

The Experience of Lesson Study in the UK

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13.1 INTRODUCTION

Action research has a long tradition in the UK education. From the pioneering work of Stenhouse (1975) focusing on curriculum development, through the work of Elliott (1991, 2007) to that of Somekh (2006), McNiff and Whitehead (2000), Whitehead and McNiff (2006), and Townsend (2013), a strong orientation towards practitioner research has evolved and become embedded in many schools across the country. However, there are reoccurring elements within action research, characterized by participation in a practical and democratic process through which practical knowledge emerges,

It seeks to bring together action and reflection, theory and practice in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of individual persons and their communities. (Reason & Bradbury, 2006, p. 1)

There are different approaches to action research, which all have these characteristics at their core. One such approach is that of Lesson Study, described by Dudley (2014, p. 1) as a ‘highly specified form of classroom action research’.

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There are varying opinions concerning the nature of Lesson Study in relation to action research. Stepanek, Appel, Leong, Turner Mangan, and Mitchell (2007) see them as similar and allied approaches to practice development but distinguish them on the grounds that action research focuses more on a research project than on practical collaborative development. However, Pérez, Soto, and Serván (2010) identify Lesson Study as a form of participatory action research focusing on in-service teacher professional learning. We would agree that there are so many overlaps between these approaches that Lesson Study can be identified as a form of action research, which has spread very rapidly from its long-established origins in Japan to become a valued approach to pedagogic innovation across a number of countries worldwide.

Lesson Study is a teacher-led collaborative process for improving pedagogy and student learning. It is a deceptively simple, yet powerful, approach which involves teams of teachers engaged in collaborative planning-teaching-observation of learning, followed by lesson evaluation and refinement (Fig. 13.1). Typically, a Lesson Study cycle involves a small team of teachers planning a ‘research lesson’. To begin with, teachers reflect upon those elements of the curriculum in which their students appear to show poor understanding, in other words, elements where ‘learning challenges’ exist. Having identified a single learning challenge they wish to focus on, teachers then work together to design learner-responsive pedagogies through a collaborative planning process. This involves discussing and developing a detailed lesson plan which includes

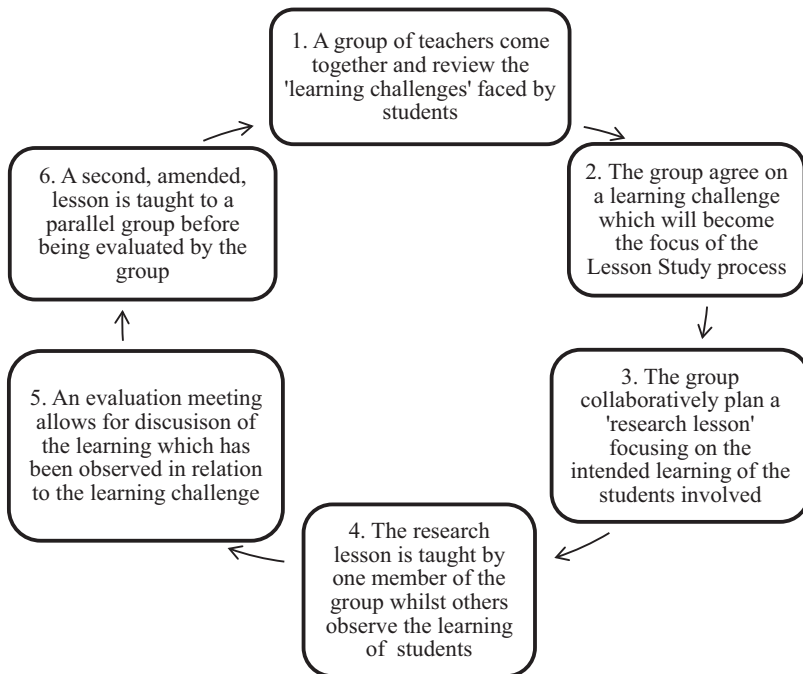


Fig. 13.1 Outline of the basic lesson study process

explicit discussion of the expected learner response and involvement, as well as deciding on the development of teacher-designed activities. Once the ‘research lesson’ has been developed, one team member teaches the lesson whilst the others observe. Importantly, the observation focuses on the students and their responses as well as focusing on the teacher; in the UK, the process has developed to focus predominantly on the learning of students as discussed below. Therefore, first and foremost, the observation allows for a systematic analysis of the effects on students’ learning (how the learning challenge is met). Once the lesson has finished, the group then evaluates the lesson, drawing on the observations of student learning, in order to reflect on what has been seen and to revise the lesson for teaching to a parallel group where possible and appropriate.

13.1.1 *A Brief History of Lesson Study*

Lesson Study (*jūgyōkenkyū*) originated in Japan between the 1870s and the early 1900s (Nakatome, 1984; as reported in Fernandez & Yoshida, 2004). It began as a grass roots activity amongst teachers who formed regional learning groups to share ideas about pedagogy and to design lessons together (Katagiri, 1990; as cited in Sarkar Arani, Fukaya, & Lassegard, 2010). By the early twentieth century, Lesson Study groups at elementary schools affiliated to teacher training colleges became common and the use of Lesson Study in teacher training is said to have facilitated educational reform and the development of a more unified school system which contributed to the modernization of the Japanese education system (Sarkar Arani et al., 2010). Researching classroom practice through collaborative inquiry thus became deeply embedded in professional practice in Japan from an early stage and allowed teachers to explore more child-centred approaches to pedagogy with opportunities for independent learning, despite the confines of the national curriculum (Sarkar Arani et al.).

Lesson Study has continued to play a central role in pedagogic development, and can be viewed as the linchpin of continuous school improvement in Japan today (Lewis & Tsuchida, 1997; Sarkar Arani, Shibata, & Matoba, 2007; Takahashi & Yoshida, 2004). It remains a core component of school-based, in-service training, known as *konaikenshu* (Nakatome, 1984; as cited in Fernandez & Yoshida, 2004). Fernandez and Yoshida (2004, p. 16) emphasize that whilst *konaikenshu* is voluntary, many teachers devote a significant amount of time to it, and many schools view it as ‘quasi-required’. Stigler and Hiebert (1999) describe how Japanese teachers meet regularly in Lesson Study groups to plan, implement, test, and improve ‘research lessons’. Teachers work collaboratively with colleagues from the same year group or subject, and sometimes form special committees to focus on specific curriculum areas, such as information technology. The aims of a Lesson Study may be informed by the school improvement plan, which sets specific goals each year, and the process can last from several months to a year and beyond; hence it is described as a long-term, continuous improvement model, which has ‘an unrelenting focus on student learning’ (Stigler & Hiebert, 1999, p.121). According to Stigler and Hiebert (1999), Lesson Study groups in Japan, therefore, perform a dual function: they

provide ‘a context’ within which teachers can be mentored and trained; but also provide ‘a laboratory’ where new teaching ideas can be developed and tested.

During the 1990s, as global educational competition intensified, a number of studies emerged which analysed how educational innovations from across the world might act as blueprints for system improvement globally. The potential of Lesson Study as a tool for developing innovative practice gained attention beyond the borders of Japan during this period. Instrumental in this process was the publication of Stigler and Hiebert’s (1999) book *The Teaching Gap: Ideas From the World’s Teachers for Improving Education in the Classroom*, which led to a surge of interest in Lesson Study within the USA. This resulted in a rapidly expanding research literature on Lesson Study within the USA (e.g., Fernandez, Cannon, & Chokshi, 2003; Lewis, 2009; Murata, 2010, 2011) with increasing popularization of the approach within the English-speaking world, particularly in Canada. Lesson Study also spread across East and Southeast Asia, particularly in China, Singapore, and Hong Kong, where a variant known as Learning Study (Pang, 2006) has become popular.

13.1.2 *The Introduction of Lesson Study in the UK*

Lesson Study appeared in England only four years after the publication of Stigler and Hiebert’s (1999) book. At this time, there was keen interest within the English education system regarding possible mechanisms for promoting a ‘learning to learn’ approach within schools. At this time, a large-scale research project, the Teaching and Learning Research Programme (TLRP), was launched. It comprised multiple research projects, involving over 500 researchers from 2000 to 2011 (Pollard, 2007). Dudley (2012), in an overview of the early adoption of Lesson Study in England, discusses how he was involved in bringing the approach to the UK as part of this programme. This developed through his association with the *Learning How to Learn: In Classrooms, in Schools and in Networks* development and research project, which explored the rolling out of assessment for learning strategies and how they could be embedded within practice across schools. Dudley’s work on embedding Lesson Study in the English context began with a pilot of 14 schools in 2003, which focused on the degree to which the approach would be viable within an English context. Certain adaptations and new insights were gained through this pilot study, which indicated the need for different approaches from the ‘traditional’ Japanese system. One important adaptation was the change in emphasis from a focus on the observation of teaching to a focus on student learning. To ensure effective observation, however, each observer only attempted to observe three students rather than the whole class. The students who were observed were called ‘case students’ and were identified by the Lesson Study teachers prior to the research lesson. Secondly, teachers canvassed the views of the case students, so that their perspectives could inform post-lesson discussions concerning further pedagogic development. In general, it was found that impact was greatest where school leadership gave strong backing and time for Lesson Study to grow, and where networks across schools were established (Dudley, 2012).

Dudley's study (between 2003 and 2006) within the TLRP, whilst only small-scale, provided rich evidence that Lesson Study could not only work within a UK context but also have positive learning outcomes for both teachers and students. He was also able to emphasize the utility of Lesson Study as one approach to developing professional learning through national literacy and numeracy strategies that were also being developed at this time in an attempt to raise standards in core areas. This led to the publication of *Improving Practice and Progression Through Lesson Study: Handbook for Headteachers, Leading Teachers and Subject Leaders*. (Dudley, 2008). This work resulted in an increasing use of Lesson Study, particularly within the primary school sector in England. It also provided early evidence of the efficacy of Lesson Study in improving learning outcomes (e.g., as evaluated by Hadfield, Jopling, & Emira, 2011).

13.2 INSIGHTS FROM RESEARCH INTO LESSON STUDY IN THE UK

It is important to stress that the research evidence of impact in Lesson Study in the UK lags behind the rapidly increasing popularity of the approach within the education system. The small number of published accounts belies the rapid adoption of Lesson Study across an increasing proportion of schools, through partnerships with universities, educational social enterprises and charities, and through informal networking across schools.

The emerging research literature in the UK shows the development of strands of Lesson Study activity across a number of sectors. Three key areas of research evidence have developed:

1. Inclusion and special educational needs
2. Initial teacher education
3. Continuing professional development

13.2.1 *Inclusion and Special Educational Needs*

Probably, the largest scale Lesson Study project to have been developed to date within the UK is the *Raising Levels of Achievement through Lesson Development for Students with Moderate Learning Difficulties (MLD)*. This project aimed to develop the understanding and practice of mainstream secondary school teachers in relation to the teaching of students with MLD. It included 77 teachers across more than 30 schools, focusing on interventions in literacy, humanities and arts with 11- to 14-year-old students. Ylonen and Norwich (2012) showed that at the start of the process many teachers had an inconsistent and generally poor understanding of the complexities of inclusion and of the concepts relating to moderate learning difficulties. Teachers were given support in developing their understanding and use of Lesson Study as a tool for planning and executing new pedagogic approaches, which helped them gain a deeper

understanding of the needs of individual students. A design-based research approach was taken, which included the use of questionnaires, interviews, and reflective writing; students were also interviewed after lessons. Over two cycles of research, Norwich and Ylonen (2013) found evidence for clear positive outcomes centred on the collaborative work between teachers who were discussing and executing more effective teaching approaches for students with moderate learning difficulties due to a clearer understanding of their learning needs. As a consequence, teachers reported that they saw Lesson Study as a very positive collaborative opportunity for continued professional development (CPD). Ylonen and Norwich (2013) suggest that one of the reasons that Lesson Study was a popular form of intervention when compared to more general approaches to collaborative or participative action research was its specific classroom focus and clear structure for reflecting on, and enhancing, practice. However, Lesson Study is time-consuming and this poses a challenge in a system where there are already huge time pressures on teachers.

Norwich, Dudley, and Ylonen (2014) have further extended their reflections on their MLD-focused project by suggesting that Lesson Study can also be used as an assessment tool. As noted earlier, whilst Japanese models of Lesson Study are based on observation of all learners, many schools in the UK have adopted Dudley's amended version of the process (Dudley, 2011), which focuses on a small number of 'case students'. Norwich et al. (2014) suggest that this amendment offers opportunities for focused observation of students with moderate learning difficulties to gain more detailed insights into their abilities as well as their progress. This demonstrates the flexibility of Lesson Study as a process as it is reshaped for specific purposes in particular contexts.

13.2.2 *Initial Teacher Education*

A different application of Lesson Study within the UK is its use in supporting the development of pre-service teachers. Davies and Dunnill (2008) adopted a variant of Lesson Study, known as Learning Study (Pang & Marton, 2003, 2005) as part of a university-based, initial teacher training course. Unlike Lesson Study, Learning Study specifically focuses on the variation in the way individuals understand a particular phenomenon that has been chosen as the focus for a forthcoming lesson. Having understood this variation, the lesson is planned to support students in developing their understanding of carefully developed learning goals. Davies and Dunnill (2008) worked with a total of 69 pre-service teachers of business and economics, and design and technology in two cohorts over a two-year period. By working in groups with school-based mentors, they found that the pre-service teachers moved more rapidly towards more complex and nuanced ways of understanding and executing the process of teaching than was the case for trainees not involved in the approach.

In a further variation on Lesson Study, Tas (2014) integrated an incremental Lesson Study approach into the early stages of pre-service teacher training with small groups of trainee science teachers. This model relied on groups of

pre-service teachers working with a school-based mentor/teacher to develop lessons which would then be team-taught. At the beginning of the process, the group of pre-service teachers were introduced to a lesson which had already been planned by their teacher-mentor, and with an understanding of the lesson, they then observed chosen students in an authentic classroom setting, before each teaching for a few minutes. Once the lesson had concluded, the pre-service teachers then interviewed the students they had observed, before they and the mentor collaboratively evaluated the lesson. Each group then collaboratively planned a second lesson with their teacher-mentor, where once again the mentor taught the majority of the lesson and the pre-service teachers interviewed observed students to inform the evaluation phase. In the final stages of the process, the teacher-mentor gave the pre-service teachers the learning outcomes for a third lesson, which they then planned and resourced themselves, before teaching, observing, and interviewing students once again, before a final evaluation meeting. Pre-service teachers who were involved in this adapted version of Lesson Study all testified to an increased level of confidence across the three cycles due to what they perceived as a safer introduction to teaching, which also gave them a more critical insight into planning and pedagogic processes than available in more traditional approaches.

Cajkler, Wood, Norton, and Pedder (2013) have used Lesson Study within initial teacher education as a vehicle for developing pedagogic understanding and practice within the practicum element of pre-service teacher training. In a small-scale pilot study, focusing on two pre-service teachers in geography and modern foreign languages, a process was developed, which more closely followed a standard Lesson Study approach. The pre-service teacher and their school-based mentor worked as a pair through the Lesson Study cycle. The mentor taught a lesson after joint planning and led the evaluation of student learning and amendments to the lesson plan. The pre-service teacher then taught an amended version of the same lesson to a parallel group. This approach was later extended to demonstrate its potential within a larger group of 12 students across the same two subjects (Wood & Cajkler, 2013). The pre-service teachers in these studies stated that they felt that they understood the process of planning and its relation to the act of teaching more clearly as a result of working collaboratively with a more experienced teacher. As a result of direct and explicit discussion of pedagogy, participants also believed that this would impact positively on their own rate of progress in understanding and developing their capacity to teach. Teacher-mentors were equally positive about the use of Lesson Study and believed that the process had not only aided pre-service teachers in making more rapid progress in their practicum work but also a positive impact on their own pedagogic understanding and practice.

13.2.3 Continuing Professional Development

Small-scale research projects have considered the use of Lesson Study within the more general context of CPD of in-service teachers. In two studies focus-

ing on the work of teachers in an inner-city secondary school, Cajkler, Wood, Norton, Pedder, and Xu (2014), and Cajkler, Wood, Norton, and Pedder (2014) worked with subject teams in modern foreign languages and mathematics. In both cases, the subject teams developed the use of Lesson Study independently after being introduced to the process by the research team. They used a Lesson Study cycle akin to the one in Fig. 1. Each group worked over a six-month period and were advised to spend as much time on any one cycle that was required to allow them to develop rich and reflective dialogues concerning their chosen learning challenges. As a consequence, both groups completed two research lessons over the course of the project. These studies found that teachers valued the opportunity to collaborate and share ideas, leading to evidence for incremental learning. The use of student-orientated observation challenged many of their assumptions concerning the activity and ability of their students, as well as revealing some of the difficulties that students encountered during lessons. This led to teachers reviewing expectations about what particular students could achieve and what quality meant in terms of the planning and execution of lessons. Once again, the collaborative approach to Lesson Study was seen to lead to a greater willingness to take risks. As with other studies, the principle challenge reported was the amount of time taken to complete a cycle of Lesson Study leading to questions as to whether the process is sustainable in the longer term.

Dudley (2013) worked with five teachers across two schools to explore how the Lesson Study approach might aid teachers in the development of their pedagogic thinking, focusing on the role of talk in the collaborative elements of the process. His evidence demonstrates that the discussion at the centre of collaborative planning plays a major role in making teacher thinking visible, a process that so often remains tacit within teacher expertise; making assumptions and values explicit makes them available for debate and critique. As with other studies, the inclusion of student interviews was also seen as particularly valuable in gaining insight into their complex needs as they learn.

What all of the above studies demonstrate is that whilst Lesson Study has only been adopted within the UK for a short period of time, it has begun to develop in a wide range of contexts and forms, each designed to support teachers to make greater sense of their work collaboratively. Across all areas of research, there is clear evidence that teachers of different levels of experience and expertise have found the practical and collaborative nature of the approach extremely useful in helping them to understand how they might develop their practice further. Cajkler and Wood (2015) explain that Lesson Study allows teachers to unpack the 'pedagogic black box' by making the complexity of teaching and learning within a given context more explicit and therefore open to discussion. There is also strong evidence that Lesson Study encourages teachers to take risks in experimenting with, and extending, their practice so leading to a greater degree of professional confidence.

However, many of the studies reported above are small-scale and demonstrate the utility of Lesson Study within the bounds of relatively short-lived

projects. There is little evidence at present that the positive impacts which are commonly expressed, especially given the recurrent messages of how time intensive it is, can be sustained within a more systemic framework. Therefore, the wider adoption of Lesson Study within the UK as a system-wide and sustainable approach to professional growth and development is still uncertain. It is important, therefore, to consider how Lesson Study might be brought to scale through a discussion of the potential cultural restrictions and barriers to teacher-led collaborative growth and how these barriers might be overcome through the evolution of wider collaborative networks.

13.3 LESSON STUDY—TENSIONS OF A ‘GROWTH’ APPROACH TO TEACHER LEARNING IN A PERFORMATIVE CULTURE

Since the late 1980s, the education system in England and Wales (the system is separate in Scotland) has seen a trend of increased marketization (Stevenson & Wood, 2013). This has resulted in a shift from a system that relies on trust and a societal belief that teachers are, and will act as, professionals who always try to maximize the positive impact of their actions on students and the wider education system, to one based on managerial controls (Hargreaves & Shirley, 2009; Ryan & Bourke, 2013). Osgood (2006) reports a change in perception of teacher work from that of respected individual teachers providing a public service to one where their work is defined by policy and the market. This has led to a narrowing of the accepted nature of this work and to what has become termed a ‘tick-box’ professionalism (Goepel, 2012) in a system founded on performativity (Ball, 2001, 2003). This has led to the development of a system which has become driven by numeric targets and data analysis, leaving little room for the expression of autonomous teacher professionalism (Evans, 2008; Storey, 2007; Whitty, 2000). For Lesson Study to have a positive impact on the work of teachers, this narrow definition of teaching needs to be questioned. This cultural context is in danger of restricting the potential for Lesson Study, and all forms of action research, to have positive impacts on teachers’ practice and therefore the learning of students.

An important alternative perspective on the work and growth of teachers is offered by Hargreaves and Fullan (2012). They critique a view of teaching which characterizes teacher work as emotionally draining but essentially easy. This *business capital* view of teaching explains the need for hard work at the start of a teaching career to ensure that teachers become expert relatively quickly. Teachers are expected to develop this expertise through intensive analysis of student achievement data, termed an ‘existence of calculation’ by Ball (2001 Professional development activities, p. 223). Support for teachers in deciding what constitutes effective teaching practices has traditionally been offered through the sharing of ‘good’ or even ‘best’ practice (Fielding et al., 2005). Such language is common within the business world and is founded on

a transmission model of practice development. Professional development activities associated with this approach, particularly those which are school-led, involve teachers in explaining particular practices and other teachers choosing to adopt and adapt these into their own classroom settings. The UK State of the Nation review of CPD, which surveyed over 1000 teachers and conducted 12 school case studies, found that 77 % CPD activity was through workshops and seminars, as opposed to collaborative activities such as coaching, mentoring, and joint practice development (Pedder, Storey, & Opfer, 2008). Hargreaves and Fullan (2012) suggest that thinking in terms of *business capital* leads to the creation of a workforce which has little critical understanding of the complexities of education and pedagogy.

Hargreaves and Fullan (2012) go on to outline an alternative theoretical framework based on the view that teachers need to become critical, autonomous professionals. This assumes a continuous process of practice growth which comes from reflection, application, and the use of evidence, mediated by increasingly 'wise' judgments. This process is identified as the growth of *professional capital*, constituted of three elements: human capital, social capital, and decisional capital. *Human capital* is characterized by the knowledge and skills which emerge as a teacher develops a personal understanding of their work through being exposed to a myriad of experiences and influences. Hargreaves and Fullan suggest that a central influence on the growth of human capital is collaborative work with other teachers. This connectedness develops *social capital*, as collaborative opportunities offer teachers exposure to new ideas and ways of working which they may not be aware of in their own practice. However, for collaboration to have maximum impact, the teachers involved need to have control over the work they develop; in other words, they need to have *decisional capital*. By giving both individuals and groups of teachers the opportunity to make professional decisions for themselves, wise educational judgement can emerge over time (Biesta, 2014), building the basis for the growth of better practitioners.

The nature of professional capital (Hargreaves & Fullan, 2012) fits well with the intended aims and philosophy of Lesson Study, and could act as an underlying rationale for the use of the approach in schools. Through teachers working together, authentic learning issues which impinge on student learning can be collectively identified and explored. Thus, Lesson Study can help teachers develop insights and solutions which aid in developing the work of the group, and the individuals within it. Even in an education system as data-driven as that in England and Wales, this formative approach can establish itself as a useful tool for professional growth, empowering teachers to develop as critical, autonomous professionals. However, embedding such an approach needs to be considered in relation to the challenges which might be faced by schools in the present performative culture.

The rise of marketization in English and Welsh education in the 1980s and 1990s led to greater standardization of practice, and the emergence of governmental top-down accountability. This led to schools in England and Wales being required to follow a National Curriculum and Common Assessment

Framework from 1991 onwards. Consequently, schools were placed in competition with one another based on their performance (Hargreaves & Shirley, 2009). Given this shifting political context in English and Welsh schools, we need to be sensitive to the fact that we may be asking teachers to work counter-culturally if we encourage them to develop practice together, such as in Lesson Study groups as an audit culture has developed which has the ‘measurement’ of teachers at its core. When asked to collaborate, teachers need to feel a sense of security, to feel reassured that they can safely expose their views to others, critique current practice, and make suggestions.

It is evident that the activities involved in Lesson Study require teachers to take significant time from their own teaching. This chapter has outlined how few opportunities there are currently for such focused and observational-based collaboration, at least in UK schools (Cajkler, Wood, Norton & Pedder, 2014; Pedder et al., 2008), attributable to the profession’s performative culture, high-stakes testing, top-down curriculum reform and associated workload pressures. Other school systems, considered effective in terms of student attainment measures, such as Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS), have demonstrated that this is not the professional work culture of teachers worldwide. There are systems where teachers can find space and time for collaborative teacher professional development, for example, as reported in Finland (Sahlberg, 2011) and in Southeast Asian countries such as Taiwan (Wang & Fwu, 2014) and Hong Kong (Pang & Ling, 2012).

The way forward points to the need to pay attention to the role of leadership in supporting the potential power of teachers in interdependent, joint practice development. This requires schools to ‘buy-in’ to a vision of a self-improving school system based on inquiry and evidence-informed practice (BERA-RSA, 2014; Morrison, 2013). A number of different models of collaborative teacher development exist, including the notion of *professional learning communities* (Lieberman & Miller, 2008; Nabhani, Busher, & Bahous, 2012) and that of *learning communities* (Lieberman, 2009). But it is the notion of ‘inquiry communities’, which foregrounds the joint transformation of professional knowledge (Cochran-Smith & Lytle, 1992, 1999; Levine, 2010), which best matches a vision for scaling-up Lesson Study. It is the adoption of such communities which will be needed if Lesson Study is to avoid being a passing fad and instead become systemic in nature (Lewis, Perry, Hurd, & O’Connell, 2006).

To accomplish the above challenges, there is an important role for school leaders. The powers they hold will need to be used in a way that supports the growing decisional capital of those involved in Lesson Study. Rather than gaining the assent of teachers for a leadership-derived vision in which they are ‘expected’ to work together in a particular way, teachers will need to feel that this vision will accommodate the agendas which emerge out of joint professional development. Teachers will need to have confidence that their priorities for investigation, emergent through Lesson Study, will be heard and valued and that this becomes the vision for the school moving forward.

This is a more radical view of leadership than models relying on a formula which gives leaders an ultimate recourse to veto, thereby retaining implicit, but direct power over the process. If a school's leadership decides that collaborative practice development is the way forward they will need to work out how best to facilitate such practices and promote a culture which will deal with the inevitable power hierarchies and interteacher tensions that exist in any organization. To enable the growth of social capital of teachers, leaders will need to ensure professional support thereby allowing staff to work closely with one another as required for successful Lesson Study. This requires trust to be established between teachers to allow them to release the human capital held by one another as individuals (Coleman, 1988; Hargreaves & Fullan, 2012), but more importantly requires teachers to trust leaders not to embed Lesson Study as a feature of accountability or competence structures. We believe that if Lesson Study becomes another 'lever' for teacher measurement, its impact will be lost, as its potential for discussion and risk-taking will disappear.

Schools are internally connected yet retain different identities, as subject departments and curriculum teams often work in semi-autonomous environments, a process which has been termed 'loose coupling' (Orton & Weick, 1990). Lesson Study provides an opportunity to embrace this diversity, whilst making positive use of the internal connections. Different groups of teachers will inevitably focus on different issues, each of which presents themselves in a range of subject areas. This allows for a wide spectrum of experimentation within the organization at any one time, allowing pedagogic practice to evolve locally in response to particular problems. However, if the organization ensures sharing of insights through reporting and sharing of new practices, the rate of organizational-level innovation can increase rapidly. The imperative here, however, is that new practices cannot be dictated from above, but must be shared and adopted where the teachers, as professionals, deem them to have utility. In this alternative 'bottom-up' model of organizational innovation, Lesson Study groups become a mechanism for developing strong, effective, collegial links, and leaders have a role in supporting teachers in making fertile connections between groups. Further structures for sharing insights might include the linking of one Lesson Study group to another by connecting teachers as a weak link or 'bridge' between groups. This might be achieved by using research coordinators to share the benefits of a range of activity or may occur by creating spaces for groups to meet regularly to share ideas and approaches.

In theory, leaders are well placed to have an overview of collaborative activity in a school, although in practice they often do not have the full picture of the ways members of staff network and the quality of their professional relationships (Carmichael, Fox, McCormick, Procter, & Honour, 2006). Teachers need to be allowed to develop trusting relationships in order to build professional capital and allow a school to develop a truly collaborative 'inquiry community'. This is certainly a further challenge that requires school leaders to reimagine their role as one of facilitator as opposed to 'manager' in supporting evidence-informed practice development. At a fundamental level, this requires leaders to trust the

professional abilities and wisdom of their own staff body, because this is vital if professional knowledge borne from such powerful inquiry as Lesson Study is to inform school-wide and, even system-wide, improvement (Lewis et al., 2006).

13.4 CONCLUSIONS

In only a decade, Lesson Study has grown rapidly in the UK to become a well-known and increasingly central approach to organizational change. The available research only begins to give a basic impression of both the variety of contexts within which the approach is taking hold and the ways in which it has been modified to suit local contexts. For over two decades much effort to improve practice has come from external, national agencies and frameworks, projected into schools that have fulfilled the role of passive recipients. Lesson Study offers a very different opportunity to schools and teachers. Discussion of pedagogy linked to cycles of practice development provide an opportunity for teachers to play an active and central role in both the development of their practice, and hence also their professional abilities. Involvement in classroom research is consistent with the recent move towards teachers taking a more explicit interest in educational research and its ramifications for their practice. In this sense, Lesson Study has reached the UK at a potentially opportune time. However, tensions still remain within a system which is heavily driven by a New Public Management framework and its associated reliance on numeric data, accountability structures, and consequential heavy workloads. Discharging these responsibilities leaves little time for teachers to engage with the process of Lesson Study, which itself requires a considerable input of time over a prolonged period if it is to operate to its potential. These tensions are at the centre of questions relating to the sustainability of Lesson Study at a systemic level. However, there is strong anecdotal evidence that some schools are managing to integrate the approach in creative and original ways. As such, research in the UK currently needs, in part, to understand and evaluate the different variants of the process, which become successful in providing space and time for professional dialogue, whilst also operating within the wider performative culture of English education.

If Lesson Study is to become a systemic approach, it will require at least two major shifts in current policy and organizational frameworks. Firstly, head teachers will need to spend time understanding the approach and utility of Lesson Study as a pre-requisite for creating space and time for teachers to act as autonomous professionals in changing and developing their practice. This is no easy task, given the external pressures on leaders. To create formative, collaborative inquiry-led communities, there has to be a strong base of professional trust within organizations. Secondly, a large-scale shift in policy priorities will ultimately be required, which move from a preoccupation with mechanisms for improving attainment to those focusing on pedagogy and professional growth. In both cases, the changes required are not only political but also cultural and therefore cannot be expected to happen rapidly.

Action research is sometimes criticized as being context-bound and small-scale. Critics see such traits as weaknesses, as insights are not immediately generalizable and do not offer easily digestible ‘soundbites’, such as effect sizes or apparently clear-cut results. However, in an education system that is going through a great deal of change, it is the small-scale and incremental changes in practice, inherent in joint professional development, which offer not only new insights into practice but also opportunities for professional growth. Politicians currently see a ‘medical’ model (Goldacre, 2013) of research as giving ‘certainty’ in deducing ‘what works’ in educational practice, a notion which itself has been critiqued (Biesta, 2007, 2010). Action research instead offers a model for joint professional practice which works *with* the complexity of pedagogy rather than trying to simplify and reduce it. As a form of action research, Lesson Study demonstrates the potency of intervening in and transforming pedagogic contexts, but also holds the potential to bring such change to scale, thereby putting systemic adaptation at the centre of teacher work. Much of the detail of how extra-organizational collaboration might be possible is still unclear, but Japan already offers a blueprint for a system whose transformation is built upon the insights of the collaborative work of teachers involved in a constant process of professional growth through action research

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