When I told my participants that the research was for part of my dissertation and that it was about the lives of teachers (I did not talk about personal knowledge with them at the beginning), they expressed great interest.

I worked with the participating teachers for approximately one year. I created field texts (data) through field notes of observations, collected school video tapes of lessons, engaged in tape-recorded interviews with teachers, wrote in a research journal, and collected various artefacts, including lesson plans, diaries of teachers, and emails. As I worked with the teachers, I began to analyse and interpret the field texts using three-dimensional narrative inquiry space, with the dimensions of temporality, sociality and place. I lived with many multiple and diverse field texts for approximately 1 year. I worked with the field texts on a person-by-person basis. For each teacher, I wove their stories in two parts – current professional life and oral history – that informed their personal practical knowledge. For each part, I paid attention to the keywords they used and the emotions they expressed. Working within the three-dimensional narrative inquiry space, I moved “back and forth between the personal and the social, simultaneously thinking about the past, present, and future, and [did] so in ever-expanding social milieus.” (Clandinin and Connelly 2000, pp. 2–3). I identified story threads, and from those threads, I moved to understand their personal practical knowledge. I composed interim research texts (narrative accounts) of each teacher, which I then shared with each participant.

As I worked with the participants, I felt they had very different stories, but the words they used most frequently were “exams,” “student achievement,” and “curriculum reform”. I strongly felt the tensions they experienced within their contexts. As I attended to their teacher knowledge that was composed over time and different landscapes, I used words such as “conflict and adaptation,” “plan and embarrassment,” “bewilderment and amelioration,” and “the experimenter in the reform landscape” as titles for their stories. They all agreed that the titles represented what they experienced.

I found that different teachers lived with the tensions in different ways. Embodied in the field texts I identified four distinct coping approaches: engaging, quasi-inquiring, zigzagging and adding. In conversations about my field texts with Jean Clandinin, we realised the teachers were experiencing two forms of tension (i.e., double tensions), between the expectations of curriculum reform and the teachers’ personal practical knowledge (Tension I) and the demands of curriculum reform and the high-stakes testing plotline (Tension II). In what follows, I detail story fragments that illustrate these four approaches of coping with these interrelated tensions as the teachers lived in their landscapes.

21.4 Story Fragments

21.4.1 *Engaging*

Guo¹ had approximately 10 years of teaching experience; she was a doctoral candidate in education. She paid much attention to study the theories about curriculum reform, and she intended to transform her teaching by activating curriculum that engaged the experiences of her students. Complex tensions arose because of a discrepancy between Guo's activated curriculum and the traditional ideas of the other teachers as well as the pressure of examinations. She told me:

'In the course of social study, there is a theme on rules. In our school, the students are often opposed to school rules; I therefore encouraged the students to research the reasonableness of our school rules. The students asked me, "Can we change the rules if we find there are some irrational rules through our research?" I promised them, "If we can present a convincing report on the basis of our research, we can submit it to the principal and invite him to have a discussion. Our school is committed to the development of students; as long as what we say is reasonable, those unreasonable rules will be cancelled or changed.'

With the expectation of improving their lives in school, the students engaged in the research with great passion. I took the opportunity to teach the knowledge related to the research, such as the design of questionnaires, collecting data, and writing reports. The groups of students investigated their schoolmates and teachers through conversations and questionnaires, etc. To take advantage of the data to finish the report, the students looked up a significant amount of literature on education, psychology, and sociology using the library and Internet. They recomposed the report several times. When they made their presentation, the students spontaneously argued according to their standpoint. The leaders of our school were invited to assess their work. Some leaders could not help arguing for the rationality of the rules. Through this process, the students learned more about the bases of the rules, and therefore were able to identify with the rules better. The students concluded that "a life without rules will be disordered." In the meantime, their reasonable suggestions were adopted by the school. The students said, "It's the first time we feel that we're the masters of our own lives. In the face of fact and discipline, students can argue equally with leaders of the school. The rules of school can be adjusted according to the reality of students. What we learned in the classroom is not so far from our real life."

However, the teachers in my Teaching and Research Group often wondered after observing my classes "what knowledge did the students learn?" Someone said directly, "the knowledge disappeared into the air." I feel that I cannot have a dialogue with them; we are in a different frame – we have bifurcation on epistemology. They believe that teachers should pass objective, certain, and universal knowledge, but I focus on student engagement and development, and I pay attention to activate subject matter to personal, contextual, and tentative knowledge. Certainly, I must pay attention to exams. If the evaluation system does not change, we teachers have to dance handcuffed and fettered. But I always try to engage the experience of the students and activate subject matter, even though I give lectures or let the students read textbooks. I emphasise that the students can use the principles learned from social studies to think about social problems.'

Guo tried to be less concerned with arriving at a predetermined destination within a given frame and more concerned with getting students engaged in activities that are emotionally satisfying and intellectually productive (Eisner 2002, p. 152).

¹For ethical consideration, all the names of the participants in this paper are pseudonymous.

In Guo's story, as a doctoral candidate in education, she studied and agreed with the demands of curriculum reform and shifted her personal practical knowledge accordingly. She managed to connect the curriculum to the personal experiences of the students by shifting her epistemology, activating curriculum congruent with that epistemological shift, and encouraging the exploration and engagement of the students. Tension I was easier for her to deal with, but Tension II was still strong for her. The high-stakes testing seemed to handcuff and fetter her, which limited her freedom to activate the curriculum.

21.4.2 *Quasi-Inquiring*

Working in a harmonious and cooperative Teaching and Research Group for about 10 years and mentored by an expert teacher, Bing was encouraged to explore new ways of curriculum reform. His students learned very fast; many of them had learned by themselves before he instructed the classes. Bing reflected on his own experiences as a student when often his teachers could not answer his questions. From then on, he was aware that "at the end of the day, study depends on students themselves rather than teachers." Bing therefore believed that if he taught by lecture, his teaching would be ineffective.

In response to the curriculum reform and congruent with his own personal practical knowledge, Bing created a model of teaching that had as its purpose the development of self-regulated study and inquiry for each of his students. The basic process he followed was that before class, students were asked to study the textbook by themselves, and they were encouraged to get relevant information through library and Internet searches. The students wrote self-study summaries, putting forward some questions. Bing reviewed the summaries, sorted the questions of the students, and chose the ones to be discussed in class. In the classes, students took turns teaching and discussing the questions. The teacher's role was encouraging and guiding the students to inquire. Bing's model produced certain effects in local mathematics curriculum reform; it was praised as embodying the spirit of reform, and named by some experts as "question-based teaching."

In one class I observed, the topic was logarithms. The students had not put forward any questions despite Bing's expectations. At the beginning of the class, the student whose turn it was to teach went to the front of the classroom. From the textbook, he read such things as the definition and nature of logarithms. He repeated what the textbook said and expressed little of his own understanding. The atmosphere in the class was dreary. After the student's speech, Bing had to ask questions, such as "why do we say logarithms come from practical needs?" to facilitate the thinking of the students. He then had to answer his own questions. After the class, Bing told me he felt dissatisfied with the class.

Several months later he told me

'now I know the key reason of my dissatisfaction: even though the students could repeat the knowledge in the textbook, they did not enjoy the process of inquiring. The textbook presents the conclusions, without process of inquiring, which is different to the real process of

knowing and problem solving. In my opinion, the thinking method and spirit of inquiry are more important than conclusions themselves. The “question-based model” attends to the process of inquiring; however, many students pay more attention to scores in examinations rather than inquiry. In fact, Gaokao has been getting more flexible, rote learning does not work well. Learning how to learn is very important for Gaokao now. Certainly, I agree that the “question-based model” needs more time than teacher speech. When all the classes applied this model, it was too dense, and the students therefore lost their passion. Now I don't apply this model in each class. In most of my classes, I pay more attention to facilitate the students' thinking deeply by asking questions. I realised that whether the students learned before the class or not, learning to ask questions and thinking deeply are more important than the “model” itself.

Notions from the curriculum reforms, such as self-regulated study, were congruent with Bing's own experience as a student. Bing felt it was not enough to let the students grasp certain knowledge from the textbook. He hoped there were puzzles and wonders that would become the starting points for student inquiry. His personal practical knowledge was expressed in his knowing that the students needed to be thinking and exploring rather than rote learning to understand mathematics. He lived in a cooperative and harmonious Teaching and Research Group. Group members supported him in trying new ideas in his class. However, he still felt tensions between what he knew how to teach and the desires of the students that still focused on test scores. When the students did not pay enough attention and spent enough time in the “question-based model,” even though the teaching style seemed changed and the students acted as teachers, they still repeated what the book said. The process of inquiring Bing expected fell to quasi-inquiring, which left him feeling unsatisfied. By reflecting on this experience, Bing understood the new notions more deeply, and his personal practical knowledge became more congruent with them. He felt he had grasped the core of what it means to teach mathematics, that is, to help his students think deeply and to learn how to inquire. As a result, he gained more confidence in dealing with the two tensions.

21.4.3 Zigzagging

Dong was a new teacher in social studies. In her short teaching career, she moved from teacher-centred to student-centred and then back to a teacher-centred teaching style.

She told me that in accordance with the spring tide of curriculum reform, her Teaching and Research Group conducted some experiments called “self-regulated study.” The leader of the group encouraged her to try this new style of teaching. Her students were the top students in the school and they learned very quickly. She therefore attempted to instruct the content of the textbook quickly, followed by having her students conduct projects. Her students explored themes they were interested in, such as hot topics that were currently being discussed in the media. They explored in groups and then presented and discussed them in class. Dong reviewed their work at the end of the classes. She said:

“I feel that the exploring was broad and deep. The students felt more interested than they would have been if they had only listened to teachers. The self-regulated study went for about two months. However, one teacher criticised that this kind of teaching was not

teaching; it delayed the development of the students. This teacher has very good relations with the leader of my school, so I felt scared. In fact, I'm not sure whether self-regulated study is correct or not, and I'm afraid that the students will not grasp the knowledge from the textbook well. After all, they must attend to the test. I therefore gave up self-regulated study and returned to a lecture format."

When her 5-year contract finished, she left Z school and found a new job, but not as a teacher.

Through the support of her Teaching and Research Group, Dong tried to unlearn her personal practical knowledge and use the reform ideas in her classes. However, after she was criticised by another teacher, Dong no longer felt confident with her new teaching style, especially when dealing with the examinations, and therefore, she returned to her previous teaching practices. She could manage Tension I by modelling a fashion, but she could not deal with Tension II. Her personal practical knowledge was unstable, and the interrelated tensions seemed too big for her to endure. She had to give up.

21.4.4 Adding

Participant Jin was an experienced teacher in biology, having worked more than 30 years, and he felt quite confident with his teaching. In the face of the tensions he continued with a lecture teaching approach while also adding some inquiry-based activities. Jin said:

"I think constructing knowledge is very important. It was hard for me to remember what I learned well as a student, and I managed to organise what I learned into a structure that was very helpful for remembering and understanding. When I became a teacher, I tried to transfer the structure I organised to my students, and my students can get quite high scores on the examinations. That's the main reason why I am well known in teaching in the field of biology and why I became the leader of my Teaching and Research Group. Now informed by the new ideas from curriculum reform, I attempt to let the students construct their own knowledge structure and find their own conclusions.

But what can be explained very clearly in 5 minutes by a teacher can't be discovered by students in an entire period. Inquiry-based study costs a lot of time, and requires much more energy from teachers and students. We teachers must pay attention to the demands of exams. We feel that we have not enough time and resources to let the students inquire. We have to primarily apply a lecture style and try to find a few themes for students to inquire. I think we should apply the strong points of every teaching style rather than choosing some new ideas and discarding the old ones. In fact, many students feel their lives in school are boring, and many of them like hands-on activity. But for some inquiry-based projects, there is not enough equipment in my school.

The top students in my school can learn knowledge very quickly, and examinations that still focus on knowledge and remembering are not so hard for them. In my opinion, this kind of top students can apply for exemption. When the other students have these classes, top students can go to the library or laboratory to conduct inquiries. I think this would be helpful for the development of the students. I put forward this suggestion to my school, but it was not accepted."

In my observations, many "daily classes" were taught through lectures and focused on examinations, but when there were visitors, especially curriculum experts in the

class, the classes (usually called “open classes”) were changed to student-centred. Some teachers, like Jin, feel they are good teachers and feel they can manage in both lectures and transmission of knowledge as well as inquiry-based teaching. Jin felt he could cope with the tensions easily by adding the new notions to his personal practical knowledge.

21.5 Discussion and Conclusion

21.5.1 *Teachers Personal Practical Knowledge: Living Within the Tensions*

From these story fragments, I show how, in this reform era, teachers' personal practical knowledge is expressed in their practices. I show how teachers are coping with the tensions created by the curriculum reform, in which the experience of students rather than subject matter is the curricular starting point. In addition, I also show how teachers are coping with the continuing high-stakes testing plotline. Teachers live in the tensions between the expectations of the curriculum reform and their personal practical knowledge (Tension I), as well as the demands of the curriculum reform and maintenance of the same examination system (Tension II). These tensions that teachers are experiencing are within their own knowledge, between teachers, and between teachers and students in the professional landscape.

In the old metaphors of tap water, learners were seen as empty vessels, and teachers were holders and dispensers of knowledge. Teachers were seen “as part of the conduit that ships knowledge from textbooks to students” (Clandinin 1986). Teaching was a process of transmitting and dispensing knowledge. Teachers' personal practical knowledge was congruent with the institutional and cultural narrative of teaching and examining. Almost all the teachers learned to teach from within these metaphors. Thus, their personal practical knowledge, which is based on this old cultural narrative, is difficult to change.

When the situation changed, teachers still attempted to live out their personal practical knowledge, knowledge that did not include an inquiry-based way of curriculum-making. Thus, in the context of reform, teachers' personal practical knowledge did not fit. Under the reforms, teachers are asked to know differently, and they are supposed to learn new things. The teachers were asked to relearn what they knew and to learn another way of living out curriculum making in their teaching practice. They had to unlearn their personal practical knowledge acquired through their own lived experiences. The teachers felt strong tensions and created different ways to cope with the tensions.

Guo, with a strong educational theory background, coped with Tension I easily by engaging the experiences of the students and activating curriculum. That is, she understood and lived out a new approach to curriculum making and shifted her personal practical knowledge; however, she felt Tension II as she lived alongside other

teachers (4.1). With strong support from his Teaching and Research Group and his own experiences as a student, Bing realised the examinations were changing to become more congruent with the curriculum reform, and he created a new teaching style as he relearned personal practical knowledge that was more consistent with the reform mandates; however, he felt tensions with his students, who paid more attention to test scores, and felt dissatisfied with the quasi-inquiring (4.2). For Dong, her personal practical knowledge shifted significantly from one way of knowing to another. However, lacking sufficient teaching experience and educational theory, she was not confident and felt the tensions were too big for her. She finally exited from the school context to another job (4.3). Jin, with very successful experiences in both examinations and reform, felt he could cope with tensions by adding new notions to his personal practical knowledge (4.4). All of the participants did their best to cope with the tensions.

Some scholars (i.e., Shi 2001) emphasise epistemology bifurcation and knowledge transformation in curriculum reform, such as whether knowledge is certain and unchanging or tentative and evolving. Guo, a doctoral Candidate in Education, agreed with this idea (4.1). The other teachers did not talk about epistemology. Instead, they were concerned about what works in their teaching. They attempted to include the requests of new curriculum reform into their personal practical knowledge, but in the high-stakes testing plotline, no one neglects the scores of the students.

The MoE (2001) encourages the reform of examinations in an effort to make them more consistent with curriculum reform. Curriculum experts (Zhong et al. 2001) argued that the purpose of examinations is to facilitate the development of students and teachers rather than only differentiating between superior and inferior students (p. 304). Similar to Craig's (2004) view, the magnitude of what teachers and students know and are able to do should not be confined to what can be measured and judged according to prevailing systems (p. 1242). Apparently, when the examination becomes more consistent with the demands of curriculum reform, Tension II will decrease, which will make it easier for teachers to accept the new curriculum reform notions. Thus, Tension I will be weakened as well. For example, Bing felt the examinations became more flexible and congruent with curriculum reform, and as a result, he had more confidence to deal with the tensions (4.2).

In spite of the required curriculum reforms, examinations are changing much more slowly. This is the case partly because subject matter knowledge is easier to test, and also because some objectives advocated in the reform, such as attitudes of active study, enjoying inquiry, and active participation, are not very easy to assess. Thus, when teachers accept the new ideas and try to live them out in their practice, they continue to be concerned about how their students will score on the examinations, especially on the entrance examinations for higher education.

The new ideas from the curriculum reform, such as the spirit of inquiry and cooperative study, seem quite good for student development in the long run, but they are not easily measured by examinations. This means that even though the teachers spend significant energy on the new ideas in their teaching practice, it might have little contribution to the scores of their students. In the high-stakes testing plotline, teachers are

mainly judged by the achievement of their students. Thus, even though the teachers were aware of the new terms, such as self-regulated study, question-based study, etc., and were aware of how to apply them into practice, that is, they can deal with Tension I quite well, it was not easy for them to transfer this kind of new knowledge to their own personal practical knowledge and express it into practice because of Tension II.

Under perfect conditions, tests would be congruent with the curriculum. In practice, however, there is still a long and difficult way to go before achieving this ideal. Examination reform consistent with curriculum reform is a significant challenge. Tension II will therefore continue to persist for a long time for most teachers. When the teachers felt a better understanding of how they could help increase the test scores of their students, it was easier for them. For example, constructing their knowledge structure was effective for Jin's students during examinations (4.4). Unfortunately, most of the knowledge for teachers from the reform made them worry about the achievements of their students, and they did not have enough resources to support them to implement the new notions in practice (4.4). Teachers have to "dance handcuffed and fettered" (4.1). Within these interrelated tensions, some of them felt overwhelmed (4.3).

21.5.2 Teacher Education Should Start with Teachers' Personal Practical Knowledge

As Connelly and Clandinin (1988) reviewed, the 1960s and early 1970s were the years in which a significant effort was made in North America and abroad to reform education through curriculum materials. However, the results were less than spectacular because the experiences of teachers and students in their curriculum situations were overlooked and often dismissed (pp. 137–138). What was missing is the situational and the personal view of the teachers, as well as any view of their personal practical knowledge, which is embodied, narrative knowledge, as fundamental in understanding classroom curriculum making (Clandinin and Connelly 1995; Chen 2009; Craig 2007). The current curriculum reform in China is attempting to avoid this kind of neglect, and seemingly pays more attention to the integration of the four curriculum commonplaces, that is, teacher, learner, subject matter, and milieu (Schwab 1969; Zhong et al. 2001, p. 428). Teachers are regarded as an integral part of the curriculum constructed and activated in classrooms, and they play an important role in curriculum development and reform.

To create successful curriculum reforms, in-service and pre-service teacher education, which aims to change the teachers' personal practical knowledge is urgently needed. A large amount of training around curriculum reform allowed the participating teachers to become familiar with new notions and terms, such as "self-regulated study" and "spirit of inquiry," etc. However, within the tensions, the journey to transform their personal practical knowledge will be a long one.

As Clandinin (2009) noted, when talk in government departments turned to questions of knowledge, "attention is given to knowledge for teachers, that is, to

what knowledge teachers should have. This is the view of knowledge in which teachers are seen to be part of a conduit through which theoretical knowledge is applied to practice” (p. 50). In fact, the view of knowledge for teachers is in conflict with the theory of the new curriculum in which the learner’s experience should be the starting point; however, it is still the main foundation of teacher education in this reform context, that is, teacher education for curriculum reform still applies the old notions to a large extent rather than the notions that the reform advocates. When knowledge for teachers regarding the reform is congruent with teachers’ personal practical knowledge, it is easier for them to express it in their practice, thus leading them to experience fewer tensions. For example, Jin’s experience was consistent with the reform notion that highlighted the importance of constructing knowledge structures (4.4), and Bing’s experience led him to know that self-regulated study was advantageous (4.2).

However, in the current reform context, most of the knowledge for teachers is in conflict with their personal practical knowledge, “as more and more knowledge for teachers is pushed more and more insistently down the conduit with more and more serious consequences, the main plotline of teacher education is a silencing one for teachers. Teachers’ personal practical knowledge composed and recomposed over time and in the contexts of personal and professional knowledge landscapes was neglected” (Clandinin 2009, p. 53). The teachers in this research did their best to learn knowledge for teachers and to practice it in their classrooms; however, it was very difficult for them to shift their personal practical knowledge because of the interrelated tensions. At this point, the curriculum reform lost its practical roots.

According to the demands of the curriculum reform, the voices of the teachers should be heard as part of the empowerment process. Only when teacher educators attend to teachers’ personal practical knowledge will teachers feel heard and have a chance to learn how to attend to the experiences of their students.

21.5.3 Transforming Teachers Personal Practical Knowledge in Cooperation

Every participant referred to the Teaching and Research Group and the “Open Class” in their conversations with me. In China, the Teaching and Research Group is an organisation for teachers to research teaching issues, and is constituted of teachers from the same subject area in the same school. Experienced teachers are the leaders, and group members meet regularly to discuss teaching issues.

“Open Class” is a typical model for teachers to research teaching issues. Group members prepare the same topic together, share their ideas and resources, watch each other’s classes and put forward suggestions. Sometimes school and district leaders, curriculum experts, parents and teachers from other schools watch and evaluate the “Open Class.” This kind of “Big Open Class” is related to a school’s reputation; therefore, the Teaching and Research Group spends a great deal of energy preparing for it. The “Big Open Class” in the reform era is designed to

communicate experiences during reform. Teachers do their best to create new approaches to engage students, and they learn from the other teachers. They express their personal practical knowledge and learn new practical knowledge in these cooperative processes.

In the reform era, however, many teachers feel that learning from other teachers is not sufficient. Educational theory as rational knowledge regarding education seems very helpful for them to shift their personal practical knowledge (4.1). If educational theory is regarded as tools that can help teachers to broaden perspectives, sharpen thinking and facilitate reflection rather than as possessions to pass through a conduit, teachers can start with their personal practical knowledge and regard it as dependable while referring to educational theory and the experiences of others to criticise and ameliorate it.

When the examination system has been reformed to be congruent with the new curriculum, and when curriculum experts and teacher educators pay attention to teachers' personal practical knowledge, take advantage of the Teaching and Research Group as well as the "Open Class", while at the same time still attend to theoretical knowledge, experts, teacher educators, and teachers can work together to make curriculum, deal with interrelated tensions, and create more educative spaces for children.

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Chapter 22

Language Teacher Emotion in Relationships: A Multiple Case Study

Yueting Xu

Abstract This chapter explores language teachers' emotions through a multiple case study of three novice EFL (English as a foreign language) teachers working in a secondary school in the People's Republic of China. Drawing on data from in-depth interviews with the teachers, it examines their accounts of emotional experiences in relations with students, colleagues, parents and administrators. Following Hargreaves' framework of emotional geographies (2001a Emotional geographies of teaching, *Teach Coll Rec* 103:1056–1080), the chapter discusses the five dimensions of teachers' emotional geographies with others. It is argued that political distance, as decided by social hierarchy, sets the emotional rules for teachers' interactions with others; moral distance, usually shared with colleagues but not with parents and students, could be narrowed by care, tolerance and communicative strategies; and that physical closeness could be achieved by means of virtual communication. The findings highlight the recognition of social hierarchy in understanding teacher emotion, the importance of interactive strategies in improving their professional relationships, and the urgent need of care for teachers' emotions in the workplace.

Keywords Teacher emotion • Relationship • Case study

22.1 Introduction

The last two decades have witnessed an emerging interest in teacher emotion in general education (Nias 1996; Hargreaves 2001a, b; Zembylas 2005; van Veen and Lasky 2005; Schutz and Zembylas 2009; Day and Lee 2011; Yin and Lee

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2012). The research focus has developed from teacher emotion in teaching (Sutton and Wheatley 2003; Hargreaves 1998) to relating it to teachers' professional identity (Zembylas 2003; van Veen et al. 2005; Hodgen and Askew 2007; Lee and Yin 2011) and to power relations in the school context (Hargreaves 2001a, b; Darby 2008; Chen and Wang 2010). One consensus arising from the prior research is the situated nature of teacher emotion. In other words, teacher emotion shapes and is shaped by the emotional climate of the school as well as by the people they interact with, such as the students, colleagues, principals and parents (Hargreaves 2000; Zembylas 2007; Ria et al. 2003). As Kemper (1993) posited, 'the social matrix determines which emotions are likely to be experienced when and where, on what grounds and for what reasons, by what modes of expression, [and] by whom' (pp. 41–42). The socio-cultural perspective of teacher emotion suggests that placing teachers in relationships is a good lens to look into how teachers experience, express and manage their emotions.

What is teacher emotion? According to Hochschild (1990, pp. 118–119), 'emotion' is 'an awareness of four elements that we usually experience at the same time'. The four elements include: appraisal of a situation, changes in bodily sensations, the free or inhibited display of expressive gestures and a cultural label applied to specific constellations of the first three elements. What's more, there is a distinction between emotions and feelings. According to Gronn (2003), feelings are subjectively experienced physiological and psychological sensations, such as anger and frustration. Only when the feelings are expressed interpersonally do they become emotions. In other words, emotions are different from feelings as they are interactional expressions.

Among the research participants of teacher emotion studies, teachers in educational or school reforms are well-documented (van Veen et al. 2005; Lee and Yin 2011) because researchers have found that educational change have both cognitive and emotional impacts on teachers, who in return, bring emotions as a part of the commitment to the change process (Norman 2010). Teachers with diverse years of teaching experiences are the second major category of subjects in teacher emotion research (Chan 2006; Hargreaves 2000; Day and Gu 2009; Day 2011). Research with these participants attempted to explore how teachers in different phases of their professional life emotionally reacted to different scenarios in the school settings. Among them, novice teachers have not received due attention, though many studies have emphasized the reality shock or abruptness which confronts new teachers as they take on the full responsibility of their roles as school teachers (Vonk 1993; Veenman 1984). As teaching is 'highly charged with feelings' (Nias 1996, p. 293), the well-known 'transition shock' may infuse new teachers with feelings of isolations (Flores and Days 2006) and vulnerability (Lasky 2005). This study, therefore, intends to fill this gap by exploring how three novice teachers' emotions mediate, and are mediated by, professional relationships in their first year of teaching. In particular, it intends to examine the peculiarity of EFL teachers' emotions in a Chinese school context.

22.2 Literature Review

Teacher emotion did not gain sufficient attention until the recent decade. According to Zembylas (2003), there are three reasons for the lack of caring to teacher emotion research. First, the long-held reason/emotion dichotomy is perpetual in education research, privileging teacher cognition research and posing prejudice against emotion studies. Second, the ‘elusive’ nature of emotions and affect has made researchers suspicious of their reliability due to the fact that they can’t be measured objectively. Third, the association of emotions and affect with feminist philosophies has resulted in its being excluded from the dominant patriarchic structures as valid and worthwhile researchable issues (Boler 1999). Fortunately, these misconceptions have been realized and there has been a rise of educational interest in teacher emotion in the last few years. I will review teacher emotion research in two fields: one from general education, and the other from TESOL.¹

22.2.1 *Teacher Emotion in Education*

A review of literature on teacher emotion suggests that most studies on teacher emotion have been conducted by researchers in the general education contexts, which generally converge on the following four issues: broad ideas of teacher emotion such as burnout and stress, teacher emotion and professional identity construction in educational reforms, teacher emotion and social relationships, as well as teacher emotional competence and regulation. Earlier research on teacher emotion recognized the importance of emotion in teaching and learning by studying emotion-related issues, such as burnout, stress and guilt. Among them, stress and burnout as structural conditions were central to the lived experience of teachers and to their performance and satisfaction in teaching (Dworkin 1987; Truch 1980; Farber 1991; Cherniss 1995; Vandenberghe and Huberman 1999; Chang 2009). For example, burnout, as a broad concept of emotional exhaustion, has brought discussions of a variety of problems in teachers’ professional life and indicated importance of the interaction between teacher emotion and other dimensions in teaching, such as teacher knowledge, teaching performance, and socio-political contexts of the classroom and the school (Zembylas 2003; Kelchtermans et al. 2009). Although this early wave of research did not use the term ‘emotion’ to theorize teachers’ experiences, it has brought teacher emotion into mainstream educational research.

To explore the structural conditions of teacher emotion left over in the first stage of research, teacher emotion research in the second stage has attempted to capture its dynamics by looking at the role of teacher emotion in their formation of identities as

¹TESOL refers to Teaching English to Speakers of Other Languages.

teachers within particular school contexts, particularly when confronted with educational changes. The special-topic issue of *Teaching and Teacher Education* in 2005 is a manifestation of such an attempt. Using primarily a qualitative research methodology (Reio 2005), such as narrative (Kelchtermans 2005), ethnographic (Zembylas 2005) and longitudinal case study (Schmidt and Datnow 2005), these studies share a common understanding that teacher emotion is constituted by discursive practices and power relations. Specifically, these studies have offered four major conclusions. First, teachers may experience ‘inefficacious vulnerability’ when confronted with educational change, and the resulting emotions have an impact on their construction of professional identity (Lasky 2005; van Veen et al. 2005). Second, teachers’ age, career stage and generational identity and attachment are proved to play a central role in the implementation of educational change (Hargreaves 2005). Third, the reform agendas not only exert an emotional impact on their self-understanding as teachers, but also elicit micropolitical actions of resistance or proactive attempts to change their working conditions (Kelchtermans 2005). Fourth, teachers attached different levels of emotions to reforms of different levels, greater to classroom level than school one (Schmidt and Datnow 2005; van Veen and Slegers 2009). These studies have ushered in a new start for teacher emotion research, and therefore, the issue of teacher emotion and professional identity has been heatedly discussed in the educational research (Hodgen and Askew 2007; Darby 2008; Lee and Yin 2011).

Following the line of research focusing on the socio-political contexts of teacher emotion, the third stage of research has drawn attention to the interaction between teacher emotion and social relationships. Based on the understanding that emotion is socio-cultural construction (Zembylas 2003) rather than psychological phenomenon, Hargreaves’ seminal work (Hargreaves 2000, 2001a, b, 2005; Hargreaves and Lasky 2004) involves a series of studies using large-scale interviews to explore how secondary and primary school teachers emotionally interact with students, colleagues and parents. To help analyze the positive and negative emotions prevailing in teachers’ professional relationships with others, he proposes the conceptual framework of ‘emotional geographies’ (Hargreaves 2001a, b) which consist of socio-cultural, moral, professional, political and physical dimensions. The significance of the framework lies in the fact that it has not only captured the essence of teacher emotion as a form of interpersonal communication (Chen and Wang 2010), but also refuted the traditional argument of the immeasurable nature of emotion research.

As teachers’ emotions are not just personal dispositions but are constructed in social relationships and systems of values in their families, cultures and school situations (Zembylas 2005), how teachers’ experience, express and regulate their emotions in the workplace seems critically important in their work efficacy and student performance. Therefore, the fourth stage of research in the recent few years has cast its attention to teachers’ emotional competence, rules and regulations (Yin and Lee 2012; Garner 2010; Hosotani and Imai-Matsumura 2011). Garner’s review article (2010) highlights the importance of attending to teachers’ emotions within and beyond their classrooms and calls for future research in relating teachers’ emotional competence to students’ learning. Further research into teachers’ emotional competence finds

emotional rules an important issue to be discussed. Emotional rules, or feeling rules in Hochschild's (1983) account, are "what guide emotion work by establishing the sense of entitlement or obligation that governs emotional exchanges" (p. 56). It serves as cultural expectation and social standards for teachers' emotional expressions. Hosotani and Imai-Matsumura's study (2011) is a further attempt of the complexity of teachers' emotional experience, expression and regulation while interacting with students. It shows that teachers have direct staging and suppression of emotions as two main ways of expression, and the strategies for their regulation include considering various purposes, appropriately using emotion expression and ideal teacher images. Taking a different stance, Yin and Lee's work (2011) intends to understand the constitutive factors that shape teachers' emotional competence by exploring the emotional rules governing teachers' work in the Chinese context. Particularly, the authors have paid special attention to the cultural uniqueness of emotional rules and pinpointed the mediating role of socio-cultural contexts in teachers' emotional competence.

22.2.2 Teacher Emotion in TESOL

It is a pity to note that teacher emotion remains an unrecognized area in TESOL. Research related to emotion in TESOL is mostly concerned with learner anxiety (Burden 2004), the anxieties that non-native English teachers have about their language deficiencies (Horwitz 1996) and stress or burnout of language teachers (Crandall 2000). The review of literature indicates that TESOL teacher educators and researchers haven't touched upon teacher emotion research except one study (Cowie 2011), although the importance of teacher emotion is highlighted in some recent publications of language teacher education (Liu and Xu 2011). Cowie's study (2011) examines the contribution that emotions make to the professional lives of experienced EFL lecturers in the contexts of Tokyo universities. With the conclusion that teachers experience more positive emotions with students than with colleagues and institutions, the study highlights the need for collaborative dialogues about the emotional impact of teaching and the need for an in-depth discussion of the moral purpose of EFL teaching.

In reviewing these studies in general education, I have reached the following conclusions about teacher emotion. First, teacher emotion is inextricably linked to teachers' lives, and therefore, teaching involves 'emotional labor' (Hochschild 1983) and depends upon 'emotional understanding' (Denzin 1984) among teachers and others in the workplace. Second, teacher emotion is discursive practice determined by power relations which in turn are a reflection of emotional rules in a specific culture. Third, teacher emotion is both a long, complex process and improvisations in a particular situation, and therefore, qualitative research methodology, such as narrative inquiry and ethnography, is the best way to approach this issue.

Based on these conclusions from the literature, this article explores how novice teachers emotionally react to their professional relationships with students, parents, colleagues and principals, through a narrative inquiry into three EFL teachers'

experiences (Jun, Song and Min²). By investigating their stories of positive and negative emotions, and situating them in the context of professional relationship, the paper seeks to make sense of the complexity of teacher emotion and how it is mediated by the political, socio-cultural, professional, physical and moral geographies between teachers and others in the workplace. The implications for teacher emotion in TESOL are also highlighted.

22.3 Theoretical Framework: Emotional Geographies

Despite an urgent need of ‘contextualized theoretical, conceptual and empirical tools’ to investigate teachers’ emotions (Zembylas and Schutz 2009), ‘emotional geographies’ (Hargreaves 2001a) has appealed to researchers as one of the few powerful theories of teacher emotion. In contrast to the technical and cognitive science-driven conception that teaching and learning are concerned with knowledge, cognition and skill, Hargreaves (2001a) contends that they are also emotional practices. Successful teaching appears to depend on strong emotional understanding, on establishing close bonds with students, and to a lesser extent, with colleagues and parents as well (Hargreaves 2001a). To look at teacher emotion from a broader and more contextualized perspective requires researchers to gain a systematic understanding of how teachers’ emotions are shaped by the variable and changing conditions of their work and how these emotions are manifested in teachers’ interactions with students, colleagues, parents and administrators. In order to explore the impact of human relationships and interactions on teachers’ emotional understanding of selves and others in teaching, Hargreaves (2001a) defined “emotional geographies” as consisting of

the spatial and experiential patterns of closeness and/or distance in human interactions and relationships that help create, configure and color the feelings and emotions we experience about ourselves, our world and each other (p. 1061).

The framework is proposed to help identify the supports for and threats to the basic emotional bonds and understandings of schooling that arise from forms of distance or closeness in people’s interactions or relationships. Yet according to Hargreaves (2001a), the five dimensions of emotional geographies of human interactions are not merely physical aspects, but also interconnected with socio-cultural, professional, political dimensions and teachers’ moral purposes.

Socio-cultural geographies: where differences of culture and class can all too easily make teachers on the one hand and others on the other, alien and unknowable to each other.

Professional geographies: where teacher professionalism is defined as a ‘classical’ masculine model of the professions, that creates a distance between teachers and the clients they serve, and that is especially prejudicial to feminine, ‘caring’ ethics of teaching.

²To protect the real identity of the EFL teachers, all personal names, Jun, Song and Min, and the name of the school are fictitious.

Moral distance: where negative emotion may occur when teachers feel their purpose are being threatened by parents' criticism or positive emotions may occur when teachers' teaching purposes are recognized by parents.

Physical distance: where teachers and others are mainly engaged in strings of infrequent, fragmented, episodic and disconnected interactions that make the relations between teachers and others more difficult to establish.

Political distance: where hierarchical power relationships may distort emotional aspects of communication between teachers and those around them.

The conceptual framework of emotional geographies provides a way to make sense of why teachers' emotions are configured in particular ways in the changing organizational life of schools, and at the same time, works as an analytical tool to understand how such closeness and distance support or threaten the emotional understanding which is foundational to high standards of teaching and learning. This study adopts this framework to analyze three novice teachers' narrative accounts of their emotional interactions with others, including students, colleagues, parents and principals.

22.4 Methodology

22.4.1 Narrative Inquiry of Teacher Emotion

The investigation of the three novice teachers' emotions was conducted through a narrative inquiry (Chase 2005). Bruner (1986) has posited that there are two different modes of knowing: narrative and paradigmatic. In the narrative mode, it is argued that humans come to understanding through storied experience. As Connelly and Clandinin (2006, p. 477) note, 'narrative inquiry, the study of experience as story, is first and foremost a way of thinking about experience.'

In the past two decades, there has been a revived interest in how narratives interact with personal experience in different social, cultural and political contexts (Clandinin and Connelly 1996). The 'narrative turn' (Riessman 2008, p. 14) in various disciplines in humanities and social sciences, can be seen as a counter-discourse to positivist research paradigm and a shift to interpretative epistemological stance (Johnson 2009). The 'renaissance' (Kim 2010, p. 83) of narrative inquiry surprisingly seems to have echoed the deconstruction of the traditional dichotomy of reason/emotion. Traditionally, issues of emotions have been associated with women and feminist philosophies and, therefore, excluded from the dominant rationalist structures as worthwhile knowledge. This notion of knowing is based on knowledge as a manifestation of rationality, which is later rejected due to the recognition of the discursiveness of emotion and the understanding of the interdependent relationship between emotion and reason. The interpretive epistemological perspective and the narrative mode of knowing further justify the importance of emotion in work. Therefore, this study uses narrative inquiry approach to explore how three EFL teachers' emotions are mediated by their professional relationships in their first year of teaching.

22.4.2 *Research Site and Participants*

This study is part of a longitudinal project (2010–2013) on novice teachers' emotions and their professional identity in Dongguan and Shunde cities, two affluent industrial cities of Guangdong Province in the southern part of China. In this project, I seek to explore how beginning teachers emotionally perceive their relationships with others, and how such relationships shape their professional identities.

The school in which the three participating teachers work is one of the top five public middle schools in Dongguan. Despite its brief history of six years, the school has enjoyed a good reputation for its strict management of students and high ranking of colleague entrance rate among schools in Dongguan. I focus on one school as the site of this study because, as Acker (1999) indicates, school culture varies from school to school so that specific variation of culture developed in each institution needs to be explored case by case. Therefore, choosing teachers from the same school would be best to look at how teachers' emotions are mediated by relationships in a particular context.

The three participating teachers, Jun, Song, and Min, all work in this school. They are all male teachers who have just finished their first year of teaching. They were chosen as the participants of the study out of the following three reasons. First, they were all my students in their teacher preparation program and have been keeping contact with me since graduation 1 year ago. It lays a good foundation for the reliability and trustworthiness of my study as it requires them to tell stories of their emotional experiences. Second, they were all interested in or even passionate about teaching when graduating from the teacher education program, which has provided a good start for their emotional experiences. In other words, their emotional ups and downs in their first year of teaching could be better attributed to their work context. Third, they are all young male teachers who are minority among the mainstream TESOL teachers in China and around the world, where the number of female teachers dominates. To understand how their emotions develop among relationships could offer a lens of the job satisfaction of young male teachers, and may as well explicate why or why not young men choose teaching as their profession.

22.4.3 *Data Collection and Analysis*

The data of the study, the three teachers' narratives, come from three sources. First include two formal semi-structured interviews with each of the teachers, both of which lasted for about two hours. In the first interviews the teachers were asked to tell their life history, share their teaching experiences in the first year of teaching, and describe their school context. They were used as input to formulate the interview questions in the second, which involves more sensitive talks of emotions, and to develop a broad description of the school context and a biographical understanding of the participants. In the second interviews, the teachers were asked to describe particular episodes of positive and negative emotion (one of each) with students,

colleagues, parents, and administrators, respectively (i.e. eight episodes in total for each teacher). These interviews, according to Riessman (2008), could be ‘narrative occasions’ (p. 23) of telling and retelling, living and reliving of their emotional experiences (Clandinin and Connelly 2000). The second source of data is the teachers’ self-reflection journals the teachers had written during the year. These journals document their understandings of and emotional responses to different situations during the year. The third source of data is the documents issued by the school and the information posted on the school website.

To allow the teachers better express themselves, all interviews were conducted in Chinese which is the native language of both the researcher and the participants. The interviews were first transcribed verbatim and then translated into English. The transcribed interviews were then analyzed inductively. Drawing on ‘content analysis’ (Manning and Cullum-Swam 1994), the interview transcriptions were broken down into four major themes for analysis: relationships with students, colleagues, parents, and administrators. Under each theme, the transcribed interviews and reflective journals were read by the researcher, and words or phrases indicating their emotional responses were identified. Revolving around the key word of ‘emotion’, teachers’ narratives under each theme were rewritten as condensed and coherent stories of their emotions in relationships.

Methods were adopted to ensure the reliability and trustworthiness of the data analysis. When the transcription and translation of the interviews were finished, all transcriptions were sent back to the participants for cross check. Revisions were made when the participants had any doubts about the content of the transcriptions. To ensure that I had not altered the teachers’ narratives in the refined stories, ‘member checking’ method was used (Lincoln and Guba 1985), which involved sending the condensed stories back to the teacher-participants and asking for comments which were later incorporated into the research process. What’s more, methodological triangulation (Denzin 1989) was used during the data collection process. Specifically, the data drawn from teacher interviews and reflective journals were compared and examined twice to get reliable information of teachers’ emotions. In addition, I secured quality data through building trust and rapport with the participants so that the stories were told with fidelity (Riessman 2008). The initial teacher-student relationship when I first taught them in the university has turned into a long-term friendship as time went by. Therefore, their truthful stories guarantee the trustworthiness of the data.

22.5 Three Novice TESOL Teachers’ Emotions

22.5.1 Case Stories of the Three Teachers

In this part, three cases are respectively reported with the participating teachers’ narratives. It is to provide a full sketch of each teacher, and therefore, to make it easier for readers to understand the teachers’ emotions along with their personal and

contextual contours. Jun, Song and Min are three beginning teachers who have started their teaching careers since the fall of 2010. Before they worked in Dongguan Middle School, they had studied in Nanda, a key university in Guangzhou with a prestige for English language teaching, for 4 years. Upon graduation, they were among the few young men who chose to work in middle schools. In the following section, a case story is presented to give a personal and contextual contour of each teacher.

22.5.1.1 Jun's Case: A 'Model' Student and Teacher

Jun was born in a small village in the western part of Guangdong Province. He is the fourth child in the family, with one elder sister, two elder brothers and one younger brother. With a big family to maintain, his parents never failed to support Jun in his academic studies. His mother never gave up Jun's and his siblings' schooling even though she had to borrow money from others to pay for their tuitions. Jun felt grateful when he talked about his parents, 'Without their encouragements, I would never have completed my degree in the university'.

Jun was kind and always ready to help others when he was in college. Monitor of the class, he was responsible for everything assigned to him. When there was silence in class, both the teacher and the students would expect Jun to say something, and he did. He never failed the expectation his teachers had for him. The homework assignments he had handed in to teachers were among the top three in his class. All in all, he was a 'model' student in the university.

22.5.1.2 Song's Case: A 'Crazy English' Follower and Passionate Teacher

Song struck me as a natural leader when he served as monitor of the class I taught 5 years ago. He was very considerate, a good helper of teachers. His English proficiency was at the average level of the class in the first year of college, and therefore, it surprised me a lot when I saw his name on the list of the winners of an English speaking contest on campus. Later in an informal chat he told me that he had made great progress with the help of 'Crazy English', a popular English training program in China which advocates 'losing face to learn English'. A stern follower of the founder of 'Crazy English' *Li Yang*, Song expected himself to be a passionate teacher as his idol, urging students to do their best.

22.5.1.3 Min's Case: A Shy Language Learner and Mild Teacher

Min was neither a student leader nor one of the top students in class when I taught his class. He was a mild gentleman, and even a bit shy when talking in public. He was active in voluntary teaching during summer vacations, which is called '*San Xia*

*Xiang*³ in Chinese. He enjoyed teaching the kids from suburban areas and the joy of being needed was the 'best part of teaching'. With the happy memories of teaching, he chose to teach upon graduation. 'It was the kids from *San Xia Xiang* who deceived me to become a teacher', he admitted when he recalled the hardship and shock he had experienced in the first few months of teaching in his career.

22.5.2 *Emotions Expressed in Relations to Interaction with Students*

22.5.2.1 *Emotions Expressed in Terms of Mutual Love with Students*

The three teachers' relations with their students were often a source of satisfaction and joy, especially when there was an emotional bonding based on care, love and friendship. Among the participating teachers, Jun had the most harmonious relationship with his students.

Jun's students got used to calling him 'Brother Army' (which is what the word '*Jun*' means in Chinese) rather than '*Lao Shi*' (teacher in Mandarin Chinese). Poised and confident, he had won all his students' respect. Jun told us a story of '*zi xi ke*' (self-study class) to help us understand his relationship with students.

We have one period of '*zi xi ke*' every afternoon. Teachers of different subjects all want to occupy the class to help the students with their exercises in their particular subjects. Normally the students hate it when one teacher comes to occupy their 'self-study' class. I am young, and I am sort of sympathetic for their hardship in preparing for the entrance exams to college. I seldom attempted to occupy their time. To my surprise, my students came to ask me from time to time, 'Army, do you want our 'self-study' class? We would be more than happy to have your class!' I thought it was their way of expressing their affection for me. (Jun, 5th July, 2011)

Apart from teaching, one of Jun's major responsibilities was to coordinate the class as the 'head teacher'. He was required to supervise students' evening self-study classes from 7 p.m. to 10 p.m. Jun would stay in his office during that period, or even till mid-night. His colleagues joked that he was 'rooted in the office'. In his reminiscence, Jun received a box of ginseng teabags and a note from a quiet boy of his class, after he had stayed up late one night and showed up early on the next morning with black eyes. The note read, 'Take care, Army!' 'I was so moved,' Jun recalled with glittering eyes, 'that the kids care about me so much.' (Jun, 8th July, 2011)

Different from Jun, Song is an enthusiastic teacher as he was as a student. He said that in his first year of teaching he had paid 90 % of his attention to the 'head teacher work', i.e., the class management work. He later proudly told us how his students liked his group-based cooperation strategy he had invented and how

³*San Xia Xiang* is a voluntary activity popular on campus of universities, which refers to three ways to contribute to the countryside and one of which is voluntary teaching.

they enjoyed themselves when he treated the winning groups KFC lunches as encouragements.

It was hard to motivate those low-achievement students. They were reluctant to talk in class and they procrastinated in their homework. I then introduced a 'group cooperation' strategy to the class. It required them to form groups of four, in which they 'swim or sink together'. I deliberately put high-achievement and low-achievement students together. Each group's performance in class was evaluated based on each member's contribution. To bring fun to the learning tasks, I allowed them to name the groups with popular words or phrases on the Internet. To motivate them further, I promised to treat the winning group a KFC lunch with me, one in the mid-term and the other at the end of the term. They really liked it! In every class of every subject, they listened attentively and competed to be the first to put up their hands. I was really touched when I saw the hands of low-achievement students rising up high. My classroom evaluation scores from students were the highest among all teachers in my grade. The winning groups told me everything in their life when we were enjoying our lunches at KFC. To them, the point was not the KFC lunch, but being motivated as a group and being trusted as autonomous learners. (Song, July 12th, 2011)

Apparently Song established a close relationship with his students through stimulating their motivation, in which way the students admired him a lot. By contrast, Min was not as lucky as Song. He spared no efforts to motivate his students, yet some did not get his good intentions. When he 'almost wanted to give up', one of his students expressed his affection in an implicit way, from which Min was convinced of his efforts.

Jim was extraordinarily quiet in class. I wanted to know more about him after class. I approached him from time to time during the 'self-study' classes. He never answered my questions with a complete sentence. All was 'ah, yes'. I was irritated by his indifference to my concern and decided not to give him that much attention at the end of the first semester. At the beginning of the second semester, Jim took a CD of Hebe (a pop singer in China) out of his bag after class, 'It is for you. I bought it from Hong Kong.' He said it softly, and left. I was touched. I knew at that moment that he actually understood my care and showed me his affection in such an implicit way. (Min, July 18th, 2011)

Min misunderstood his student's 'indifference' to his care. The seemingly unrequited love was repaid with a small present. Mutual respect and love between the teachers and their students are grounded on communication, motivation and care.

22.5.2.2 Emotions Expressed in Terms of Anger Towards Students

Being referred to as the '*best-tempered*' teacher by his students, Jun seldom lost his temper except once, when a student tossed his own test paper in class.

I was then explaining to the students the grammatical rules in the exercises. Tommy, a boy who has excellent performances in science subjects, was paying no attention to my lecture. His paper sheet was blank; obviously he didn't finish the homework. I dropped him a hint by walking past him several times but he did not seem to get it. He continued to play with his pen. I was angry, but I tried to remain calm. When the bell rang, Tommy stood up, tossed his paper and dumped it into the garbage bin. Seeing this, I almost burst out yet I suppressed my rage and went on to pick up the tossed paper from the bin. I noticed astonishment in Tommy's eyes. I said firmly, "I know you didn't catch a word of my explanation just now. But that's because you didn't finish your homework. It is 'one more fault' (*cuo shang jia cuo* in Chinese) when you dumped the paper. Never do it again!" He later apologized to me

and explained that he had prepared mathematics Olympic games the night before and had no time to finish the test paper I had assigned. (Jun, July 8th, 2011)

Different from Jun's control of anger, Min flew into a great rage when Jackie, a boy in his class, did not do the morning exercise on the playground.

All the students were doing morning exercise after two periods of classes. Every middle school has such a practice, you know. When it started, Jackie was standing there still, not intending to do anything. I waved to him several times, yet he did not move. I burst into anger. I dashed through the team of swinging arms, yelled at Jackie, 'Are you blind and dumb? Don't you know what to do now? You think you are handsome not doing anything...?' All the eyes were on me, and silence haunted on the playground. I kept shouting, but he was stiff, like a statue. I almost hit the roof. I pushed him, yelling 'Move!' I regretted it immediately [when I pushed]. After the morning exercise, I asked him to stay. I apologized to him, 'Sorry, I shouldn't have done that. You must forgive me.' He was all tears. He later told me that he didn't do the morning exercise simply because he thought it was meaningless. He changed after that incident. He has been doing the morning exercises as others since then. (Min, July 15th, 2011)

Obviously Min did not control his temper. He apologized to Jackie because he had realized he was too anxious to correct the Jackie's mistake. He should have done it another way. Yet his frankness erased the negative effects of the incident, and luckily Jackie understood him.

22.5.2.3 Emotions Expressed in Interacting with Students on Twitters

With the popular use of twitters among teenagers, Chinese youngsters are no exception that they use the Chinese version of twitters which are called "micro-blogs" (*wei bo* in Chinese). Min once showed us a snatched picture of one of his students' micro-blogs on his computer, and told us how he communicated with students by tweeting each other.

I would tweet them when I was online. They are crazy about micro-blogs. Whenever they have time, they tweet. They post what they feel, what they do, and what they will do next, almost everything on their micro-blogs. The thing they complained most is too much homework and no time to play. I frequently visited them, and left my messages. They take me as their twitter friends now. It did make things easier. (Min, July 15th, 2011)

Min's use of twitters increased the opportunities of his interaction with students. The physical distance between Min and his students was consequently narrowed with the aid of virtual communication.

22.5.3 Emotions Expressed in Terms of Interaction with Colleagues

As Hargreaves (2001b) pointed out, all collegial relations among teachers are a peculiar combination of closeness and distance. Jun, Song and Min's interactions with colleagues are embedded with mixed emotions.

22.5.3.1 Respect for Mentors

A mentoring system is practiced in Dongguan Middle School. A senior teacher is responsible for mentoring two or three novice teachers in their first 2 years of teaching. Both mentors and mentees are required to listen to each other's classes for at least 40 periods and discuss together afterwards. Among the colleagues, their mentors are the colleagues with whom Jun, Song and Min work closely and interact most. They enjoy being mentored. Min even had developed friendship with his mentor.

My mentor is the coordinator of the English subject group. We stayed in the same office, so I had plenty of opportunities to discuss with him the teaching issues. Middle-aged, he is intelligent and strict. He doesn't like to observe our 'public' class, which he believes is a show rather than a real class. He likes to open the door, walk in, and sit down to observe our classes without notice! Some of other young teachers felt uncomfortable, but I wouldn't. I am happy to be observed without notice. I know my weakness would be magnified, but my teaching would improve a lot that way. My mentor would frankly point out my problems after his observation and I would accept most of his suggestions. He has become my big brother, leading me to be a qualified teacher. I am grateful for his great help. I value our friendship. (Min, July 15th, 2011)

Like Min, Jun thought highly of his experience of being mentored. He attributed it to the collegiality that the school tries to promote among teachers.

Every time we had a school meeting, the principal would reiterate, "Teachers need to learn how to appreciate each other. No mean criticizing. No talking behind others." His words at least served as a reminder. We try to observe this rule when interacting with colleagues. We would point out at least one strength and one weakness of others' teaching after we listened to each other's classes. (Jun, July 10th, 2011)

22.5.3.2 Worry Over Colleagues' Possible Jealousy

Obviously the special relationship of mentor-mentee lays a good foundation for cooperation and assistance. When interacting with other colleagues, the teachers had different experiences. While Jun experienced joy in his relations with colleagues, Song is afraid of standing out of crowd among colleagues. As he successfully motivated his students with his original strategy, the coordinator of the grade asked him to share his experience with other teachers. He did as required, but very worried.

I didn't mean to show off. I would like to share, but I am afraid of standing out. Some teachers implemented my method, yet not as successful as in my class. They doubted my way. I know it. I don't know why it didn't work in their classes, but I knew why it did in mine. First, I know my students well. It is for them. Second, I am very sure I can succeed. But I can't explain this to my colleagues. You know, as a new teacher, you'd better listen rather than talking. So I try not to do things differently from others. For example, I don't have to take a nap at noon. But I dare not to stay in the office to work. I am afraid my colleagues may say that I am working too hard. (Song, July 20th, 2011)

Song had no mean intention for his colleagues, and so did his colleagues for him. Yet he didn't trust them, nor did some of his colleagues. They need time to establish mutual understanding.

22.5.4 Emotions Expressed in Relation to Parents

As indicated by Hargreaves (2001b), praise from parents, though always welcome, is too scarce due to their infrequent and episodic interactions. In the school, teachers keep contact with parents via a school-home SMS message system. Text messages are the main means of communication between teachers and parents. Parents and teachers do not meet except on the parent meetings, or when the students have had a serious trouble at school. Some parents call the teachers from time to time to consult their children's performance. Others do not. Teachers usually interact with parents with mixed emotions, and so does Jun. Jun laughed when he recalled one of the parents' words at a meeting with parents.

This middle-aged man came near, and shook my hands. "Mr. Wang, I have long heard about you from my boy. He admires you. He told his mum that you are the only teacher he listens to. I am so excited to have met you!" I smiled, but didn't know how to respond to his kind words. (Jun, July 15th, 2011)

It is apparent that the parent respects Jun because his child admires him. Some parents, however, have some special requirements concerning their children. Min felt irritated about such 'irrational' requirements.

Sometime they were annoying! I was exhausted after the whole day's work. Some parents kept calling me, expecting that I would 'take care of' their children. I would of course, no matter whether they called or not. Some of their requirements were ridiculous! One wanted me to give extra assignments to her boy. Quite a few asked me to change the seating of their children, especially 'to sit with excellent students'. Others wanted me to share some 'short-cuts' of English learning. Is it possible? I would have liked their children more if they hadn't asked me to do this and that. (Min, July 20th, 2011)

Unfortunately the annoyance from the parents has negatively affected Min's views of the students. He preferred to be left alone to deal with the students rather than being instructed how to.

22.5.5 Emotions Expressed in Relation to Administrators

Jun, Song and Min all agreed that they had not had much contact with the administrators in school. Yet their administrators, usually the principal, gave them encouragements or advice when needed. Song said he was touched by his principal's warm encouragement.

My principal sat next to me at one teachers' assembly. I thought he didn't know me or know about me. He suddenly talked to me, 'I heard about your successful implementation of the cooperation strategy', he paused, 'You know your students well and change your strategy accordingly. Believe me, you will become an excellent teacher in three years.' I was really moved by his words. I thought I couldn't let him down. (Song, July 15th, 2011)

Min, however, was invited to have a talk with the principal because his students broke the school rules too often, such being late for class, not standing in queue

when waiting in the canteen, or absent from the morning exercises. He said it was because he never published them for their wrongdoings. The principal had a talk with him.

'I know you are a very good friend of your students,' the principal said slowly, 'it was a good start, but not yet enough.' I nodded when he talked. 'When you are too intimate with your students, you have no authority and they don't listen.' I agreed, I did have no authority among my students. 'Three roles to play as a teacher,' he continued, 'a kind father, a strict teacher and a good friend'. He didn't further explicate how to do this. And I didn't ask. In the second semester, I kept distance from my students and criticized them when they did wrong. It really worked. They are not better behaved. (Min, July 20th, 2011)

From the narratives it is known that Min followed his principal's advice though he didn't know exactly how to fulfill the three roles. Yet he gave it a try, and found it effective.

22.6 Discussion

The above narratives of teachers' emotional relationships show that teachers had mixed emotions in interacting with students, colleagues, parents, and administrators. In this part, teachers' emotions will be analyzed with the framework of emotional geographies (Hargreaves 2001a, b).

22.6.1 *Emotional Geographies of Teachers and Students*

Among the six geographies, moral geographies play a key role in teachers' emotions in their relations with students. As moral geographies indicate, people have moral closeness when they 'pursue purposes and feel senses of accomplishment together' (Hargreaves 2001b, p. 508). The data shows that whether teachers are happy with students largely depends on whether they think they are achieving their educational/teaching purposes. They would believe so if their students display that they enjoy learning, improve their performance or show their appreciation for teachers' efforts. For example, Jun felt happy when his students demonstrated that they had enjoyed his teaching; Song felt rewarded because the students were improving with his help; Min felt satisfied when his student showed his affection. In contrast, they would have a sense of failure if the students didn't follow their instructions. In the Chinese tradition, students are expected to listen to teachers (Qu and Zhang 2005). Jun and Min were both angry when their students did not do their homework or the morning exercise. It illustrates that the "psychic rewards" of teaching (Lortie 1975, p. 187), which are mostly from students, are essential in narrowing the moral distance between teachers and students.

The second critical factor in teacher-student emotional geographies is political distance. It sets the emotional rule of teacher-student interactions that teachers have

a privileged position over students. In the Chinese tradition, the relationship between a teacher and his/her student is akin to a parent and his/her son (Watkins 2000), consistent with the Chinese saying that “He who teaches me for one day is my father for life” (*yiri wei shi, zhongshen wei fu* in Chinese). In other words, teachers have an absolute authority over students both inside and outside the classroom. This unbalanced power relations lead to teachers’ beliefs that students ought to do what they or the school expect them to. If they fail, the teachers may get mad or upset with them. In this sense, political distance seems indispensable from traditional power-laden relationships in Chinese educational settings.

The third factor that shapes teacher-student emotional geographies is their physical distance. Working in close proximity, teachers and students have plenty of opportunities to get to know what the others are doing and thinking. Jun and Min felt being appreciated and known by the students who had a chance to get to know their life outside the classroom (i.e. staying up late and being a pop music fan). With shortened physical distance, the students had a chance to express their concern and appreciation for their teachers. Physical distance, therefore, is a terrain where teachers could explore to obtain positive emotional experiences with students.

What emerges from the teacher-student emotional geographies is the strategy to narrow the moral and political distance. As Jun and Min’s negative emotional experiences indicate, they got angry because they didn’t know why their students were not following their instructions. They took it for granted because of their privileged positions as teachers. For example, Jun did not know that his student had had to prepare for the mathematics Olympics, nor did Min realize his student’s true feeling of morning exercise. They didn’t ask until the problem arose. If the students’ particular situations are not to be understood by the teachers with an equal stance, teachers cannot get across their teaching purposes. To shorten the moral and political distance, teachers should try to know more about individual students by allowing their voices to be heard.

22.6.2 Emotional Geographies of Teachers and Colleagues

As Hargreaves (2001b) observes, colleagues are one of the likely sources of recognition, reward and appreciation for teachers, as they pursue the same objectives and share similar troubles. Our data suggests that professional geographies are the foremost factor in shaping teachers’ emotions in their relationship with colleagues. According to Jun’s narratives, the school had been attempting to create a cooperative and supportive school culture and to encourage teachers to be engaged in genuine professional dialogues. That is, the school had tried to narrow the professional distance by opening the teachers up to exploring professional issues together. The mentors, as a special kind of colleagues, were expected to work closely and discuss the professional issues with the teachers, so as to ensure the novice teachers’ teaching quality and professional development. Towards the same goal, the mentor-mentee relations were experienced and perceived positively, even though the mentor

from time to time paid unnoticed class visits to the teachers' class, as shown in Min's narratives. As a novice teacher, Min was so eager to improve his teaching that anything helpful would be readily accepted. In Song's case, his concern over his colleagues' possible jealousy came from his uncertainty of his own professionalism. He thought his colleagues might dislike the strategy he had initiated, or take it as useless, as he was not sure whether he was competent enough to contribute to the professional community. The two cases indicate that novice teachers tend to experience positive emotions when they are 'receivers' or 'takers' of knowledge/information, yet they may feel uncomfortable if they become the 'givers' or 'authors'.

The reason why novice teachers are more comfortable with taking than giving lies in the hierarchical system set by the political geographies of teachers and their colleagues. In the Chinese context where social hierarchy prevails, new practitioners are expected to listen more and talk less (Qu and Zhang 2005). For example, Song's worry of colleagues' possible talks over the effectiveness of his classroom management strategy has led to his cautious attitudes towards his behaviors in public. As a novice teacher, he then reminded himself of not doing things differently from others. The political distance has kept Song from engaging in genuine meaning negotiation with colleagues, and therefore threatens the emotional understanding between teachers and colleagues, which is foundational to high standards of their teaching and professional growth (Hargreaves 2001b).

22.6.3 Emotional Geographies of Teachers and Parents

As Hargreaves and Lasky's study (2004) point out, parents of teachers' students are an important source of praise and recognition that teachers want as validation for their efforts, expertise and effectiveness. Our data reveals that moral distance is the most important factor that configures teachers' emotional understanding of parents. Teachers tend to experience positive emotions when they feel that their educational purposes are known and understood by parents. In Jun's case, he valued the direct display of appreciation and gratitude from his student's parent. Although the parent's compliments were not concrete, they could sufficiently convey to the teacher the message that his educational purposes were acknowledged and appreciated.

It is also noted that moral closeness is the prerequisite of physical closeness. When the moral distance is shortened, teachers will more flexibly accept their physical closeness with parents. Otherwise, the attempt to be physically closer to teachers would arouse nothing but their amenity. As Min's case indicates, he was first irritated by parents' calls at night, which might be seen as their attempts of shortening the physical distance with the teacher. He was further annoyed when those parents asked for something 'ridiculous'. It implies that if the moral distance between teachers and parents is not yet narrowed, their physical closeness will not be possible.

The finding confirms Vincent and Tomlinson's (1997) conclusions that distanced respect and active support are the two kinds of relationship with parents that teacher

prefer most. It also echoes Hargreaves and Lasky's findings (2004) that teachers do not like to have their expertise and judgment questioned. The pleasant teacher-parent emotional experience, as highlighted by the finding, could be achieved by teachers' tolerance of parents' query and parents' appreciation for teachers' work.

22.6.4 Emotional Geographies of Teachers and Administrators

As displayed by Song and Min's narratives, it is interesting to note that the personal and physical distances seem not to be the key things that matter in the emotional understandings between teachers and administrators. The interactions between the teachers and the administrators of the school were not a common occurrence: they did not meet or talk with each other except on the faculty meetings or until a critical incident occurred. Yet it did not affect their communication, nor did the teachers complain about it. What matters in their emotional relationships is the political distance.

The political distance between the principals and the teachers is prescribed by the hierarchical order in the Chinese culture that the one of a lower status ought to listen to the one of a higher position (Zhai 2004). Whatever advice the principals may give to the teachers, it would be considered as important and useful. It is not a coincidence that the conversations between the principals and the teachers, as shown by the two cases, were all initiated by the principals. The principals, therefore, play a role of 'reliable others' whom teachers could turn to and count on. The political distance, therefore, seems not to negatively affect teachers' emotional experiences; instead, it is likely to keep a culturally appropriate distance of power relations in which teachers and principals could interact comfortably and effectively.

22.7 Conclusion

This study explored how teachers' emotions were mediated by their interactions with students, colleagues, parents and administrators. Qualitative data of three novice secondary-school EFL teachers' emotional experiences in relationships were collected by interviews, teacher reflective journals and school documents. Within Hargreave's (2001a, b) framework of emotional geographies, I make sense of novice teachers' emotions in relations with others. The research findings reveal that novice secondary-school EFL teachers' emotions are configured by and intertwined with political geographies determined by social hierarchy, moral geographies to be improved by mutual understanding and interactive strategies, as well as physical distances to be narrowed by virtual communication.

First, discussions of political geographies in teacher-student, teacher-colleague and teacher-administrator relations seem to highlight its dispensable position in setting the emotional rules for teachers. By nature, emotional rules reflect the

cultural expectations, social standards, or professional norms which lead and direct teachers' emotional experience and expressions (Yin and Lee 2012). In the Chinese society where social hierarchy prevails, the emotional rules are prescribed by such hierarchical perceptions as the young are supposed to obey the senior, students to teachers, the subordinate to the superior. The obeying/disobeying of such rules, to a large extent, determines whether or not teachers are to experience positive emotions in their workplace. In other words, teachers' emotions are largely determined by the accordance of political distance and the social hierarchical order. In other words, if the social interactions between teachers and others accord with the social hierarchy, teachers are likely to experience positive emotions. Otherwise, they tend to have negative emotional experiences in relationships. The recognition of emotional rules, to some extent, echoes Zembylas' (2011) post-structural view of teacher emotion that teachers as socially and cultural specific persons engaged in complex webs of power relations which "allow or disallow the constitution of certain emotions" (p. 33).

Second, the analysis of moral geographies of teachers' emotions suggests the need of mutual understanding and effective interactive strategies in narrowing the moral distance between teachers and students and that between teachers and parents. As teachers' moral purposes are usually shared with colleagues but not with parents and students, they may need to pay extra efforts in narrowing their moral distance with these two groups of stakeholders. To get across their educational and teaching purposes, teachers are supposed to listen to students' voices, show care for their true feelings and allow more tolerance for parents' queries and requirements of their children's performance at school. On the other hand, parents should also undertake the responsibility of improving their relationship with teachers, which eventually does good to their children. To achieve this, parents ought to show appreciation for teachers' efforts by applying such interaction strategies as compliments.

Third, the findings of teachers' physical geographies suggest the role that virtual communication means play in teachers' professional relationships. As the extensive use of twitters among students suggests, effective use of virtual communication means may help increase the opportunities of genuine teacher-student interaction. The widespread of the school-home SMS message system, likewise, points out the importance of utilizing technology to enhance teacher-parent communication.

Based on the above three conclusions, the present study contributes to the research body of teacher emotion by highlighting its implications for teacher emotion research and language teacher education in three ways. First, the emotional rules determined by socio-cultural expectations and norms suggest the necessity of attending to cultural specificities in teacher education research. Particularly, comparative studies of teacher emotion across different socio-cultural contexts are in great need. Second, the importance of interaction strategies and mutual understanding point to the need of emotional preparation curriculum for pre-service teachers and emotional support mechanism for in-service teachers. Teachers who are not emotionally prepared for their jobs are bound to fail in their profession. Third, the use of virtual communication means implies the need of encouraging and training teachers to effectively use technology for investing their professional relationships.

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Chapter 23

Tensions and Relations: Exploring the Dynamic Relationship Between Teachers' EFL (English as a Foreign Language) Teaching and Learning Beliefs and Practices

Hongying Zheng

Abstract As a major area of enquiry in language teaching, the study of language teachers' beliefs has focused on the exploration of its relationship with teachers' classroom practice since the 1990s. However, the dichotomy of consistency and inconsistency between teachers' beliefs and practice presented by the majority of prior studies in this field seems to simplify the issue in that it fails to indicate the evolving feature of the interactions between teacher beliefs and practice in different teaching contexts. By adopting socio-cultural theory, the study explores how the relationship between the teachers' beliefs and practice is constructed. A case study was adopted to explore five secondary school EFL teachers in the context of curriculum reform in China. Semi-structured interviews, classroom observation and stimulated recall interviews were used to elicit data. The study revealed that the teachers held five major tensions, which may be resulted from the misinterpretation of the new concepts, or the incompatibility between the teachers' existing beliefs and the new concepts from the NECS. The teachers' explicit awareness of these tensions exerted direct influences on their practices. Moreover, the dynamic relationship between the teachers' beliefs and practice surfaced the analysis of the tensions exemplified in the practice. That is, usually more than one belief underpinning the teachers' practice interacts with each other, which contributes to the dynamics between the teachers' beliefs.

Keywords EFL teachers' beliefs • Relationship between beliefs and practice • Tensions

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23.1 Literature Review

In the last 20 years, the study of teachers' beliefs has emerged as a major area of enquiry in the field of language teaching. Substantive evidence has indicated that teachers' beliefs exert powerful influence on all aspects of teachers' thoughts, decisions and actions. This has provided the groundwork in many studies on teachers' beliefs. One strand of these studies has focused on the relationship between teachers' beliefs and their classroom practices. A sophisticated two-way relationship has been established, not only by affirming cognition as a key factor in shaping classroom events, but also recognising the fact that classroom events in turn shape subsequent cognition. Further studies have explored the extent to which teachers' professed beliefs correspond with what they do in the classroom. This leads to a recurring research theme of 'consistency' and 'inconsistency' between the teachers' beliefs and practices.

On the one hand, such research focused on the relationship between teachers' professed beliefs and their reported practice (Allen 2002; Flores 2001; Kerm 1995; Richards et al. 1992). Some studies have shown that underpinning their reported practice, language teacher have diverse beliefs about the curriculum, about language and language teaching, about the nature of language learning, about classroom practices, about the teachers' roles and about the teaching profession (e.g. Kerm 1995; Richards et al. 1992). These beliefs relate to language teaching in that, for example, teachers with more functional-based beliefs reported more frequent use of audio tapes and pair/group work, while teachers with grammar-based beliefs tended to use written grammar exercises more frequently (*ibid.*). However, the major way of obtaining data in these studies was by adopting self-report instruments, such as questionnaires, without analysing observed classroom practices. Since other researchers have found that language teachers' practice does not often reflect their stated beliefs (e.g. Phillips 1996), the study without examining teachers' classroom teaching may fail to fully capture what really underpins teachers' practice.

On the other hand, the studies of teachers' beliefs by relating to their actual classroom teaching reveal more complex relationships between the two than those revealed by referring to teachers' reported practice. There seems to be some evidence that language teachers do not always teach in line with their stated beliefs, personal theories or pedagogical principles (Karavas-Doukas 1996; Richards and Roger 2001). Such discrepancies were verified from two perspectives. For one thing, different teachers make different associations between beliefs and practices (Breen et al. 2001; Mangubhai et al. 2004). For another, an individual may appear to be inconsistent in his/her beliefs and practice (Freeman and Richards 1993). Some studies have indicated that teachers' claims to be using communicative approaches are often not supported by their practices (Karavas-Doukas 1996; Kumaravadivelu 1994). Apart from the relationship between beliefs and practice, these studies also reveal the evidence that teachers' beliefs are situational and contextualised. Such consistencies, inconsistencies and departures are the results of the teachers' interaction

between their pedagogical choices and their interpretation of the instructional context at a particular time. It thus reinforces the assumption that any study of the relationship between teachers' beliefs and practices should take a situated view of teachers' beliefs. However, the dichotomy of consistency and inconsistency between teachers' beliefs and practice presented by the majority of prior studies in this field seems to simplify the issue in that it fails to indicate the evolving feature of the interactions between teacher beliefs and practice in different teaching contexts. The present research aims to break out of such a dichotomy by presenting a dialectical relationship between teachers' beliefs and practice.

In this case, the existing research adopted cognitive or socio-cognitive perspective has an important limitation. It fails to address the constructive role of contexts in understanding the relationship between teachers' beliefs and practices. According to socio-cultural theory, teachers' beliefs are subjective interpretations of culturally influenced social relationships, while teachers' practices are at the core of the objective characterization of culture both at the level of local interaction as well as that of society. Under the above assumptions, my study aims to illuminate dynamic relationship between Chinese EFL teachers' beliefs and their instructional practices. In the context of curriculum reform in China, the study will explore how such a relationship is constructed, as teachers involve themselves in the social interaction manifested in a classroom context. To be more specific, I regard the relationship between teachers' beliefs and practice as a contextualised concept developed with the integration of various activities by individuals in particular interactive situations.

In 2001, under the principle of 'quality education for each and every student', China launched the National Full-time Compulsory Education Reform. As an important component of this reform, the National Full-time Compulsory Education English Curriculum Standards (NECS) was published in 2003, indicating the beginning of the reform on the subject of English. However, changes in both curriculum and teaching materials do not guarantee a subsequent change in classroom dynamics. Teachers' pedagogical choices cannot be made simply on the basis of abstract principles written in the curriculum or textbooks, but need to accommodate the realities of each teaching situation in its own right. This is due to the fact that teachers' practices are influenced by their beliefs, and the changes of their beliefs undergo gradual process with great variations under different teaching contexts. At the time of the study, the reform has been conducted for 5 years with evident changes in all aspects of education. However, the new concepts advocated in the NECS have not been fully implemented by teachers into their classroom teaching, which may be partly due to the constraints imposed by teaching contexts. EFL teaching has been characterised as situated and interpretive (Johnson 1996), which suggests that EFL teachers' beliefs is, in part, experiential and constructed by teachers themselves as they respond to the contexts of their classrooms. However, research in teacher education has largely focused on developing an empirically grounded knowledge-base to be given to teachers, rather than on examining what teachers' experiential knowledge is and how they use that knowledge (Carter 1990). Therefore, deeper understanding of the mechanism of how teachers construct their beliefs and practice in specific contexts are critical to teachers' professional development and will further inform

teacher education. To be exact, my research question is ‘How did the Chinese secondary school EFL teachers’ explanations of their instructional practice reveal their beliefs about EFL teaching and learning?’

23.2 Conceptual Issues of ‘Belief’

In the study of beliefs, one of the most important and bothering issues is to define ‘**belief**’. Although there is a considerable amount of research done on beliefs, there is a wide range of variance as not only to the terms used but also to the understanding of beliefs. The following table may give you a glimpse of how varied the terms have been used throughout years. In order not to cause more confusion, I will adopt the most used term in the literature ‘belief’. Despite that attempts have been made to define the term ‘beliefs’, there is no one-for-all definition of ‘beliefs’. As revealed from these studies, every definition of ‘beliefs’ is a study-bound, culture-based, context-emergent and even person-bound.

Because of the diversity in using this term, I chose not to define beliefs but rather to present some basics of teacher beliefs that have been agreed and presented in the prior research and reviews on teacher beliefs.

In understanding beliefs, one of the greatest confusions about beliefs comes from its relationship to knowledge. In literature, knowledge is either taken as different from beliefs by nature, or used as a grouping term without distinguishing between what we know and what we believe. From the standpoint of an epistemological debate, knowledge and beliefs may be seen as separate entities in that knowledge is closer to truth than beliefs are. For example, Fenstermacher (1994) distinguished beliefs from knowledge by emphasizing beliefs as personal values which may not have epistemic merit and knowledge as factual proposition.

However, from the perspective of teachers’ cognition as the way in which teachers construct ideas and concepts, they can be taken as overlapping concepts which are ‘inextricably intertwined’ in teachers’ minds (Verloop et al. 2001). In many empirical studies on teacher beliefs, such blurry distinction between knowledge and beliefs proves to be impossible to distinguish whether teachers refer to their knowledge or beliefs when they plan and make decisions and act in classroom. Woods (1996) proposed an integrated network of foreign language teachers’ beliefs, assumptions and knowledge (termed BAK), which is useful for defining the key construct under investigation. Borg (2006, pp. 33–34) has argued that ‘aiming to separate knowledge, belief and related concepts is not a particularly fruitful exercise given that in the mind of the teachers these constructs are not held or perceived distinctively’. In line with this understanding of the relationship between beliefs and knowledge, I will not try to distinguish knowledge from beliefs in this study but to concentrate on teachers’ thought underlying teachers’ instructional practices.

Based on the above review of the muddle of debate related to the definition of beliefs, EFL teachers’ beliefs can be understood in this study as: “EFL teachers’ sub-system of their educational conceptions that affect teachers’ perceptions,

judgement in terms of EFL teaching and learning and serve as a basis for subsequent instructional practice in the classrooms. Teachers' beliefs are a complex and inter-related system, which are tacitly held and grounded in the experiences teachers pass through in the socio-cultural context."

23.3 Research Methods

This is a case study examining five teachers in their workplace, assuming an interpretive theoretical perspective. Participants (Jin, Wu, Xi, Yin and Hua) were voluntary sample of five Chinese secondary school EFL teachers, whose EFL teaching experience ranged from 5 to 20 years. They worked in three different grades at four different secondary schools. The data was collected over a period of 4 months using semi-structured interviews, observations and stimulated recall interviews, which not only allowed for triangulation of findings, but also supported a genuine dialogue between the researcher and the teachers to elicit authentic information. The data was collected continuously from one teacher after another. One-hour semi-structured interview was first conducted within a planned framework of themes on EFL teaching and learning before classroom observation. Mostly ethnographic interview questions were used to elicit responses based on the teachers' experiences, which better predicted future behaviour than abstract professed beliefs. Then the teacher was observed eight times throughout their teaching of one unit, each followed by a stimulated recall interview after each observation. These interviews aimed to elicit the teachers' explanations of their teaching practices, which revealed their conceptualisation of their practices. Both the pre-observation interview and stimulated recall interviews were audio-recorded and transcribed. Observations were video-recorded and the episodes of the teachers' practices mentioned in the stimulated recall interviews were also transcribed.

23.4 Research Findings and Discussion

23.4.1 Tensions in the Teachers' Professed Beliefs About EFL Teaching and Learning

First of all, the analysis of the teachers' explicit beliefs revealed five major tensions. The research shows that the teachers' explicit awareness of these tensions exerted direct influences on their practices. The above within-case analysis displayed an overall picture of the teachers' beliefs about EFL teaching and learning and also revealed the variation of their beliefs in terms of coherence. The key themes that arise from the cross case analysis represent tensions in the teachers' beliefs about EFL teaching and learning. These tensions manifest themselves in different degrees

and ways in the following perspectives: tensions between different beliefs about the NECS, tensions between ‘overall competence in language use’ and ‘passing exams’, between ‘focusing less on grammar teaching’ and ‘optimise grammar teaching’, between ‘learner-centeredness’ and ‘teacher-centeredness’, and tensions between ‘behaviourist approach’ and ‘communicative approach’ to EFL learning.

23.4.1.1 Tensions Between Different Beliefs About the NECS

The differences in relation to the teachers’ beliefs about the aims of EFL teaching seemed to be connected with the differences in their views towards the NECS. As a contextual influencing factor, the NECS exerted a different influence on the teachers. To a certain extent, themes of denial, compromise, and assimilation of the influence from the NECS were revealed from the teachers’ narrations.

Jin explicitly claimed that she had little knowledge about the NECS and her teaching follows the requirements of textbooks and examinations. In this case, claiming the influence from textbooks, she held the view of putting less focus on the importance of grammar teaching and introducing new words with context. Yin’s comment about the NECS revealed her passive application of some views advocated. Her reiteration of examination requirements revealed her beliefs in examination orientated teaching. Therefore, she complained that the NECS, as guidance to EFL teaching, did not clarify the requirement of examinations and that the textbooks were irrelevant to examinations in terms of language knowledge. Although they pointed to inconsistencies between the NECS, the textbooks and the examinations, Wu and Xi, seemed to have developed their own compromise strategies for language teaching. Under the influence of the NECS, Hua seemed to assimilate most principles of the NECS into her professed beliefs about EFL teaching and learning.

Despite the above differences, some similarities shared by the teachers seemed to coincide with the principles advocated by the NECS, such as the pedagogical role of L1 in L2 learning, vocabulary teaching in context, the emphasis on listening and speaking skills, the importance of learners’ interest and experience in EFL learning. Moreover, pair-work and group-work have become common practice among Chinese EFL teachers. In this context, the teachers approved of the role of pair-work and group-work as cultivation of the learners’ sense of cooperation and competition. Therefore, regardless of whether or not the teachers explicitly welcomed the influence from the NECS, their beliefs about EFL teaching and learning, to some extent, were affected by it in one way or another.

23.4.1.2 Tensions Between ‘Overall Competence in Language Use’ and ‘Passing Exams’

According to the NECS, one of the main aims of EFL teaching is the development of students’ overall competence in language use. However, the frequent dual references to ‘overall competence in language use’ and ‘passing exams’ in the teachers’ accounts implied a tension in their beliefs, pulling in two directions.

All the teachers claimed that the aims of ‘overall competence in language use’ and ‘passing exams’ do not necessarily contradict each other as learners of higher ability were believed to be equipped with the ability to pass exams. However, in reality the exams focused too much on language knowledge, although the exams became more competence-oriented. One of the excuses of ignoring learners’ overall competence in EFL teaching is the limit of time and energy for teachers to meet the dual aims. Interestingly, Yin complained that the change of exam focus from language knowledge to competence in language use made it difficult for teachers to teach for exams.

This dual perspective also shaped the teachers’ views about teaching reading. The NECS proposes a route for gradual development of reading skills from simple reading skills to deductive analytical reading skills. The amount of reading increases from 40,000 words in Grade 7 to 150,000 words after Grade 9. Yin focused on teaching reading strategies because she believed that it can help learners to get a good score in examinations. Jin regarded reading as a way to reinforce language knowledge so she focused on the learners’ understanding of the main idea and detailed language points. Xi emphasised that reading materials provided good resources for learners to imitate the use of language. Wu believed that training of learners’ skills in effectively locating useful information was beneficial for learners’ more intensive learning in the future. The beliefs of whether approaching reading as a reinforcement of language knowledge or as a way to develop learners’ thinking skills implied the tension between ‘developing learners’ overall language competence’ and ‘passing exams’.

According to the NECS, the accumulation of cultural knowledge and awareness of cross-cultural differences can arouse learners’ interest and promote efficiency in EFL learning. Although the teachers seemed to acknowledge its importance in terms of arousing learners’ interest (Jin), broadening their vision (Yin), helping language learning (Xi) and so on, some of them expressed their concerns about teaching culture. Yin claimed that she usually did not have enough time to provide cultural information; Wu mentioned that he would introduce culture but learners varied in degree of understanding. Hua introduced culture according to their personal knowledge and experiences. It seemed that the importance of cultural teaching was easily overtaken by time limit, learners’ level of understanding and teachers’ access to cultural information.

Facing such tensions, the teachers tended to choose ‘passing exams’ as the priority in EFL teaching and take developing ‘overall competence’ under certain personal or contextual conditions. But in most cases, they developed compromise ways to resolve the tensions.

23.4.1.3 Tensions Between ‘Focusing Less on Grammar Teaching’ and ‘Optimise Grammar Teaching’

Tensions in regard to grammar teaching involved two issues: how and to what extent grammar should be taught. First, there had been a common belief since the curriculum reform that the NECS advocates a reduction of time devoted to grammar

teaching with an increased focus on developing learners' communicative competence. However, this was a misinterpretation of the NECS in terms of grammar teaching. In fact, the NECS states that the teaching of grammar should be optimised by encouraging learners' inductive learning. With the promotion of communicative skills, the textbooks focus on topics rather than on grammar. Under such circumstances, the above misinterpretation among the teachers resulted in a tension in their beliefs about whether or not to teach grammar. Jin argued that the importance of grammar teaching should be played down in classroom teaching although she believed that grammar was the foundation for producing language and writing. Xi claimed that he always held the view that grammar should be acquired in a natural way rather than be taught intensively in lessons. Yin believed that grammar is very important for both language learning and passing examination so she thought it necessary to reorganize the order of grammar in textbooks so as to present it more systematically. Although Hua said she was unsure about how much grammar to include in her lessons, like Wu, she recognized the importance of grammar in helping learners' EFL learning. They held the opinion that grammar should not be the focus of EFL teaching and experiential learning of grammar should be encouraged in EFL classroom.

The second issue was about to what extent grammar should be taught. Jin mentioned that she would only teach grammar when mistakes occurred in exercises. Xi emphasised that he would not spare any time in grammar teaching. The only practice he asked learners to do was 'substitution drills' on what appeared in the textbooks. In Yin's accounts of grammar teaching, her reference to grammatical terms such as "there be" sentence pattern', 'tense', 'part of speech' implied her focus on basic but systematic grammar rules. Wu attached importance to teachers' 'clear and proper presentation of grammar rules at certain stages'. Hua acknowledged the necessity of grammar teaching in EFL classroom but she also expressed the difficulty in how much grammar teachers should teach.

23.4.1.4 Tensions in the Teachers' Professed Beliefs Between 'Learner-Centeredness' and 'Teacher-Centeredness'

In the teachers' narration, 'to teach according to learners' differences' indicated that the teachers agreed to put learners at the centre of their teaching and respond to learners' needs and interests. Moreover, learner/teacher-centeredness can also be revealed from the teachers' beliefs about teachers/learners' roles. In a learner-centred classroom, the role of the teacher is seen to be changed from that of a knowledge provider to a facilitator, a resource organiser, a guide to activities, a participant, an assessor, a carer, a counsellor as well as a helper in the learning process (Richards and Rogers 2001; Dam 2000; Hedge 2000).

All the teachers in the study approved 'learner-centeredness' in EFL teaching. However, they seemed to hold different interpretations relating to it. Jin believed that teachers should be authoritative and be actors to arouse learners' interest in learning, while learners should be participants. Xi believed that teachers should be

organizers and participants. Yin believed that teachers should guide learners, while learners should be recipients of knowledge. Hua regarded teachers as co-participants and interlocutors. Wu believed the teacher's main role was to provide learners with a sense of success. The variations in views about the respective roles of teachers and learners can be explained by the multi-faceted nature in EFL classroom teaching.

23.4.1.5 Tensions Between the 'Behaviourist Approach' and the 'Communicative Approach' to EFL Learning in the Teachers' Professed Beliefs

Approaches such as the behaviourist and communicative approaches have exerted a great influence on EFL teaching (Mitchell and Myles 2004). In this study too, the teachers' professed beliefs bore the features of the influence from these approaches in second language learning.

On the one hand, the teachers all shared a belief in the importance of repetition in EFL learning. According to the behaviourist view, language learning consists of the formation of habits through repetition of basic patterns. The audiolingual method was based on this theory in emphasising certain practice techniques including imitation, repetition, memorization and pattern drills, which were exactly the words used by Xi in describing his method of teaching. Yin and Hua even regarded the lack of drill exercises as a drawback in current textbooks. Moreover, the behaviourist influence can also be inferred in the teachers' beliefs about error correction. Yin and Hua believed that errors should be corrected immediately after the learners have made them. Otherwise, the errors may be accumulated as habits in language use. In this case, it is evident that the adherence to some behaviourist approach to language learning in the above domain would suggest a strong influence of this approach on the teachers' assumptions about EFL teaching and learning. On the other hand, the teachers also expressed their beliefs about the importance of communicative language learning. All the teachers in the study agreed that 'learners learn a language through using it'. The fact that the teachers adopted some communicative language teaching strategies and held some behaviourist views at the same time indicates the variations of the influence from these two approaches.

23.4.2 Dynamic Features of the Teachers' Beliefs and Practice

The above five tensions revealed from the teachers' professed beliefs were further exemplified in the teachers' practice. The teachers' awareness of these tensions of beliefs may lead them to the consistent practice. For example, Jin held that grammar is important but she did not teach grammar too much because of the requirement of the NECS. The consistent practice was found in her practice. In one of Jin's lesson, she mentioned a grammar point when she was checking exercises for the students.

Episode 1:

T 'Look at this exercise: "Excuse me, will you pass me the pen? Sure, ____." Here we need to fill in what?'

Ss 'Here you are.'

T 'Yes. Here you are. Attention. If you are asked to fill in a blank "excuse __", remember here we use "me" instead of "I". Here "me" is an objective pronoun.' (In Chinese).

In explaining this episode, Jin claimed that

From my previous teaching experience, this is where the students usually make mistakes. And it is the language point that is frequently tested in exams so I need to emphasize it. But there is no need to explain any further since it is not necessary for them to know more at this initial stage of learning...."objective pronoun" is a new term for them, even in Chinese. But I think if I keep mentioning it, when the learners come to learn this grammar later, they may recall where they learned the similar usage.'

Obviously, Jin's explanation of her practice indicated that there was more than one belief underpinning her practice. She expressed her concern about exams, the learners' characteristics, previous teaching experiences. All these beliefs were compatible in underpinning her teaching of the grammar point at that specific time in that specific way, which contributes to the consistence between her professed beliefs and practice.

However, not all beliefs were consistent with what they did in the classroom. For instance, in Hua's professed beliefs, she claimed that in communicative tasks, she focused more on the meaning of students' presentation rather than on form of expression. One of the episodes relating to this was when she set a group-work task for learners to list the order of several inventions in history. She explained later that by creating an information gap activity for the learners, the purpose of this task was for learners to communicate with each other so as to create a cognitive desire for doing the follow-up listening task. She further stated that an 'additional' purpose was to offer opportunities for the learners to review the sentence patterns just learned. The recording of the lesson showed that Hua interrupted the students' presentation not only to correct their grammatical errors but also to limit the students' expressions to newly-learned passive voices. Reflecting on the students' performance at interview, Hua made the following strong comments that paradoxically focused on the accuracy of the learners' language use rather than on the ideas expressed:

The students neither performed well during their discussion nor in the presentation afterwards. They were eager to express their ideas but they did not think about which sentence patterns they need to use. Because of the lack of drills on these sentence patterns, they can neither produce them correctly nor spontaneously. That's why they made mistakes such as "it invented" and "it invited". I think I need to call all the students' attention to these errors at the very beginning. And I also need to further strengthen their use of passive voices... I limited their expressions to passive voices, which was the focus of last session. I believe if the learners do not use the language, it can not be internalised. Before they master this sentence pattern, I need to have more control over their practice... So tomorrow I am going to give them another task to discuss "four great inventions in ancient China", during which I will not focus on whether they get the

information correct or not, but on their usage of these sentence patterns. I will also ask them to copy these sentence patterns after class, through which process I believe the students can have deeper impression.

This discussion illustrates the organic nature of the overall process of interactions among beliefs, practices and classroom events when inconsistency between teachers' beliefs and practices was revealed. The clash between beliefs and classroom events triggered the inconsistencies between what teachers say and what they do. Hua professed that she focused more on meaning than on form. The explicit purpose of the task in question (the focus, according to Hua) was more on meaning than on form. However, as the students ended up making many errors in their completion of the task, Hua diverted her focus to accuracy of their language use. As she attributed these errors to the lack of drill practice and therefore she began to adopt more controlled activities to strengthen the use of the passive voice in English. Therefore, when Hua's beliefs about focusing on meaning were confronted with the learners' linguistic errors, Hua's interpretations about what caused errors, and how learners undertake learning process, specifically how to consolidate what they have learned in this context precipitated the inconsistencies between what she believed about this task and what she really did in the classroom.

However, being consistent or inconsistent was simplified the relationship between the teachers' beliefs and their practice. The teachers may adopt eclectic ways to ease the tensions in their beliefs. For example, believing in the importance of contextualised language teaching, Hua acknowledged that contextualisation could help learners in vocabulary learning. The following is an episode of introducing a new word 'crispy'.

Excerpt 2

Hua (...) For some good apples, they are sweet and (...) what? (...) crispy.
Read after me: crispy.

Ss crispy.

Hua and for some cookies, if they are fresh enough, they are crispy. Ok, are you clear?

Ss yes (hesitation).

Hua Ok, read these words together.

Ss Sweet, sweet, crispy, crispy.

Hua Now answer this question in sentence: what does the apple taste? S1.

S1 The apple tastes sweet and crispy.

...

When commenting on this episode, she recalled her thinking at the time as follows:

I really wanted to present more examples for them [the students] to understand but those words such as 'cookies', 'biscuits' which taste crispy are also new words to them. I thought of using English explanation of 'easily broken' but they only learned its meaning of "being damaged". Therefore, it is difficult to offer appropriate examples or explanations. I know vocabulary is better to be learned experientially but it needs constant exposure to authentic language, which is not accessible to learners with the limited time in foreign language learning environment. So we have to ask students to preview words before class and we explained them contextually in class for better understanding and memorisation.

In this episode, Hua did introduce the new word by raising examples but she also relied a lot on learners' previews and their de-contextualised drills. Therefore, when Hua encountered contextual factors such as limited exposure to authentic language, time constraints and teachers' pedagogical knowledge, she made a compromise in conducting contextualised teaching by combining it with de-contextualised practice. Referring back to her professed beliefs, Hua labelled her EFL teaching as 'a combination of the traditional way of teaching and the modern way of teaching'. It indicated that Hua was aware of these tensions, while an eclectic approach was the best way for her to ease the tensions.

The above three examples exemplified how the teachers' professed beliefs relate to their explanations of their practice. The study of the tensions in the teachers' professed beliefs offers a ground for studying the dynamic relationship between beliefs and exploring the relationship between teachers' beliefs and practices. Moreover, much evidence has shown that more than one belief was underpinning the teachers' practice. These beliefs interacted with each other, with one being the core belief promoting certain practice.

23.5 Conclusion

This study explores the relationship between the Chinese EFL teachers' beliefs and practice from the perspective of the tensions revealed from the teachers' professed beliefs. These tensions of the teachers' beliefs may be resulted from the misinterpretation of the new concepts, or the incompatibility between the teachers' existing beliefs and the new concepts from the NECS. The dynamic relationship between the teachers' beliefs and practice surfaced the analysis of the tensions exemplified in the practice. Since usually more than one belief underpinning the teachers' practice interacts with each other, which contributes to the dynamics between the teachers' beliefs. They were either compatible in underpinning certain practice or contradictory with each other, thus indicating the distinction between core and peripheral beliefs.

However, it would be too simple to conclude that certain beliefs were always dominant over others in certain situations, although in most cases, beliefs about EFL teaching aims and learning procedures were the major concerns underpinning their practices. And it would also be too arbitrary to conclude that some beliefs were always contradictory to others, although beliefs about exams and beliefs about the requirements set by the NECS were found to be in conflict in some cases. Nevertheless, one thing for sure from the above analysis was that the compatibility and contradiction seemed to be related to the dynamics between the teachers' core and peripheral beliefs. Such core roles in guiding the teachers' practices were observed to be, in most cases, related to their beliefs about EFL teaching aims and EFL learning processes. To be exact, the teachers' practice reflected their beliefs that learning is enhanced when the teachers' expectations of learning are met and their control of learners' learning is maintained. These beliefs exerted a more powerful influence on the teachers' work in structuring their teaching than their beliefs

about the limited value of teacher-controlled communication, de-contextualised grammar teaching, mechanical drills and repetitions. Each of these language teaching procedures featured in the work of the teachers, yet they articulated misgivings about the potential of such patterns in EFL teaching to promote learners' overall competence in language learning.

As an implication for the future study, the exploration of the reasons behind such tensions deserves more efforts because recognition of the tensions in the teaching context may stimulate teachers to reflect their beliefs and practice so as to promote their professional development.

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