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Research-Practice Partnerships through Lesson Study: Learning through the Three Worlds of Experience

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Statements and Declarations

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Research-Practice Partnerships through Lesson Study: Learning through the Three Worlds of Experience

Research-practice partnerships through lesson study promises to deliver educational improvements in an era of evidence-based school and curriculum reforms. But learning from these experiences is not trivial but rather challenging in a complex ecology of classroom and school environments. So, how do researchers and practitioners learn from their experiences during their engagement in a RPP through lesson study? In this commentary, I introduce the idea of noticing possibilities from the three worlds of experiences—self, others, theories and observations—as the key to learn from these partnerships, as evidenced in the papers in this special issue.

Keywords: research-practice partnerships; lesson study; learning from experience; noticing

The Promise of Research-Practice Partnerships through Lesson Study

Research plays an important role in shaping and implementing educational improvements. But the path from research findings to classroom applications is often fraught with challenges and difficulties. On one hand, researchers lament that practitioners do not pay enough attention to research findings and the research findings do not seem to impact practice; on the other hand, practitioners complain that research findings are often too theoretical, not applicable, or not relevant to their complex real-world classroom scenarios (Cheng, Cheng, & Tang, 2010; Kezar, 2000; Nuthall, 2008). It is against this backdrop of research-practice gaps and the mounting pressure from policymakers to use research to guide educational improvement that the idea of research-practice partnerships (RPPs) have gained traction in the community (Coburn & Penuel, 2016; Coburn, Penuel, & Farrell, 2021; Coburn, Penuel, & Geil, 2013; Farrell, Penuel, Coburn, Daniel, & Steup, 2021).

What started out as experimentations of novel models of collaboration between researchers and practitioners to address the proverbial research-practice gap has evolved into a form of research-practice partnership that challenged the traditional boundary between researchers and practitioners (Coburn et al., 2021). Although these partnerships are situated in diverse contexts and have different approaches to their collaboration, they go beyond researchers working with practitioners to address a problem within the context of a research project. Instead, these partnerships can often be found to revolve around researchers and practitioners collaborating to investigate persistent "problems of practice" (Coburn & Penuel, 2016, p. 49) and collectively constructing "knowledge-of-practice", which emerges from "systematic inquiries about teaching, learners and learning, subject matter and curriculum, schools and schooling" (Cochran-Smith & Lytle, 1999, p. 274). To reflect this emphasis, research-practice partnerships can be defined as "long-term, mutualistic collaborations between practitioners and researchers that are intentionally organized to investigate problems of practice and solutions" for educational improvement (Coburn et al., 2013, p. 2). More recently, with the aim to reflect a more equitable balance of power amongst researchers, practitioners, and other community partners, there has been a shift to focus on the kind of partnerships that "connect diverse forms of expertise and shift power relations in the research endeavour to ensure that all partners have a say in the joint work" (Farrell et al., 2021, p. 5).

The promise of RPPs to achieve "equitable transformation through engagement with research", as evidenced by several successful RPPs (Coburn et al., 2021; Farrell, Coburn, & Chong, 2019; Resnick & Kazemi, 2019; Rigby, Forman, Fox, & Kazemi, 2018), is premised on the following five principles, which emerged from the definition by Farrell et al. (2021). First, RPPs are long-term collaborations in that both researchers and practitioners are *committed* to establish long-term working partnerships that go

beyond a single program (Coburn et al., 2013). A key landmark of RPPs is the commitment from both researchers and practitioners to work *alongside* each other to *jointly* frame problems of practice and shape solutions (Farrell et al., 2021). This principle leads to the second principle that RPPs are intentionally organized to focus on persistent problems of practice for the purpose of improving educational outcomes through *equitable transformation* of practices (Coburn et al., 2013; Farrell et al., 2021). That is, RPPs focus on "key dilemmas and challenges that practitioners face" rather than "gaps in existing theory or research" (Coburn et al., 2021). In addition to the organization aspects of RPPs, it is also crucial to think about the nature of interactions between the different partners and how these interactions can be enhanced to facilitate collaboration (Farrell et al., 2019). The third principle highlights the central role of research in bringing the different partners together through "democratizing the research process" (Ghiso, Campano, Schwab, Asaah, & Rusoja, 2019, p. 2). Practitioners, not just researchers, are systematically engaged in the different phases of research to address the problems of practice identified (Farrell et al., 2021). Next, RPPs deliberate on "strategies to foster partnerships, with carefully designed rules, roles, routines, and protocols that structure interaction" (Coburn & Penuel, 2016, p. 49) in ways that leverage on the diverse expertise and perspectives of the different partners to fulfil the goals of the partnership (Farrell et al., 2021). Last but not least, RPPs aim to decentralise power relations so that *all* partners have a say even if "it requires reconciling the competing priorities that can emerge when research and practice come together" (Farrell et al., 2021, p. 11; Ghiso et al., 2019). This may involve all partners in listening to the wide ranging perspectives offered by the various partners and roles, thereby enhancing the joint ownership of the problems and solutions (Resnick & Kazemi, 2019).

In many ways, these five principles are clearly seen when researchers and practitioners are engaged in educational improvement through lesson study—a collaborative process in which teachers plan, carry out, and reflect on a lesson designed to address an intended problem of practice (Fernandez & Yoshida, 2004; Lewis, 2015; Stigler & Hiebert, 1999). Lesson study is widely credited for transforming the teaching of mathematics in Japan (Fernandez & Yoshida, 2004; Murata, 2011; Yoshida, 2005) and different variants of lesson study (Fernandez, Cannon, & Chokshi, 2003; Takahashi & McDougal, 2016; Yang & Ricks, 2013) or learning study (Lo, 2012; Marton & Pang, 2006), have been practiced in different countries. Despite the different adaptations implemented by various countries, there are five key tasks—developing a research theme; working, discussing and anticipating student thinking through mathematics tasks; developing a shared lesson plan; collecting data during observation of research lesson; and conducting a post-lesson discussion (Lewis, Friedkin, Baker, & Perry, 2011). Sometimes, there is an additional iteration of observation of research lesson followed by another post-lesson discussion (Murata, 2011; Yoshida, 2005).

Although it is possible to conduct lesson study without any external partners outside schools, Takahashi and McDougal (2016) argue for schools to provide time and resources for practitioners to collaborate with researchers so that the impact of lesson study can be maximised. In many instances, researchers (often teacher educators) are involved in the process as knowledgeable others to advise and comment on the design and implementation of research lessons (Takahashi & McDougal, 2016; Watanabe & Wang-Iverson, 2005). In this way, the knowledgeable others can be viewed as research collaborators with the practitioners to connect theory from research to practice in the classrooms. Successful lesson studies are often the result of a longer-term commitment from schools, practitioners, and researchers, and not an ad-hoc discussion around a

single lesson. The collaboration between practitioners and researchers centres around a research theme, which is usually initiated by the practitioners to address a persistent problem of practice specific to the schools involved. In addition, school leaders, departmental heads, teachers, and researchers (knowledgeable others) work together by tapping into the expertise offered by the different roles during the research process. One way to view this research process is to see lesson study as an example of improvement science (Langley et al., 2009), which comprised of a plan-do-study-act (PDSA) cycle driven by three key questions: (1) What are we trying to accomplish?; (2) How do we know that a change is an improvement? and (3) What change can we make that will result in improvement? (Lewis, 2015, p. 55). The research lessons become the platform for researchers and practitioners to collect data by observing students' responses to instruction before they reflect on and analyse the data collected from students' work during the lesson. Furthermore, the open nature of lesson study discussions also provides a mechanism in which every participant in lesson study can share their ideas and observations. Hence, lesson study can be seen as a form of RPP when researchers and practitioners collaborate to solve problems of practice through its protocols.

Although lesson study, like other forms of RPPs, has potential to transform and improve educational outcomes, it is clear that it is "wishful thinking" if we think "something good will happen" just because we "gather teachers together to talk about practice" (Bryk, 2009, p. 599). Even though lesson study can be viewed as a form of improvement science (Lewis, 2015) and the paradigm of improvement promises to draw on the expertise of both practitioners and researchers to achieve improvement (Bryk, 2015), it remains to be seen how this practitioner-researcher partnership can reliably bring about educational improvements within the complexity of classroom practices. As argued by Farrell et al. (2021), it is imperative for researchers to investigate and

understand the "underlying conditions [RPPs] require to succeed, given the complexity of RPP work and dynamics" (p. 30). Furthermore, learning from the processes of lesson study is not trivial (Choy, 2016; Lee & Choy, 2017) but rather highly contextual—to the extent that context or 'local conditions are not just "background" for an RPP' but they are driving the design and implementation of RPP work (Farrell et al., 2021, p. 31). Hence, studying the interactions between researchers and practitioners within the complex ecologies of classrooms and their wider environments is critical for realising the full potential of lesson study as a form of RPP.

RPP through LS: Learning from Experience

The papers in this special issue focuses on RPP within the Asian contexts and contribute towards the emergent dialogues about the enabling interactions between practitioners and researchers when they are engaged in lesson and learning study. In this paper, I will frame my commentary around one key question: How do researchers and practitioners learn from their experiences during their engagement in a RPP through lesson study or learning study?

The partnership between researchers and practitioners can be conceptualised from the perspectives of at least three traditions—action research, narrative inquiry, and teacher research—as highlighted by Pereira and Fang (this issue). As pointed by the authors, there are nuanced differences amongst the three traditions, particularly in terms of their theoretical and historical roots. Despite these differences, one thing is common. Researchers and practitioners aim to learn from their *experiences* as they engage in RPP. As highlighted by Elliott (1991), "all worthwhile professional learning is experiential" and that "a pedagogy to support professional learning should aim to provide opportunities for learners to develop those capacities which are fundamental to competent reflection practice" (p. 314). This is not only true for practitioners as they

learn to reflect on their experiences with researchers during RPPs to improve their practices, but this is also the case for researchers as they seek to generate new theories and knowledge about teacher learning. For example, teachers' personal practical knowledge about practice "is revealed through interpretations of observed practices over time and is given biographical, personal meaning through reconstructions of the teacher's narratives of *experience* [emphasis added] as found in practice" (Pereira & Fang, this issue). In other words, learning from engagement with RPPs is a dialogic process between researchers and practitioners, blurring the boundaries between research and practice, as they learn from their own experiences, the experiences of others, and their experiences within the world of theories and observations.

This blurring of boundaries between research and practice is also highlighted from the systematic review of RPPs in Asia (Wei & Huang, this issue). This review was framed using the three modes of partnership from the perspective of activity theory (Engeström, 1987), namely coordination, cooperation, and communication. In their review of 21 articles on RPP in lesson and learning study from Asia, the authors have found the three modes of partnership coexisting with similar frequencies and contributing differently to the building of the RPPs at different stages of lesson and learning study. More importantly, Wei and Huang (this issue) conceptualise two dimensions—collectivity and flexibility—to feature these three modes of RPP. They argue that for researchers and practitioners to move beyond "simply imparting knowledge" to "inspiring transformation" in praxis, both parties need to transit towards a more communicative partnership: one in which "both the theoretical and the practical elements of teacher education are fused together and in which, importantly, the processes and practices of that fusion are also shared between academics and teachers" (p. x). Doing so requires researchers to "spend more time in schools" so that they can

get "the *experiences* of teachers and students" [emphasis added]. For teachers, this means that they have to learn to connect their own experiences in the classrooms to their experiences with theories and observations when collaborating with the researchers.

Experience, in some way, can thus be seen as "an interaction between a learner and social, psychological and material environment or milieu" (Boud & Walker, 2006). The quality of these interactions is key to learning. As argued by Dewey (1986), while the belief that "all genuine education comes about through experience" may be true, it does not mean that "all experiences are genuinely or equally educative" (p. 248). In other words, having experiences is not the same as learning. Making meaning out of experiences by reflection is critical for learning—what the learner "perceives" about the learning experiences and "what the learner has contributed to the situation at hand" (Boud & Walker, 2006, p. 68). An important aspect that enhances the reflection processes, as put forth by Boud and Walker (2006), is the idea of noticing, by which the learner "becomes aware of the milieu, or particular things within it, and uses this for the focus of reflection" (p. 68). Furthermore, in the case of RPPs, it is not just noticing within the cluster of cultural, social, institutional, and psychological variables but also how both researchers and practitioners move "into and out" of their learning experiences to make connections with their own understanding of theories and observations within RPPs that matter (Boud & Walker, 2006, p. 71). As highlighted by Boud and Walker (2006), noticing is directed to both the "interior" world—feelings and thoughts"—and the exterior world—"forms of interactions between participants, use of language, cultural patterns, documents and objects used" amongst others (p. 68). Here, I draw on Mason's (2002) idea that professional learning takes place in three worlds of experiences—world of personal experiences, one's colleagues' experiences, and the world of theories and observations (p. 93). Mason (2002) argued that the key to learning

from the three worlds of experiences lies in one's ability to *notice* new possibilities at the intersection of all the three worlds of experiences.

To notice is to become aware of what is happening within and around oneself and in the context of learning, it means to be aware of what is taking place in oneself and in the learning experience (Boud & Walker, 2006). Noticing can be conceptualised as "a shift in attention" (Mason, 2011, p. 45), which results in sensitising oneself to respond differently. As Mason (2002) has explained:

> At the heart of all practice lies noticing: noticing an opportunity to act appropriately. To notice an opportunity to act requires three things: being present and sensitive in the moment, having a reason to act, and having a different act come to mind (p. 1)

In the case of RPPs, it is not just the teacher who needs to notice an opportunity to act appropriately. Researchers must "be present and sensitive in the moment" when working with teachers in the contexts of RPPs; they have to base their decisions on their understanding of theories and interpretation of observations; and they have to be able to act differently when appropriate. In other words, both researchers and practitioners have to notice opportunities to act *together* and appropriately if they were to learn from their experiences when engaging in RPPs.

This two-way noticing by researchers and practitioners can be represented in the schematic diagram as shown in Figure 1. As proposed by Mason (2002, p. 94), we see

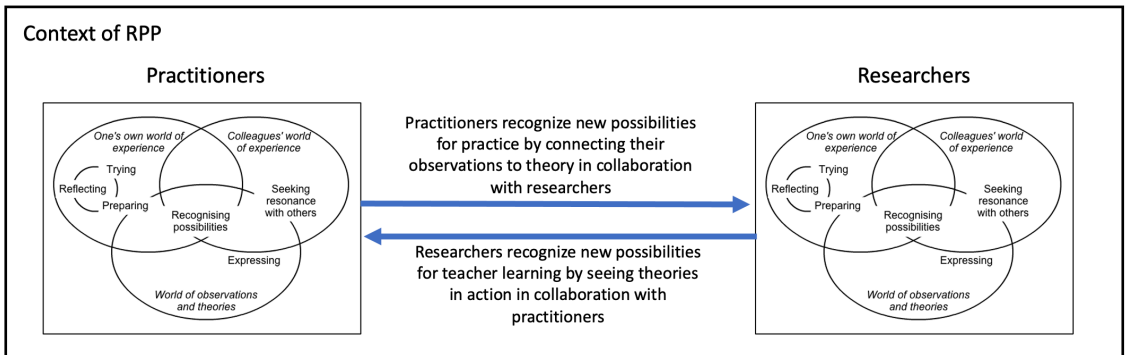

Figure 1. Researchers and Practitioners learning from the three worlds of experiences.

that one can learn from their own world of experience through cycles of preparing, trying, and reflecting on their actions. As one works with others, there are opportunities to seek resonance about what they notice from observations and theories. But it is at the intersection of these three worlds of experiences that one can begin to be sensitised and recognise possibilities to act differently. In the contexts of research-practice gaps, what practitioners tend to miss out is the opportunity to see their observations from the perspective of theories; while the researchers tend to miss out on the opportunities to see their theories in actual practice. What the two review papers (Pereira & Fang, this issue; Wei & Huang, this issue) have highlighted is this: learning from RPPs require both researchers and practitioners to learn from the experiences they can only have when working with one another. In other words, practitioners have to recognise new possibilities for practice by seeing their practice in connection to the theory and researchers have to recognise new possibilities for teacher learning (in both theory and practice) by seeing their theory in connection to the practice and contexts. Interested readers may wish to explore more about how noticing, or more specifically teacher noticing, can be developed and leveraged upon to enhance teacher education and practice (Dindyal, Schack, Choy, & Sherin, 2021; Mason, 2002; Schack, Fisher, & Wilhelm, 2017; Sherin, Jacobs, & Philipp, 2011).

What lesson study or learning study has to offer is a protocol for practitioners and researchers to engage in the work of learning from the three worlds of experiences as they collaborate in the context of an RPP. The other papers in this issue illustrate how this learning can take place in a diversity of contexts and applications, describing a wide spectrum of lesson study work across six Asian economies, including Brunei, China, Hong Kong, Japan, the Philippines, Singapore, and Vietnam.

Learning from Experience: RPPs through Lesson Study in Asia

I will now illustrate how researchers and practitioners learn from their worlds of experiences by noticing new possibilities through lesson study or learning study as a form of RPP from the other papers in this special issue. Most of the papers were situated in the primary school contexts (6 papers in all), three involved secondary schools (Chen & An, this issue; Wood & Andrew, this issue; Ronda & Danipog, this issue), and one was situated in the context of graduate programme (Wang et al., this issue). In each of these papers, we can find interesting and illuminating instances of how the lens of learning from different worlds of experiences provide the opportunities to notice possibilities to act differently, which then enhance the opportunities to learn for both researchers and practitioners.

Jiang et al. (this issue) provide an example of how a researcher can learn from practitioners by working with them to reveal their own thinking from analysing students' work instead of "imposing" the researcher's own ideas on teachers. Specifically, the researcher noticed an opportunity during one of the discussions to use teachers' own analyses of students' work to highlight different ways of approaching the teaching of fractions. In a similar vein, the teachers in the study became more aware of the connections between theory and their practice when they have opportunities to examine their teaching through their discussion with the researcher. As seen in Jiang et al. (this issue), both researcher and teachers crossed boundaries to see new possibilities, and this gave rise to learning from their experiences in RPP. Through the lens of the three worlds of experiences, the researcher noticed a new possibility of working with teachers (other's experiences) by seeing "theory in action" through the errors made by the teachers' students (world of observation and theories). Along the same vein, the teachers noticed new possibility of practice by making their understanding of theory

"practical". Here, we have an "independent" account of how a researcher had worked with the teachers to negotiate the differences in perspectives. We need more studies of this nature to illuminate the dynamics of RPPs for the purpose of uncovering the underlying conditions for success.

In RPP, the working dynamics of RPP are often tilted towards the researchers and the practitioners' voices are often missing in many research reports (Coburn & Penuel, 2016). Ronda and Danipog (this issue) present the possibility of shaping teachers' identity as a teacher to a teacher-researcher. Here, the authors go beyond the usual idea of teachers seeing teaching as inquiry (Hiebert, Morris, Berk, & Jansen, 2007; Jaworski, 2006; Lave, 1996). Instead, the teachers in their study took on the roles of researchers and began to present their lesson study work at academic conferences. As reported, the teachers had opportunities to engage with the processes of research and this could have created a new possibility for the teachers—that they can take on the dual-role of a teacher-researcher and add value to their practice. Doing this involved teachers crossing boundaries from their own world of experiences as teachers to the researchers' world of experiences. Shifting identity takes time but researchers can facilitate teachers to notice this possibility not only by being sensitised to alternative teaching approaches but also *why* these different approaches may work, making connections to the world of observations and theories.

Similarly, as described by Chen and An (this issue), when teachers and researchers began to be more aware of how they can work "candidly" with one another, the partnership within the context of a boundary-crossing lesson study (BCLS) was strengthened. Teachers became more comfortable at sharing their doubts and questions while the research support group became more sensitised to the kind of "theories" that teachers might need. By being able to notice across the two worlds of experiences—

their own and that of others—both parties were more able to negotiate meanings from their observations and gain new perspectives from theory and practice.

One way of facilitating teachers' ability to reason about their own practice is to give researchers and practitioners a common language, drawn from theory, for discussing and refining practice during RPPs. To this end, Ko (this issue) has highlighted the use of Variation Theory (Gu, Huang, & Marton, 2004; Marton & Pang, 2006) as a means to build capacity in teachers' ability to design, refine, observe, and discuss lessons. The power of variation theory lies in its affordance to make visible the impact of theory on practice by seeing the critical features of content, students' learning difficulties, and the corresponding instructional designs through the lens of variations. Similarly, Wood and Andrew (this issue) used Variation Theory to guide the RPP activities as they engaged with teachers for a unit on the economic concept of price. Their learning study had led to their teachers developing a much more robust understanding of price and "gained insights into how they as teachers might work *differently* with supply and demand graphs as objects of learning" [emphasis added]. What was striking in this paper was the impact of seeing the different ways their students were able to experience the objects of learning. The different ways in which their students had experienced the learning objects also provided the impetus for teachers to reflect and change their approaches to teaching. Even more interesting is the lost opportunity when a group member did not follow the group-designed lesson, which highlights the importance of experiential learning in professional development (Elliott, 1991). This is another example of noticing a different possibility by noticing and learning from the experiences of others, including students (Boud & Walker, 2006; Mason, 2003).

The opportunities to learn from self, others, theories, and observations afforded in the context of an RPP create the potential to forge synergistic partnerships that can positively impact practices. As demonstrated by Fang (this issue), the triad of teachers, specialist from the ministry, and researchers captured what it takes to link instructional improvements with student learning. In particular, Fang (this issue) argued that putting curriculum making as the centre of lesson study work can bring about more coherent efforts towards sustainable teacher development and student learning during curriculum reforms. Fang's description of Lily, who was the specialist in the study, reiterated the importance of noticing the *experiences of others* in shaping her role (own world of experiences) from that of a knowledge disseminator to that of a knowledge co-constructor and mentor with the novice teachers, a key factor for success.

Bringing these opportunities to learn from different experiences from the classrooms to the context of a graduate programme offered by the University of Fukui in Japan (Wang et al., this issue) is one way to make explicit the linkages between the world of observations and theories and the learners' world of experiences. As presented by the authors, the Fukui programme was designed under the premise that "teachers are reflective practitioners whose learning comes by doing" to focus on developing research questions (theories and observations) based on real and ongoing challenges in the schools where the graduate students were working in (own world of experiences). The settings and design of the programme provided a way for their students to be sensitised to the new possibilities and to experience change as a result of their participation in the programme. Student B's (see Wang et al., this issue, p. x) experiences from the seminars on teaching and learning were instrumental for him to notice the stark differences between what was taught and what was observed at his school. This

prompted him to see new possibilities in shifting from “lessons that learners can understand” to “lessons that keep up with the learning of learners”.

Likewise, Atsushi and Saito (this issue), through their engagement with Vietnamese teachers in a Lesson Study for Learning Community (LSLC), highlighted the impact of RPP on shifting the teachers’ ideas about meetings as an “assembly in a people’s committee” or “professional gathering in a school” to a “professional gathering by Lesson Study for Learning Community”. Besides the changing attitudes of teachers towards the meetings, the researchers also experienced changes in their perspectives of student learning, moving towards a culture of care and authenticity. The intentions of the researchers moved away from a position of authority—"researchers ask and desire practitioners to do”—to a position of co-learners—“researchers can and want to learn”—during lesson study. These changes, on both the researchers and practitioners, have opened up new possibilities in furthering the work of lesson study to reform the work of teaching and learning.

Concluding Remarks

Each of these studies detailed in this issue highlight that learning from experiences is the key to successful RPP (Boud & Walker, 2006; Dewey, 1986; Mason, 2002). Regardless of whether we are taking on the roles of practitioners or researchers, such learning involves learning from our own experiences, being opened to learn from the experiences of others, and embracing the experiences we encountered as we inquire into the world of observations and theories. As illustrated through the papers in this issue, the lens of the three worlds of experiences is one way to capture the complexity of the interactions that made learning possible. It is only when both researchers and practitioners are both present in-the-moment during the partnerships and have become more sensitive of their “positions” and “perspectives”, they can then notice a reason for

change (see Cheng & An, this issue) and have a different act in mind (Mason, 2002). This first step of noticing is one of the many other steps to take for us to move towards fulfilling the promises of RPPs through lesson study in improving educational practices.

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