Chapter 7
Learning Teaching and Doing Teaching in New Hybrid Spaces

Recap of the Context and Purpose of the Study

In many countries, government concerns about global economic competitiveness are driving large-scale reforms agendas designed to address perceived problems of teacher quality and the effectiveness of teacher education, both of which, it is argued, are critical to understanding and addressing falling economic competitiveness. The situation is often 'imagined' as needing neoliberal policies incorporating greater deregulation and market competition (Furlong 2013; Rizvi and Lingard 2010). Thus, increasingly tighter regulation is being imposed on teacher education programs through accreditation and the credentialing of graduates. It is somewhat ironic, therefore, that at the same time, more resources are directed to alternate pathways that enable various cohorts into teaching without having completed an accredited teacher education program. Some of the policy and media attention that supports these alternate pathways involves a 'distortion and misuse of research' (Zeichner and Conklin 2017) in ways that are designed to manufacture a narrative that university-based teacher education is failing. The crisis discourse developed in this way is also fuelled by think-tanks and multinationals producing reviews and reports purporting to draw on available research, but which is inevitably filtered according their purposes and associated funding arrangements. Zeichner and Conklin (2017) use the interesting concepts of 'knowledge ventriloquism' and 'echo chambers' to demonstrate how these narratives of failure of university-based teacher education are manufactured and then used to justify reform agendas. Using examples from the US, they show how various research conclusions and also conclusions from reviews of research are cited in part, then reused by others and taken up by yet others, such that the message bounces back and forth, ending in a situation where the cited rationale for a reform agenda is, at best, only part of the story, and at worst, a deliberately inaccurate referencing of the research. As part of the 'derision and salvation' discourse associated with alternate pathways into teaching, alternatives to the current university-based teacher education are

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painted as innovative and pioneering, with the assumption that what we have now is not.

It is within this context that we, a group of teacher education researchers, set out to provide a large-scale evidence base about the effectiveness of Australian teacher education programs in preparing new teachers for the diverse contexts in which they gain employment. We started not from the premise that 'teacher education is successful' or from an initial standpoint that 'teacher education is failing'; rather, we set out to provide research evidence in a space where we believed unsubstantiated claims were being made. We acknowledge that teacher education—as a field—has not generally articulated a response that speaks to policymakers about the effectiveness of teacher preparation programs. As we noted in Chap. 1, reviews of teacher education research regularly conclude that the research is characterised by isolated, often unrelated and small-scale investigations (Cochran-Smith and Villegas 2015a; Cochran-Smith et al. 2015; Murray et al. 2008). This body of research does not present a convincingly coherent argument that governments believe they can use as rationales for reform agendas. In the end though, most reform agendas are political so the starting point is not necessarily the research findings. Of course, these small-scale case studies have regularly informed teacher education curriculum and pedagogy. However, they gain little attention in the policy sphere.

Therefore, we set out to design and implement a project designed to 'speak to policy with evidence' and to 'unlock the "black box" of teacher education, turn the lights on inside it, and shine spotlights into its corners, rafters, and floorboards' (Cochran-Smith 2005, p. 8). In this way, the *Studying the Effectiveness of Teacher Education* (SETE) project was conceived. This book, almost five years later, is the culmination of our work. The chapters so far have provided the rationale for the study, the conceptual framing, the methodological approach and rationale, and the findings in relation to the three overarching research questions:

1. How well equipped are graduates to meet the requirements of the diverse settings in which they are employed?
2. What characteristics of teacher education programs are most effective in preparing teachers to work in a variety of school settings?
3. How does the teacher education program attended impact on graduate employment destination, pathways and retention within the profession?

As we have shown, the approach we used aimed to problematise the 'teacher education is failing us' discourse as well as the pursuit of essential 'truths' or so-called 'best practice' models. We have argued that there are multiple ways of thinking about and enacting teacher education that involve different but related spatial practices. In this way, teacher education is not a singular construct but a set of representations, practices and experiences that are socio-spatial and relational in their nature. As discussed in Chap. 2, we used the work of Lefebvre (1991) and Soja (1996) to help us consider the spaces where teacher education is understood differently—the conceived space, the perceived space and the lived space. This

approach has enabled us to be sensitive to the dynamics between the teacher education program, the individual and the workplace, and to examine the layers of factors that influence new teachers' sense of preparedness and effectiveness as beginning teachers.

SETE set out to backward map teachers' perceptions of their effectiveness in their school context to their preparation for teaching. Our focus has been on how the graduate teachers perceived their teacher preparation as effective in preparing them for the context in which they are working and to identify characteristics of various programs thought to be effective. We acknowledge that graduates begin teaching in diverse school contexts that are situated within the broader social, political, historical and economic contexts in which initial teacher education is developed and regulated. The effectiveness of graduates in their specific school contexts also takes into consideration the graduates' practical consciousness—their identity, pedagogical preferences, professional experiences and intended/actual lived space in the context of educational reform in Australia. Effectiveness in this research differs from the understanding of the term used in improvement frameworks. Effectiveness here is determined through the graduates' and principals' perceptions of the relational (Day et al. 2006) aspects of their preparation.

Chapter 3 explained the ways in which this project sought to make sense of the complexity of teacher education through its longitudinal, mixed methods, iterative research design involving: a mapping of initial teacher education programs; surveys of graduate teachers and their principals about the graduate teachers' preparedness to teach and their effectiveness as new teachers (four surveys over 3 years involving over 5000 graduate teachers and 1000 principals); and, case studies of 197 beginning teachers in 29 diverse school settings to understand their preparation and effectiveness as well as their employment and career pathways.

Chapters 4, 5 and 6 examined the findings in relation to each of the three research questions: Chap. 4 How well-equipped graduates are to meet the requirements of the diverse settings in which they are employed; Chap. 5 The characteristics of teacher education programs that are most effective in preparing teachers to work in a variety of school settings; and, Chap. 6 How the teacher education program attended impacted on graduate employment destination, pathways and retention within the profession.

This final chapter discusses the implications of the findings from this study for teacher education practice and policy. In summary, we argue that SETE findings raise issues associated with quality teaching that call for a reconsideration of initial teacher education such that it becomes a collective responsibility between universities, schools, systems and communities requiring the fusion and synthesis of the goals of teacher education, schooling and education more broadly. We also discuss possibilities and imperatives for future research. First, we review the findings and summarise implications for teacher education practice.

Recap of Main Findings and Related Implications for Teacher Education Practice

Despite the crisis discourse referred to above and in Chap. 1, approximately 75% of graduate teacher respondents in the SETE surveys indicated that they would recommend their teacher education program to others. Overall, they felt prepared by their teacher education program and effective as beginning teachers across all of the nine key areas of teachers' work that were used in the surveys and examined in the case study data:

- Teaching culturally, linguistically and socio-economically diverse learners
- Design and implementation of the curriculum
- Pedagogy
- Assessment and the provision of feedback and reporting on student learning
- Classroom management
- Collegiality
- Professional engagement with parents/carers and the community
- Professional ethics
- Engagement with ongoing professional learning

Principals reported that they felt the new teachers were more effective in all areas than they judged themselves. Interestingly, the graduate teachers reported feeling more effective in all areas than prepared by their teacher education programs in those areas.

However, while the graduate teachers did feel generally well prepared by their teacher education program and effective as beginning teachers, they reported feeling better prepared in: pedagogy; professional ethics; and, engagement with ongoing professional learning. They felt less well-prepared in: classroom management; professional engagement with parents/carers and the community; assessment and the provision of feedback and reporting on student learning; and, teaching culturally, linguistically and socio-economically diverse learners. This later category was worryingly the area in which graduates felt least well prepared as well as least effective despite a majority of teacher education providers nominating 'social justice' as a key feature of their programs when asked as part of the mapping of Australian teacher education programs.

In terms of effectiveness as beginning teachers, the graduate teachers judged themselves as more effective in the areas of professional ethics and engagement with ongoing professional learning but less effective in: teaching culturally, linguistically and socio-economically diverse learners; design and implementation of the curriculum; pedagogy; and, assessment and the provision of feedback and reporting on student learning. The areas in which the graduate teachers felt less effective are firmly located in their classroom work with students. In addition, the case study data highlighted that negotiating relationships with other staff members and with school leadership were areas of challenge impacting one's effectiveness as a beginning teacher.

Graduate teachers reported that they knew they were effective as beginning teachers when their students demonstrated successful learning and when they received positive feedback from more experienced teachers, students and parents. However, they also cited their own developing sense of confidence in making pedagogical and curriculum decisions as a basis for judging themselves as effective. In many instances, the graduate teachers attributed their effectiveness as new teachers to their own hard work and the assistance they had received from mentors rather than directly to anything from their teacher preparation program.

Both graduate teachers and principals identified classroom management and catering for diverse learners as key challenges in beginning teaching, although the teachers rated these areas as a greater challenge for themselves than principals thought were a challenge for them. Interestingly, teachers rated assessment and reporting and planning as far greater challenges than principals thought they were, while principals highlighted pedagogy as a far greater challenge for the new teachers than the teachers themselves judged this area to be. The case studies highlighted that new teachers saw classroom management as a key challenge early in their teaching careers but that it became less challenging with more classroom experience in the first few years of teaching.

In the statistical analysis of the survey data, perceptions of preparedness were not often able to be causally linked with particular characteristics or dimensions of the teacher education programs, though there is some evidence to support the view that those graduate teachers who completed a program of two or more years' duration did feel more well prepared. Nevertheless, as Chap. 5 has shown, when all data sources are analysed and synthesised, there are some things to learn about the components of effective teacher education. Despite it not always being seen as an integral part of the teacher education program, professional experiences in schools were highly valued and were linked to feelings of preparedness especially if they were in settings similar to the schools in which the new teachers began their teaching employment. This was especially so for those who completed an internship towards the end of their programs. However, graduates experienced conflict and challenge when their own view of themselves as teachers and the type of teachers they aspired to be, did not align with that of the teacher education program and/or the schools in which they undertook professional experiences and in which they began their careers as new teachers.

While both graduate teachers and principals suggested that the preparation provided by teacher education programs could have been strengthened by more time spent in schools and more time on strategies for teaching and less theory, both articulated a view that teacher education provides foundational knowledge and tools from which the learning teaching journey continues along with increasing effectiveness as a teacher. In this way, initial teacher education is viewed as the first part of a professional continuum of doing and learning and developing expertise.

SETE also investigated the career progression of graduate teachers—their employment pathways, possible reasons for attrition, and retention strategies used by schools. Unlike the sector-based approach to understanding career pathways

which focuses mainly on employment trends (e.g. McKenzie et al. 2011), a situated perspective was taken in SETE to focus on transition into the workplace and take into account graduate teacher needs and school characteristics. As Chap. 6 explained, by taking this situated perspective SETE provides understanding of the links between graduate teacher employment pathways, retention and mobility, with characteristics of schools, such as workplace conditions or staff turnover. This approach has enabled a focus on the needs of beginning teachers, including their concerns about job security and changing employment patterns, along with providing support structures and mentoring, making links to how they perceive their capabilities and effectiveness as teachers in particular schools, as well as with how they assess the quality of workplace conditions.

While SETE graduate teacher respondents highlighted a range of intrinsic and practical reasons for choosing teaching, like wanting to 'make a difference', wanting to work with children, and wanting to work in an area of their particular specialisation or interest, career pathways for these graduates were influenced by multiple factors including the professional capabilities that they developed as a result of their teacher preparation programs, the conditions of the current job market and employment opportunities, as well as particular workplace conditions. It is clear that graduating from a teaching degree and gaining an initial full-time ongoing position, with the likelihood of a permanent position to follow, no longer constitutes the norm for Australia teacher education graduates. Analysis of the findings related to graduate teachers' employment pathways highlight different reasons for residential and/or workplace mobility often associated with age of beginning teachers, their family circumstances, employment possibilities in particular locations, housing market as well as whether they perform or do not perform traditional gendered or social class identities.

Moving Beyond Manipulating Policy Parameters and Increasing Accreditation Demands

SETE findings do provide some guidance in relation to things that need consideration in teacher education practice and there are certainly areas where teacher educators could strive to improve in their programs if graduates are to feel prepared and effective as beginning teachers. One area that cannot be ignored is working with diverse learners. However, we argue that the way of understanding and responding to the SETE findings is not simply to add to the list of required content in teacher education programs. This is often the immediate response in such a situation. The argument goes something along these lines: 'Graduating teachers (or principals) say they are not well prepared by their teacher education programs in X, therefore teacher education programs must now include a unit/course in X in order to be accredited or to maintain their accreditation'. This is seductive for the political cycle

in that governments can demonstrate their increasingly 'tough' measures that promise to 'fix' the problem of beginning teachers not being 'classroom ready' in X.

From our analysis, we argue that simply adding to the list of program requirements for accreditation will not ensure more effective teacher preparation or more effective teachers because of two important factors found to have the greatest bearing upon perceptions of preparedness and perceptions of effectiveness: employment status and workplace context. Not unlike Brouwer and Korthagen (2005), SETE found that the type of employment (for example, contract or permanent) and the school context including various levels of formal and informal support for new teachers, had a significant impact on how graduates perceived their teacher education program. In SETE, those who were employed on an ongoing, permanent basis reported feeling better prepared and more effective compared to those in casual/contract positions irrespective of the actual program from which they had graduated. In addition, graduate teacher perceptions about their teacher preparation as well as their effectiveness as new teachers were mediated by the workplace context including the induction and support they received in the school. These factors impacted choices about career pathways and retention.

Moreover, while the graduate teachers in SETE shared an understanding of the importance of initial teacher education in providing them with the necessary knowledge and skills to enter the profession as effective beginning teachers, they also acknowledged that their professional learning and growth continued during the first few years of teaching. This view was supported by their principals. However, SETE participants highlighted how the type of employment impacted their capability for ongoing professional learning. For example, if they were employed casually or on short-term contracts, they had little opportunity for sustained classroom practice that would enable their learning. Moreover, those working casually were usually not able to access mentoring and professional development opportunities in the schools in which they provided relief teaching.

This view of teacher education as a continuum of teacher learning is not new. It has been evident in policy and some practice for some time (Conway et al. 2009). In the past, much of it has constituted stage-based descriptions of teacher learning and development, including for example the work of Dreyfus and Dreyfus over 20 years which focussed on five levels or stages of teacher development: Novice, Beginner/Advanced beginner, Competent performer, Proficient, Expert (Dreyfus and Dreyfus 1986, 2004). In Australia, Green (2009) argued the need for 'a cumulative program of connected multi-disciplinary and multi-focused work in teacher education that concerns itself with issues of practice and policy, curriculum and pedagogy across the continuum of preparatory, transitional, and continuing teacher education, and involves both universities and the profession'. This notion of 'Initial -> Transitional -> Continuing' depicts teacher education as a journey from novice to expert. It is mediated by the local context (universities and schools) as well as the broader political context. It builds on pre-existing knowledge and develops as a result of accessing a knowledge base for teaching and utilising practice-based inquiry. In trying to understand the sorts of activities that might be

most useful to student teachers in different stages and places, Reid (2011) mapped the work of Green onto the Dreyfus and Dreyfus model in this way:

- Initial teacher education: Novice—Beginner
- Transitional teacher education: Advanced Beginner; Competent Performer
- Continuing teacher education: Proficient performer; Expert

(p. 302)

More recent emphases have conceptualised initial teacher education as the first part of a professional continuum of doing and learning and growing expertise, rather than a distinct preparatory phase (Ward et al. 2013).

All of this work is especially helpful in helping us think more carefully about teacher education practice and policy that is thankfully taking attention away from the 'seductive pursuit of what we now call "best practice": namely, single, best solutions, to complex problems' (Bullough 2012, p. 344) and/or the endless list of requirements for entry into teacher education programs along with the ever growing program content requirements for accreditation, all of which, it is argued by some, enhance teacher quality and the status of the profession. These approaches are often favoured by politicians and governments, because when teacher education is positioned this way policymakers can be seen to manipulate parameters of teacher education such as these and demonstrate their visible actions intended to 'fix' teacher education.

However, while it is helpful to interrogate the growing work on understanding the teacher education continuum and its component parts such as teacher preparation, transition into teaching employment, and then ongoing professional learning as teachers become more proficient and expert. However, SETE highlights the messiness of delineating, understanding and somehow trying to strengthen one or more of the component parts in isolation of the others. We argue that the learning teaching continuum cannot be neatly compartmentalised and analysed in this way. Nor, we argue, is it helpful in thinking about how we might improve teacher education writ large; that is, the entire learning teaching continuum over a career. After all, it is this that will support and enhance teaching quality.

Underpinning the expressed perceptions of preparedness and effectiveness by both graduate teachers and school leaders are a number of factors pointing to limitations in current approaches to teacher education and which served to artificially segment learning teaching. First, learning teaching in teacher education was often separated from learning teaching and teaching practice in schools. Moreover, a linear progression of development was often assumed: first, one is prepared and then effectiveness comes afterwards. In addition, some graduates seemed to attribute their preparedness and effectiveness to their individual capacities and capabilities valorising narratives of resilience and of hardening up and survival, especially where they were employed in difficult contexts. Insufficient attention seems to being given to the role of relationships in learning teaching and doing teaching, including relationships with students and with colleagues and other members of school communities. And, as we have highlighted many times, the

types of employment contracts have significant impact on effectiveness and uncertainty of employment conditions resulted in teacher behaviours that were not always linked to student learning but had more to do with securing more stable employment.

These narratives have been around for some time and have sometimes been used to argue for bypassing teacher preparation in universities and giving increasing responsibility and resourcing to schools to undertake their own teacher preparation, such as, for example, the Teach Direct program in England and Wales. We do not believe this is the answer to improving teacher preparation and beginning teacher effectiveness. SETE highlights learning teaching as:

- Neither linear nor stage-based;
- Mediated by the local context (universities and schools) as well as the broader political context; and,
- Building on pre-existing knowledge and developing as a result of accessing a knowledge base for teaching and practice-based inquiry.

Therefore, we argue for more time to be spent, both in practice and in policy, on focussing on graduate teachers' lived sense of preparedness and effectiveness *in* a transitional space that incorporates both preparation and beginning teaching. This is a space in which the boundaries between 'being prepared' and 'being effective' are blurred and we argue that it is only in this way that we can come to understand learning teaching and thereby growing professional knowledge and professional practice as well as professional engagement across the teacher preparation and early years of teaching space. We argue for attention to a third hybrid space, a space in which neither universities nor schools are bypassed or privileged, but where all stakeholders work collaboratively both in policy and practice terms. This is beyond the current interpretations of partnerships in teacher education. Moreover, we argue that a focus on being classroom ready is not 'the' destination for learning teaching even if we partition preparation from ongoing learning.

Teacher Education in a Third Hybrid Space: Partnerships and Classroom Ready Are not the Destination

Recently, as part of the discourse questioning the preparedness of new teachers for the work of teaching, the term 'classroom ready' is being used in policy contexts to focus attention on what are judged to be important indicators of teacher preparation (e.g. Teacher Education Ministerial Advisory Group 2014). We acknowledge that since new teachers are expected to carry out the duties of teaching just like their more experienced colleagues—in that student learning is the goal for all teachers—and therefore attention to 'classroom ready' and all that term embodies is important, we argue that 'classroom ready' is not the destination. Learning teaching is ongoing but nonlinear. It occurs across multiple spaces in messy and recursive ways.

Moreover, 'partnerships' is often proposed as the way to bridge the so-called theory–practice gap and the perceived overly theoretical orientation of university-based teacher education programs. It is often assumed that such partnerships will ensure that university-based teacher educators will be influenced by school practitioners and thus become more attuned to the 'real world'. This is often fuelled by school-based teacher educators advising pre-service teachers to attend more closely to their learning during professional experience since this is where they will really learn to teach; a view often subsequently reflected in the beliefs of pre-service teachers. Even in their best form designed to support pre-service teacher learning in both spaces, there is often a tendency to separate this learning and expect the pre-service teachers to make sense across the spaces. These bounded spaces and the associated knowledge hierarchies often force participants into a situation where they feel they have to choose between theory and practice, situations that sometimes uncritically glorify practice (Zeichner et al. 2015) or deride it as simply reinforcing the status quo.

We argue that to understand how teachers are prepared for the variety of school and community settings in which they ultimately teach, teacher education must focus on a transitional space, a hybrid and third space, one where learning teaching and/or doing teaching is not situated at one point in time with one side of the 'partnership' (in university), and then at another point in another partnership space (in school), and then somewhere in between after graduation and during early employment where the graduates themselves are left to make sense of and negotiate the context and their learning, often with little support.

This lack of connection between teacher education in universities and teacher education and teaching practice in schools is evident in the SETE project and plays out as dichotomies or binaries in the data, for example: being prepared then being effective; learning teaching in a pre-service environment and then in-service; learning teaching in universities versus in schools; learning teaching then doing teaching; theory versus practice; and, university knowledge versus school knowledge. These oppositional positionings in the activity of preparing teachers are operationalised in accountability terms resulting in blame of the other for not contributing to the reality as well as perceptions of teacher quality. Like the recent British inquiry into the role of research in teacher education which 'demands an end to the false dichotomy between higher education and school-based approaches to initial teacher education' (British Educational Research Association 2014), SETE results highlight the importance of focussing on the 'transitional' part of the continuum of learning teaching that blurs the boundaries between *being prepared* and *being effective*. This analysis urges us to rethink teacher education policy, structures and practice to more adequately prepare and support growing professional knowledge and professional practice that challenges the linear notion of first one is prepared and then one is effective. Rather than argue for a focus on the 'transition', we argue for a consideration of a new hybrid teacher education displaying multiple physical and virtual dimensionality and integrated circuitry of environments, subjects/objects, and purposes—the motherboard of teacher education.

Transitional Teacher Education: A Third Space Laboratory

Some researchers and authors have explored ways of thinking about the gaps between teacher preparation and beginning teaching employment. For example, Ziechner et al. (2015) call for approaches to teacher preparation that value and promote interaction between practitioner, academic and community-based knowledge requiring the creation of new 'hybrid spaces' where these knowledges can come together to inform innovative solutions to teacher preparation (p. 124). Similarly, the Teacher Education Ministerial Advisory Group (2014) argued for an integrated system, though it is likely that the partnership models imagined by this group are dissimilar to those that would occupy the hybrid space. In the US, and increasingly in other contexts, the development of new ways to share responsibility for teacher education across institutional boundaries is being explored such as in urban teacher residencies (Cochran-Smith and Villegas, 2016). However, Zeichner et al. (2015) suggest that while they offer,

> …the potential for developing genuinely hybrid contexts for teacher education, thus far they have not realized this potential and have experienced some of the same problems (e.g., connecting coursework with clinical work) that have plagued traditional college and university recommending programs and early-entry programs. (p. 124)

Further, Zeichner et al. echo Klein et al. (2013) in highlighting that a third space is a continual construction and perhaps a utopian prospect that is never fully achievable (p. 126). Perhaps this is so. Hopefully SETE can contribute to this ongoing and continual construction and challenge the forces that play out as arguments idolizing the practical pitted against arguments for closer attention to teacher qualifications and autonomy.

Returning to our theoretical framing related to the spaces for teacher education, the notion of a 'thirdspace' affords an open, critical spatial imagination of how things can be different (Soja 1996). Ryan (2011) notes that:

> Lived space is a space to resist, subvert and re-imagine the 'real-and-imagined' spaces (Soja 1996) of everyday realities and hegemonic ideologies. It offers the potential for space to be made and remade with generative possibilities for critical transformation and civic participation. It is a space for new possibilities and imaginings of how things could be, a space of transgression and symbolism (Lefebvre 1991). (p. 888)

Employment practices and opportunities, emotional identities and school contexts have been shown in SETE to be central moderating influences in early career teaching on teacher effectiveness, commitment and resilience. Therefore, we urge consideration of new synergies and new ways of working together to create collaborative spaces for teacher education (physical as well as conceptual spaces) involving universities, employers and schools that bring together learning teaching and doing teaching.

To support this approach, we argue for thinking about teacher education as a complex system rather than a complicated one (Davis and Sumara 1997). Much of

what has characterised policy thinking to date suggests a complicated systems approach whereby teacher education has been taken apart, the component pieces have been examined with the assumption that by examining the pieces one can understand the whole system and its functioning. In this way, various reform agendas have been promulgated focussing on one component part and providing a solution for that part of the whole with the assumption that the whole is the sum of its parts—fix one part and the entire enterprise of teacher education can be fixed. However, drawing on complexity theory:

> If a complex system is taken apart, key aspects of how the system works and what makes it work in the first place are lost since unexpected consequences arise as a result of the dynamic interaction of parts. (Cochran-Smith et al. 2014, p. 107)

So, when teacher education is thought of a complex system in a third hybrid space, we acknowledge the multiple parts and interactions, but also acknowledge that the whole is more than the sum of its parts.

> [C]omplexity is manifested at the level of the system itself as a result of the interactions and non-linear relationships of component parts and of intricate feedback loops in the system (Cilliers 1998 cited in Cochran-Smith et al. 2014, p. 107)

Thinking about teacher education as a complex system in a third hybrid space involving universities, schools and their communities, and systems, as part of a continuum of lifelong learning and doing teaching, will require examination of questions about where learning teaching happens, who does it and how they are prepared for the task, as well as a rethinking of where in this continuum employment and teacher certification occurs and (re)occurs. Specifically, negotiating whose knowledge will guide the outcomes, the processes and the structures of this transitional teacher education will need attention. It will require decisions about who is part of the system, their agreed roles, as well as the establishment and maintenance of relationships based on mutual respect and reciprocity. Moreover, attention will be needed to the constraints and affordances for each of the players—pre-service teachers, the school community and the teacher educators. It might require a redefinition of 'teacher educator' such that teacher educators actively contribute to the learning of all teachers in the school community, making significant contributions to the capacity of school leadership groups in the same ways that school leaders could make significant contributions in supporting teacher education. It will be important to focus on learning teaching within and across spaces, putting teacher learning at the centre of the contradictory and often conflicting spaces associated with teacher education, community and school by focussing on negotiating the contested knowledges about quality teaching and how to prepare quality teachers and drawing on notions of horizontal expertise.

It will also prompt (re)consideration of key aspects of teacher preparation which we currently take for granted, such as:

1. From SETE, the length of one's teacher education program matters, but what does 'length' mean in a transitional teacher education?

2. What will professional experience mean? What does it look like in a transitional teacher education? How can sustained practice be positioned alongside learning to teach, in preference to the current model of practice through intervals of placement or internships?
3. At what point does 'employment' happen and what does it look like?
4. At what point is a 'learning teacher' registered or credentialed as a teacher?
5. What is the role of research in teacher education? Universities are sites of research to inform education. Teacher educators are researchers and teachers of teachers but more thinking will need to be directed to the role of teachers as researchers.

In summary, SETE argues that quality teaching requires a reconsideration of teacher education such that it is a collective responsibility between universities, schools, systems and communities. This will require a focus on inquiry-centred teacher education, rejecting the idea that there are universally appropriate 'best practices' or models to be transported from other places and implemented universally. It will require much working together to make it clear what each is uniquely positioned to offer teacher education and to learning teaching over time. Differing conceptions of teacher education have been articulated and championed in Australia, but if they are to be future focused and meet changing community expectations of the university and schooling sectors, policy and practice changes will benefit from the evidence that this large-scale mixed methods project has generated.

We know there are isolated projects and examples of where this third space is working focussing on knowledge in the boundary spaces (design, practices etc.) but many are one-off. The fragility of this work means we have to move from isolated projects to more sustainable options, which will only be possible through policy incentives to drive systemic change in new ways.

Further Research

In Chap. 1, we provided a brief overview of the history of the relatively new field of teacher education research. For some time, research on effective teaching was the research being taught and practiced in teacher education. More recently, research on and about teacher education and professional learning has emerged and, even though it is plentiful, it has not been regularly taken up by those outside the teacher education academy. Policymakers in particular have generally not seen this body of research as persuasive in policy terms. Some argue that the effectiveness questions at the core of the early process-product research that dominated understanding of effective teaching during the 1960s and 1970s have never really disappeared (Cochran-Smith and Villegas 2015b) despite subsequent attention to questions about knowledge for teaching and a knowledge base for teacher education. With

our increasingly global context involving goals associated with economic competitiveness as well as the challenges of educating increasingly diverse student cohorts, more current research on teacher preparation has focussed on policy and teacher learning (Cochran-Smith and Villegas 2015b). Policy-related research questions focus on parameters of teacher education that might be manipulated by policymakers in seeking to improve teacher and teaching quality.

We argue that by drawing on our spatial framing, we have sought to position SETE in relation to both these purposes, but acknowledge that, in the main, we have investigated versions of policy questions albeit a slice of that angle. Part of this was because of the collaborative nature of this project and the involvement of large jurisdictional employing bodies and regulatory authorities. However, we never set out to make judgments about beginning teacher effectiveness through classroom observations or to fully understand how they learn to teach diverse student populations. We always set out to understand the perceptions of the graduate teachers about their preparation by their teacher education program for beginning teaching and about their effectiveness in the diverse contexts in which they began teaching employment. We also set out to understand the perceptions of their principals and school leaders. Along the way, we came to understand some areas for program improvement and support for beginning teaching, but we came to understand the artificiality of separating learning teaching and doing teaching and the need to blur the boundaries between being prepared and being effective not as part of any linear developmental continuum but through close examination of a new hybrid space for learning teaching.

We agree with Cochran-Smith and Villegas (Cochran-Smith and Villegas 2015b) that future research should address questions that link teacher learning with student learning and examine the relationships between research practices and social, economic and institutional power. While there are differences across countries in relation to policies and practices that influence research related to initial teacher education, given our increasingly globalised and culturally and economically connected world, many of our conclusions and suggestions for future research have relevance beyond Australia. However, traditional methods of research and analysis (perhaps those more readily accepted by policymakers) fall short when researching a complex system like teacher education. Teacher education is usually in a continuous process of change responding to reform agendas as well as to their ongoing improvement processes.

> Thus, there is a need for engagement, participation and involvement of key stakeholders in a continuous process of research, reflection and refinement adopting a responsive mode to change over time. Thus there is, in contrast to a more technical rational view of research, a very real need to engage practitioners in the process of research, reflection and analysis. (Gray and Colucci-Gray 2010, p. 429)

Moreover, as we have argued, no one single research approach can help us understand teacher education as a complex system in a collaborative hybrid space. Recognition of different boundaries for different participants will mean learning to

coexist with different representations of the issues at stake and the related uncertainties. Acknowledging such complexity will require reconsideration of the current search for definitive causal links.

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