Sina Sam

Collaborative Approaches to Teachers' Professional Learning and Development in New Zealand Primary Schools

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School of Education
Faculty of Culture and Society

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Abstract

This study adopted a qualitative research approach using purposive and convenience sampling which allowed the researcher to access six staff participants in two primary schools in Auckland. They participated in semi-structured interviews to explore approaches for teacher collaboration in professional learning and development in those schools. The research findings revealed the use of collaborative learning formats which were structured in four layers of teacher professional development (PD). The four layers were 1) a network of schools/community of learning, 2) school-wide PD, 3) team PD or syndicates, and 4) personal PD. These learning formats used collaborative features of evidence-based dialogues, inquiry and reflective approaches across collaborative activities such as study group, school PD meetings, peer mentoring and coaching, network-based workshop or training, and classroom observation and feedback.

Professional learning and development in both schools were supported by conditions where the schools implemented distributed leadership practice, used student assessment data and other evidence to guide their PD planning, and had a strong collaborative learning culture where teachers' capacities were valued, praised and trusted. Thus, healthy relationships were built across the school and within a cluster system. Networking systems were found to be preferred by one school in this study, while the other school was a member of a Community of Learning (CoL). The networking school system may help schools to mobilise financial resources more at the teacher level, whereas the CoL seems to use the resources more at the senior leadership level.

Some challenges and strategic solutions to deal with those challenges are discussed. Learning from the study, the researcher could use the knowledge and ideas in her working place in Cambodia. Some limitations of the study are described, and suggestions made for future research.

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning." AUT Ethics Approval Number 17/284.

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Last but not least, without budget support from the New Zealand Government for my study I would not have had such an excellent opportunity. More importantly, this opportunity has progressed my skills and knowledge in school leadership and a specific topic on continuous professional development for teachers. This opportunity enabled me to understand thoroughly the ways that teachers can learn collectively with their colleagues and keep searching and questioning for further improvement in their teaching practice, and the ways in which school leadership practices are essential when they are made appropriate to responding to particular school contexts. All of these could improve school operations in a sustainable way for achieving a high standard in students' learning outcomes.

Chapter One: Introduction

Background

Professional development of teachers is widely perceived to be essential for raising the quality of teaching and learning in the school (Craft, 2000; Hargreaves, 1994; Harland & Kinder, 1997 as cited in Harris, Day, Goodall, Lindsay, & Muijs, 2006). In a report of teaching policies in Cambodia, researchers indicated that "teacher quality is the main school-based predictor of student achievement and [that] several consecutive years of outstanding teaching can offset the learning deficits of disadvantaged students" (The World Bank, 2011, p. 2). In short, the capacity of teachers is important for school improvement. In this regard, the success of students would depend on the knowledge, skills, characteristics, behaviours, beliefs, and dispositions of teachers who work directly with students (Timperley, Wilson, Barrar, & Fung, 2007). Many researchers have indicated features of teacher collaboration as an essential approach that should be applied in schools. According to Argyris and Schön (1974) "Collaborative working relationships and empowerment are seen as critical conditions for teacher learning, as they are for learning in organisations" (as cited in King & Fred, 2001, p. 86). The accomplishment of "students' skill levels in innovation, collaboration, curiosity, entrepreneurship, and creative problem solving" requires teachers to become collaborative and adopt collaborative learning approaches (Sharratt & Planche, 2016, p. 2). Some learning forms used by teachers would be structured to ensure collaborative learning amongst teachers is implemented systematically, for example, through workshops, study groups, lesson study, and peer mentoring. These learning forms are types of collective teacher learning provided to give opportunities for teachers to incorporate professional talk, reflection, inquiry and discussion to enhance teaching practices and thus improve teachers' capacity for promoting student learning.

Schools might have teachers who are skilled or talented in mathematics, or who can work effectively with students who do not want to engage in a classroom activity, or who can deal effectively with students from diverse backgrounds or cultures. However, those skills or knowledge of curriculum or pedagogy might not be shared across their colleagues. Failure to share skills may occur because teachers might not have understood that a part of their teaching profession is to pursue new ideas and knowledge to sharpening their teaching practices or pedagogy through ongoing professional learning and development. Moreover, their schools might have an environment or

culture where collaborative learning is not valued and encouraged. In addition, teachers' time is often fully occupied with classroom teaching. As a result, formal teacher professional development might rarely be seen in schools. Teachers may talk to each other despite having busy teaching hours. However, what they discuss tends to be about topics such as sports, or their personal lives, that are not practice-related knowledge linked to improving their competencies for classroom learning (Breidenstein, Fahey, Glickman, & Hensley, 2012).

To promote collaboration among teachers, a school should include a critical practice of educational leadership. This leadership practice, for example, distributed leadership, needs to be promoted and used in the school by teachers and leaders equally, where it helps to strengthen relationships and trust in the school community and beyond. Therefore, distributed leadership may create a collaborative learning culture that encourages teachers to explore and learn in more in-depth ways from colleagues about enhancing student achievement. The present research highlights the activities of collaboration in the professional learning and development of teachers in two primary schools in Auckland.

The New Zealand Education Context

The education system in New Zealand adopted decentralisation into its school system in 1988. This system of school-based management or self-managing schools, led schools, school leaders and teachers to become more autonomous in school decision-making (Bibbee, 2013; OECD, 2013) with the aim of improving teaching efficiency, providing effective governance, and meeting economic challenges. This system required schools to have leaders and staff with relevant capacity and tailored appropriate professional development (Bibbee, 2013) to meet the needs of student learning by being able to use student data and engage with parents actively and effectively (Schleicher, 2012). In addition, school staff needed to become active resource persons for professional growth. Professional learning and development (PLD) has a strong link with student learning outcomes (Ministry of Education, 2014). If PLD is effective, student achievement will be improved. The evidence related to this claim is continuing to grow. One of the many evidence sources is The Best Evidence Synthesis (BES) on PLD which was released in 2008, according to a report of a PLD advisory group in 2014 (Ministry of Education, 2014). While evidence is used to inform teaching approaches, approaches for PLD are further developed for effective PLD programmes that match the needs at the school

level. To fulfil the perspective in the New Zealand Curriculum that needs the knowledge and skills to develop young people to become confident, actively involved, connected, and lifelong learners (Ministry of Education, 2007), providing teaching approaches that consistently have a positive impact on student learning are among the priorities of the PLD agenda. While PLD programmes should be matched with needs at the school level, the new approach in PLD should involve not "only learning about new ways of doing things, but also impacts on how teachers think of themselves as professional educators" (Ministry of Education, 2014, p. 5). Any investment being made to PLD programmes in both informal and formal activities is to ensure its effectiveness in raising the capacity of teachers and leaders for enhancing the learning outcomes of all learners.

The development of PLD is being made alongside other changes in the New Zealand education system. One clear purpose of this effort is to promote the vision that teachers and leaders are adaptive experts required to focus on the moral imperative of promoting the participation, learning and well-being of all students. To achieve this, teachers need to be actively involved in seeking deep knowledge about the content of what they teach, while understanding how to teach effectively for their students in particular contexts. These skills would help them meet the diverse learning needs of students from many different cultures and backgrounds. In this regard, the new approach of PLD is to make every school become a place where leaders and teachers are actively engaged in PLD so that they can be supported and challenged to raise the learning standard of students. Furthermore, since a collaborative enterprise is believed to help enhance educational outcomes (Education Review Office, 2016), the New Zealand government developed an initiative called "Communities of Learning". This policy may help schools to address the issue of improving the professional development of teachers, through which schools are supposed to work beyond their borders to inspire teachers to work more collaboratively to share knowledge and experiences (Education Review Office, 2017). In this initiative, teachers are expected to work collaboratively with teachers in other fields to build relational trust within and across schools.

In the New Zealand education system, attending school is compulsory for ages 6 to 15, that is, for primary school (children aged five to 13) and secondary school (children aged 13 to 18). The shift from centralisation to decentralisation of management and administration gave authority to elected or appointed Boards of Trustees to govern

schools, while the Ministry of Education is required to provide other support. That support includes the implementation of education policies, carrying out the research and dissemination functions, and allocating budget to school and early childhood education providers (Bibbee, 2013). However, there may be limits to the capacity of school boards, teachers and principals, especially in some smaller primary schools in rural or deprived areas. In addition to PLD approaches, it has been proposed that some small schools should be joined together as a 'cluster' school, managed by elected advisory groups (Springford, 2006 as cited in Bibbee, 2013). This trend is perhaps similar to the approach of a cluster school programme which is currently being implemented in the Cambodian primary school system.

The Cambodian Education Context

Cambodia has developed its education system with the focus on three primary strategic goals. Those goals are: to ensure all children have equitable access to general education services; to improve the quality of teaching and learning; and to achieve good leadership and management by educators and administrators at all levels (Ministry of Education Youth and Sport, 2014). Although equity of access to primary education has been achieved, the quality of education for students in primary school still needs to be improved (Ministry of Education Youth and Sport & UNICEF Cambodia Country Office, 2016). Child-Friendly Schools (CFS) is an approach that the Government of Cambodia and development partners continue to use in strengthening its implementation for improving the quality of basic education, from grade 1 to 9. CFS is a policy approach for enhancing the quality of education at primary school level. The earliest stage of its implementation was as a pilot project, in the school year 2001-2002. One of the six dimensions of the policy is effective teaching and learning, which mainly aims to improve teacher proficiencies, in which a student-centred approach is being promoted in the classroom. Along with this initiative, teachers' attitudes, behaviour and moral values are also developed (UNICEF, 2010). Furthermore, in this dimension, teacher professional development is intended to be improved through a systematic approach, with teachers using a logbook to share what they have learned with their peers at a monthly meeting. However, more appropriate data, both qualitative and quantitative , is needed for tailoring the capacity of teachers to meet the need for student learning (Guskey, 2000).

Some significant achievements may have resulted from this Cambodian policy implementation and other policies and interventions. Those evidence are policy on early childhood education, the strong adaptation of the approach of inclusive education into education strategic planning, as reflected in various interventions by the Government and its partners. Achievement at the primary school level is reflected in an increased rate of net enrolment, from 88.9 percent in 2002 to 97 percent in 2013. However, there was a slight drop in the enrolment rate in 2015, at 94.5 percent (Ministry of Education Youth and Sport & UNICEF Cambodia Country Office, 2016). In addition, childrens' completion of primary school has also been improved, from 46.8 percent in 2005 to 87.35 percent in 2013 (Ministry of Education Youth and Sport, 2014). Despite this, the current system of education in Cambodia remains in a developmental stage. Some concerns related to the quality of education are being addressed, including the alarming pass rate in the Grade 12 exam in 2014, which was just 26% (Kelsall, Khieng, Chantha, & Muy, 2016). This result may signal low quality in teaching, school leadership and student learning, although some socioeconomic factors are believed to have an indirect impact on student learning results. To address the issue of low student achievement, a prioritised reform agenda is focusing on improving quality of education, which is perhaps more rigorous and more appropriate than similar educational measures in the past, specifically, the professional development of teachers. In strengthening this area, some significant changes are reflected in a teacher policy action plan that was adopted in 2015. Activities being implemented in teacher development are upgrading basic teachers qualifications and enhancing the capacity of school principals regarding leadership and management, and focusing on the teacher career pathway (ongoing professional development) (Ministry of Education Youth and Sport, 2015). This focus should also facilitate the smooth and effective implementation of 'new generation schools', a school-based management approach that is being introduced to provide opportunities to school directors and teachers to have a clear purpose and focus on instructional improvement for school improvement.

Rationale

In recognising the demand to develop competent primary school teachers in Cambodia, teacher professional learning and development is the topic that I want to explore to learn more in-depth. The area I focus on is how teachers learn from each other, as this practice may contribute to improving the quality of the teaching workforce in Cambodia

in a more sustainable way than learning in a classroom workshop or other types of training. Learning about collaborative approaches to PLD in the two primary schools in New Zealand would enable me to gather some relevant knowledge and ideas for educators in Cambodia. Ways that teachers in Cambodia might continue to learn from each other in a structured learning process may not be well understood by many teachers and school leaders. Moreover, a meaningful collaborative manner is needed in such learning approaches for teachers. For example, strengthening peer mentoring may enable the teacher learning system to achieve a better result in classroom instruction and the curriculum.

A recent research study conducted by the World Bank in 2015 confirmed that teacher support should be improved into a way that is a "more dynamic and collaborative working environment" (Tandon & Fukao, 2015, p. 6). Support processes in the Cambodian education system should also include an aim to strengthen peer collaboration for stronger classroom performance. This issue is apparent not only at primary school level but also across the education system in Cambodia. To address this issue, peer collaboration could be promoted among teachers and teacher trainers. Doing so can lead teachers to have more opportunities to share problems as well as effective practices, and to learn collectively with their peers. In this regard, collaborative approaches to teacher professional learning and development in primary schools in New Zealand is a suitable topic to be explored for expanding my knowledge and ideas for applying that approach in the Cambodian context. Cardno (2012, p. 126) has noted that "collaborative approaches are anticipated as the norm in most education settings". Applying this norm in the education system in Cambodia may help to address the issue of teacher quality. The meaningful practice of how teachers work together to solve problems or to improve their capacity may be revealed from research on this area. The practice of teacher collaboration for school-based PD in two primary schools in New Zealand can then be shared in my working place (UNICEF) and some schools in Cambodia.

Research Aim and Research Questions

Research Aims

The present research aims to explore (i) some ways in which collaborative approaches to teachers' professional learning and development are implemented in New Zealand primary schools, (ii) the challenges facing teachers who use collaborative approaches to

teachers' professional learning and development, and (iii) how teachers overcome those challenges. Learning from the research findings, some relevant findings may be applied in my role as education programme associate for improving the quality of primary schools in Cambodia.

Research questions

1) In what ways are collaborative approaches to teachers' professional learning and development implemented in New Zealand primary schools?

2) What challenges for teachers and school leaders arise in collaborative approaches to teachers' professional learning and development in New Zealand primary schools? How might these challenges be managed?

3) What aspects of New Zealand primary schools' collaborative approaches to teachers' professional learning and development might inform the researcher's own work as an education officer in education programmes in Cambodia?

Outline of Dissertation

The dissertation is divided into five chapters:

Chapter one provides a background and context of an education system focus on professional learning and development in which teacher collaboration is emphasised. This chapter also outlines the aim of the research and research questions.

Chapter two provides the literature on professional development, teacher collaboration and learning, supporting conditions for teacher collaboration, and the challenges of collaborative approaches.

Chapter three sets out the qualitative research methodology. The justification for using this approach and the methods for collecting data are explained. Sample selection and strategy, processing and analysing data, and ethical considerations are also detailed.

Chapter four provides summarised findings from the six interviewees. Four key themes are presented: learning forms of PLDs; collaborative features in PLD forms; supporting conditions; challenges and strategic solutions.

Chapter five discusses the significant and relevant findings. Key topics are: ways of teacher collaboration; challenges and solutions; and some appropriate practices for the researcher's work in providing support to education programme of early childhood education, child friendly school and capacity building for education reform in Cambodia. Conclusions are drawn based on the discussion of the findings.

Chapter Two: Literature Review

Introduction

Effective professional learning and development (PLD) is an essential aspect of school improvement. While the impact of professional learning and development on schools has been evaluated by many studies, particularly the outcomes at classroom level (Harris et al., 2006), teachers' collaborative approaches to PLD should be key strategic actions for improving teaching and learning quality. Teacher collaboration has been identified as a necessary skill for school improvement (Bubb & Earley, 2007). In this regard, schools should ensure that teacher learning is carried out through the participation of teachers in a school community of learning where they can learn together to share ideas and discover appropriate ways to ensure high student achievement. This does not mean that personal learning or individual learning by teachers should be eliminated. However, the importance of collective learning is in enabling teachers to learn more in-depth. Therefore, various forms of collaborative approaches and supportive conditions for collaborative teacher learning will be discussed in this literature review. Challenges and solutions around the collaborative approach will also be canvassed. As a result, the literature review will provide a knowledge base for analysing findings.

Professional Learning and Development (PLD)

Professional development is an overarching task for school improvement. Fullan (1999, as cited in Lindstrom & Speck, 2004) suggested that a school principal who is trying to improve the performance of teachers must think of PD as a cornerstone strategy. With the aim of improving the quality of education to meet growing knowledge, high-quality PD is a priority component of education reform or a school improvement plan (Guskey, 2002). According to Guskey (2000), “professional development is defined as those processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students” (p. 16). The PD process should be systemic, purposeful or intentional, and ongoing.

To ensure educators are updated with emerging knowledge, some PD programmes have been designed and conducted at the central or district level, school level, or both combined or integrated (Guskey, 2000). Lindstrom and Speck (2004) give an aspect of PD as a learning process that is continuous and collaborative in learner-centred, daily

job-embedded contexts and aims to nourish teachers' growth. They further believe that, to achieve high-quality PD, a key focus is "collegiality and collaboration among teachers, other staff, and principal" (p. 13). In this regard, collective participation is identified as a useful feature - a cross-cutting feature for all types or models of PD (Tallerico, 2005). Therefore, what matters the most might be the fact that teachers can participate collaboratively in various forms of PD, such as training, action research, observation and assessment of teaching, and collaborative problem-solving. Teachers from the same grade-level or subject-area should join together for "sharing and problem-solving around common concerns, goals, students, curriculum, methods, assessments and, often even supplies and materials" (Tallerico, 2005, p. 62). The level of collaboration in the school can be seen by perceiving the way teachers share in decision-making, or the way they engage around an issue and how often collegial interaction happens (Guskey, 2000). In short, as argued by McLaughlin and Talbert (2006), PD is improved when the school's norms include professionalism and teacher collaboration. In extending collaboration beyond school borders, Doolittle, Sudeck, and Rattigan (2008) emphasise the benefits of schools extending their professional development partnerships with other schools to provide opportunities for increasing the quality of teaching and learning.

However, if schools want to achieve effective PD by enabling and encouraging collaboration as one of the critical qualities, they need to include or apply some essential values in collaborative forms or models of learning. These qualities are PD goals that should be clear and purposeful as to how relevant and useful the goals are. All of these should contribute to the main goals. Another quality is the reliable evidence to be used to determine, up front, whether the target can be attainable (Guskey, 2000). Making PD goals explicit can help to ensure that school leaders and teachers are on track, remain actively involved and focus on students' learning (Timperley 2008).

Teacher Collaboration and Learning

The word 'collaboration' can be confused with terms such as 'collective learning', 'collegiality' and 'reciprocity'. However, collaboration in a school context has a specific meaning. One short definition is that "collaboration in schools is 'working together' and 'teamwork'" (Lindstrom & Speck, 2004, p. 10). However, meaningful collaboration requires a team that has a clear goal to maintain a team focus. Piggot-Irvine's (2012) expanded definition sees "collaboration [as] bound to notions of joint

work, consultation, involvement and participation: it is based on shared goals and shared the vision, openness, trust and democratic ideals" (p. 90). Similarly, Friend and Cook (2013 as cited in Friend and Barron, 2015) define collaboration as the interpersonal style of at least two parties who interact voluntarily to engage for making a shared decision in the aim to achieve a targeted goal. These definitions could alert educators that the real value of teacher collaboration is not just about working together but being guided by a shared goal in ways that are open, trusting and respecting the voice of the majority as democratic process.

Teacher collaboration could enable teachers to learn more in-depth. Knox (2016) sees collaboration as one of 12 features for useful professional learning activities, where good collaboration among teachers can facilitate them to exchange knowledge and ideas in identifying suitable solutions to problems. The significant impact of their learning might be achieved when they share ideas or expertise, for example around a teaching method - asking critical questions and receiving feedback from colleagues. In this regard, teacher collaboration is positively viewed as actions for teacher learning (Meirink, Imants, Meijer, & Verloop, 2010) in ways that are active and productive (Darling-Hammond, 2008). Similarly, according to Ertesvåg (2014), teacher collaboration is a robust platform for schools to develop a learning environment for teachers, as well as to ensure that teachers in each school have a shared vision, thus creating a capable school.

Some elaboration of the activities in collaborative teacher learning is explained by Little (1982, as cited in Ertesvåg, 2014). Little proposes that four types of collaborative activity are necessary for continuous professional development:

> (1) teachers engage in frequent, continuous, and increasingly concrete and precise discussions about teaching practices; (2) teachers are frequently observed and provided with useful critiques about their instruction; (3) teachers plan, design, research, evaluate, and prepare teaching materials together; and (4) teachers teach each other the practice of teaching. (p. 567)

These practical activities would be demonstrated by teachers, for example, in sharing efforts to design curriculum or instructional improvement after classroom observation had been undertaken and critiqued. Furthermore, reflective dialogue is identified as a cross-cutting practice in all four collaborative activities (Munthe, 2003, as cited in

Ertesvåg, 2014). Schools demonstrated such critical activities would be distinguished as the most successful school.

Sagor (2010) focuses on learning by teamwork, through a ‘collaborative faculty study team’, where solving a non-routine problem through action research requires meaningful collaborative work and good communication amongst colleagues. As a team, teachers observe the work of students as well as reflect on their own teaching practices, and then share what they have learned with colleagues. Furthermore, the interaction of teachers might facilitate a long-lasting change in teachers’ beliefs and ideas. Briscoe and Peters (1997) found in their study that:

> the teachers discovered that collaboration was not only essential, but very desirable to support the change process, to lessen the fear of risk-taking, and to provide a forum for analysis of what works and what does not when change is implemented.(p. 63)

Professional Learning Community

In general education, it is argued that the professional learning community could ensure space for teacher collaboration (Battersby & Verdi, 2015). Sharing knowledge and skills can occur when teachers work meaningfully beyond their classroom, when schools select existing expertise to learn from, and when partnerships occur amongst schools in a cluster or a network (Bubb & Earley, 2007). Timperley et al.'s (2007) study of Best Evidence Synthesis Iteration (BES), which reviewed New Zealand-based PLD studies, confirmed that greater collaboration among teachers is a core characteristic of school-based professional communities. However, building school-based professional communities that possess a strong characteristic of greater collaboration among teachers would require a stronger focus on students' learning (Timperley et al., 2007). This means that teachers should be able to assess their students, to challenge new perspectives and problematic beliefs, so that teachers can link evidence collected, ideas identified, and knowledge learned to demonstrate or to experiment with an innovative teaching practice that can enable them to achieve a targeted goal.

The term ‘professional learning communities’ (PLCs) has been defined similarly across some education researchers. According to Stoll, Bolam, McMahon, Wallace, and Thomas (2006), professional learning communities occur when teachers and administrators operate schools in a manner of ongoing collaboration and sharing in a collective enterprise and act upon those learning activities with the aim of improving

their teaching and, ultimately, the learning outcomes of students. Stoll et al. (2006) further add that such processes can be called "communities of continuous inquiry and improvement" (p. 223). Although there are some slight differences in the meaning and approaches of PLCs, an international consensus on the definition of professional learning communities is "an inclusive and mutually supportive group of people with a collaborative, reflective and growth-oriented approach towards investigating and learning more about their practice to improve pupils' learning" (Robertson & Timperley, 2011, p. 104). Active participation of teachers in a collaborative manner in which teachers are encouraged to work as a team to develop a mutual understanding around the student, curriculum, classroom material, student assessment, and instruction are seen in a healthy professional community (Newmann, 1994).

Features of Teacher Collaboration

Some necessary forms of collaborative teacher learning have been applied in systemic studies of teachers in PLD, for example, in team study, staff PD meetings, on-site training or workshops, and co-teaching. In those forms, coaching, professional conversation, collaborative inquiry, and purposeful collaboration would be identified as collaborative features or strategies.

Teacher Study Groups

This type of learning is a kind of collaborative teacher learning. It is a type of teacher support group (Murray, 2010) or 'critical friends' medium for having opportunities to reflect and to provide feedback (Tallerico, 2005). Stanley (2011) calls these groups 'inquiry groups' in a community of practice. The group is set up by school leaders and facilitated by team leaders. However, the group can be independent, where the learning of the group is organised and run by teachers. This study group might be offered as an alternative to a conventional model of the workshop (Stanley, 2011), although it is not conducted in the same way as a workshop (Murray, 2010). A collaborative teacher study group (Stanley, 2011) could consist of three to four teachers from the same grade level or department, or teachers who share special interests or needs (Breidenstein et al., 2012; Murray, 2010). In the study group, structured meetings are formed. However, a group can be informal, though it should be collegial. The team within the study group should focus on a specific issue associated with their teaching by making a reflection, brainstorming and/or role-playing to review whether a problem-solving technique or selected approach worked or not (Tallerico, 2005). Practically, to achieve higher

understanding and gain more expertise, a group of teachers should undertake action research and share their professional knowledge (Breidenstein et al., 2012). Potentially, such work might enable teachers to learn collaboratively in the study group.

Peer Coaching

Peer coaching is defined as "a confidential process through which two or more professional colleagues work together to reflect upon current practices; expand, refine and build new skills; share ideas; conduct action research; teach one another, or problem solve within the workplace" (Robbins, 1995 as cited in Rhodes & Beneicke, 2002, p. 298). The result of a study on the examination of coaching in school, indicates that teachers learn new strategies and skills through coaching that can make them more successful than teachers who did not participate in peer coaching (Crafton & Kaiser, 2011). Coaching can create the space for teachers not only to learn new technical knowledge and skills brought from internal problem-solving outcomes and external training, but also to develop professional dialogue and a collegial relationship among teachers (Hargreaves & Dawe, 1990). Drawing upon the research of Joyce and Showers in 1988, the national strategy for continuous PD in the United Kingdom identified coaching as a transforming medium between training and practice which helps increase the impact on teacher performance (as cited in Rhodes & Beneicke, 2002).

Often a beginning teacher needs additional support from experienced teachers. To address this need, a new teacher support team is created to help when needed, for example in classroom management and lesson plans (Lindstrom & Speck, 2004). Instructional coaching is a typical support in which instructional leaders provide a real example of teaching practice for teachers in the classroom (Breidenstein et al., 2012). Such learning can also take place during faculty, grade-level or department meetings. It is a form of modelling of an instructional strategy or approach through which successful instructional practice is shared. While a principal is a suitable person to provide coaching to teachers, to achieve quality coaching outcomes partners should be matched, or pairs should share a similar situation (Lindstrom & Speck, 2004; Robertson & Timperley, 2011) so that coaching can address each individual's needs. For example, a coach need not always be a principal but can be also someone who has more expertise on a topic, which can be used to address their peer's need in that area or topic. However, it is identified that there is a more significant impact on student learning when coaching time is also spent on observing teaching and providing feedback on teachers' practice

(Timperley, 2011). Concerning the development of coaching partners, Lindstrom and Speck (2004) suggest a model of initial expert coaching be used to facilitate for selecting the right partners. A teacher can be assigned as a coach or mentor, but he or she should understand their functions such as being able to build a good working relationship, plan something together, spent time observing each other, and do reflection on each other's practice. This can make sure that their learning through coaching or mentoring is useful and can lead teachers to develop and adopt new instructional strategies.

Professional Conversation

Professional conversation is a means or a common feature of a collaborative learning approach. Through dialogue, opportunities are created for teachers to have verbal communication with their leaders and colleagues regarding teaching and learning (Robertson & Timperley, 2011). Professional conversation tends to be productive as a group of people talking engages actively with a topic (Irvine & Price, 2014). Dialogues are about having an informal yet explicit conversation between two people (Robertson & Timperley, 2011). Both terms (professional conversation and dialogue) might be used similarly. For example, talk of encouragement, feedback, and questioning from a leader to a teacher regarding the outcomes of a day or a week of teaching or student learning. This could create a conversation between a leader and a teacher with useful knowledge that will enable the teacher to reflect and act on it. Some ground rules are normally required for productive conversation, although it can occur informally (Robertson & Timperley, 2011). The conversation should be a structured mechanism with a clear purpose of teacher learning. In addition, coaching and reflection are necessary skills for both parties if they want their conversation to be well understood in the dialogue process.

Collaborative Inquiry

The collaborative inquiry may be an appropriate strategy for all forms of teacher learning. It is defined by Weinbaum (2004, pp. 2-3) as follows:

> Collaborative inquiry is the process by which colleagues gather in groups to pursue, over time, the questions about teaching and learning that the group members identify as important. Groups develop their understanding of an issue through framing a question, identifying artifacts or "evidence" that help response to it, sharing perspective on the

> evidence, reflecting on the partial or provisional answers that emerge, and revising the question in light of experiences and discussion.

Sharratt and Planche (2016) add that inquiry approaches can be used in any collaborative learning. Furthermore, in a collaborative learning process, inquiry is an approach that can develop deeper knowledge as "it is rooted in the notion of inquiring about issues of teaching and learning as a process for problem-solving and finding the most impactful assessment and instructional strategies for each learner" (p. 7). For example, whether students are struggling in a literature subject can be identified through classroom assessment by teachers who are members of a collaborative inquiry group. This activity would allow them to pursue the inquiry discussion by participating in regular observation, examination and analysis of students' work, so that a new or revised instructional strategy for teaching literature is constructed and shared. This approach helps the teacher to identify the most effective practices through exploring and questioning the issues associated with student learning (Robertson & Timperley, 2011) and can be done by using "classroom-based data, students' responses to instruction, existing literature, teachers' shared experiences, and teachers' learning goals" (Webster-Wright, 2009 as cited in DeLuca, Bolden, & Chan 2017, p. 67). The establishment of collaborative inquiry acts to ensure the effectiveness of teachers' engagement in PLCs for their learning (DeLuca et al., 2017). Teachers' assumptions will be revealed through asking questions so that they could be insightful in their learning. As noted by Robertson and Timperley (2011, p. 110) "collaborative inquiry has particular potential to stimulate evidence-based learning conversations". This aspect or model is adopted from Earl and Timperley (2008) who define it as evidence-informed conversation. The model has four main components: using relevant evidence; developing a habit of inquiry; building relationships of respect; and providing challenges (Timperley, 2011). In an element of relationship and respect, teachers need to be engaged by receiving words of admiration rather than criticism and not being put down, even where they may not yet be competent, so they might gain knowledge in their area of teaching.

Purposeful Collaboration: Collaborative Problem Solving

Purposeful collaboration is when a goal is established and shared in collaboration work. According to Sharratt and Planche (2016, p. 6) "true collaboration is purposeful" so that "collaborative learning is focused learning with a clear goal in mind". Without a precise aim, a key expected impact of gaining knowledge and expertise in teacher learning may

not be achieved. Timperley (2008) argued that purposeful or goal-oriented collaboration is a key strategy to maintain the momentum of a teacher's efforts towards student learning. Teachers work jointly in focusing on problem-solving (Timperley et al.,2007). Evidence of student achievement data is sought in collaborative teacher problem-solving (Timperley et al., 2007) and collaborative decision-making (Datnow, 2011). Other areas to be focused on in purposeful collaboration can be topics related to curriculum design, instructional strategies and classroom management (Marzano, Waters, & McNulty, 2005) during the ongoing practice of the teaching profession.

Support Conditions for Teacher Collaboration

Some supporting conditions for teacher collaboration identified by researchers are school leadership (transformational and distributed leadership), school culture (collaborative culture or contrived collegiality), relationships of trust, and teacher attributes such as beliefs, dispositions or attitudes and behaviour concerning their own and students' learning.

Leadership Behaviours

The establishment of a collaborative learning community may depend strongly on the extent of school leadership support. According to Cardno (2012), the success of collaborative practice relies on the extent to which leaders have the ability and skill to lead their staff to participate actively in decision-making. One study suggested that principals' leadership is often viewed as a support condition in a school environment where teachers are encouraged to learn collectively in a community of learning for improving students outcomes (Louis, Leithwood, Wahlstrom, & Anderson, 2010; Robinson, 2011). For example, the role of principals or head teachers in fostering collaborative inquiry can lead teachers to have a better understanding of their own performance. McLaughlin and Talbert (2006) have argued that principals' commitment and skilled leadership can support teachers to collaborate on addressing an issue related to student learning. While these are some of the claims regarding principals' leadership in supporting teachers' collaborative learning, the leadership practices of teachers themselves can also contribute to their productive collaboration. Lindstrom and Speck (2004) suggest that the leadership approach of the principal should occur on a shared leadership basis with other educators. This leadership style of distributed leadership "concentrates on engaging expertise wherever it exists within the organisation rather than seeking this only through a formal position or role" (Harris, 2004, p. 13). Teacher

leadership has been viewed as a new professionalism that can enable teachers to be more collegial (Muijs & Harris, 2003). Teacher leadership can be built through empowering teachers to work together by having principals undertake the role of facilitator (Sharratt & Planche, 2016), rather than a top-down management approach, and by having mutual trust and interpersonal factors such as the quality of the relationship between teachers and senior leaders.

School Culture

A supportive culture within a school is viewed as a factor to ensure a school can become successful. Professional development experts have attributed the cause of successful teaching and learning to not only a robust instructional method, student-centred context and a designed mechanism or process, but also to a favourable culture (Tallerico, 2005). A supporting culture, such as a learning culture and other necessary conditions, provide the environment needed for teaching and learning achievement, because they can help teachers to become more active and productive in teaching (Morrissey, 2000). However, an appropriate school culture can be the culture that fosters effective collaboration (Bubb & Earley, 2007) where teachers talk more about their professional work, indicating that they value collaboration (Y. Goddard, D. Goddard, & Tschannen-Moran, 2007). For example, teachers may talk to one another about their work in both formal or informal settings.

An emphasis on the importance of collaborative work by teachers in their daily practice (R. DuFour, R. DuFour & Eaker,2002) identifies collaborative culture as a characteristic of schools functioning as professional learning communities. In this regard, to create a collaborative culture, school principals need to establish collaborative teams, promote the value of sharing, develop leadership capacities among teachers and create opportunities for participation in various forms of PLD by teams (Balyer, Karatas, & Alci, 2015). Through these factors, teachers will be motivated to provide input, even risky ideas, into essential decision-making through discussion.

All teachers are supposed to take a lead on their instructions, and in a collaborative culture the roles of designated leaders should support and foster them to do so (Mullen & Hutinger, 2008; Murphy, Smylie, Mayrowetz, & Louis, 2009). School culture can be influenced by both teacher leaders and team leaders (Reeves, 2010). Their responsibilities of maintaining a successful team and enabling support for creating

potential leaders for improving student achievement should pave the way for developing a learning culture in their school. This practice is like ‘the responsibility of Culture' (Marzano et al., 2005, p. 48) suggested as the degree of fostering “a sense of community and cooperation among staff” by leaders. For example, a leader usually takes chances to praise teachers for working collaboratively. A learning culture, including a collaborative learning culture, has to be expected in education settings if the goal is for teachers or other staff to work together collaboratively (Cardno, 2012). Furthermore, to build a successful collaborative culture, teachers are expected to be participating in ‘authentic interaction’ (Marzano 2013, as cited in Battersby & Verdi, 2015). Authentic interaction is about having open sharing of lessons learned regardless of failures and mistakes, so that teachers can have opportunities to analyse and criticise their practice to facilitate self-reflection for improving their performance.

Trust, Relationships and Behaviour

Trust is a factor in teacher motivation. When trust in school is enriched, the relationship of staff members in school can be enhanced, together with their motivation to improve their capacity. With motivation, a teacher can work more collaboratively. The key to genuine collaboration (Cardno, 2012) and productive conversation for teachers’ learning is to build trust (Lindstrom & Speck, 2004). In addition to trust, safety and strong relationships are also the important contributing factors for collaborative learning (Sharratt & Planche, 2016). In trusting discussion, teachers act directly and honestly with their peers. In school, the motivation of teachers toward professional learning depends on the level of trust and how much trust is gained from leaders and peers (Tschannen-Moran, 2009). The people responsible for building trust should be leaders. One of their main roles is to develop and maintain trust within their schools. Openness, reliability and competence are behaviours that should be possessed and displayed by leaders, as these behaviours can facilitate teachers' trust in them. This leadership orientation can be evolved by their every day actions, for example, demonstrated through paying more attention to staff's concerns and understanding the necessary conditions to motivating their staff to achieve at a high level of student learning (Marzano et al., 2005). Cardno (2012) points out that trust is built when we are honest and respect others. Such behaviour is demonstrated when teachers acknowledge any disappointing results in student learning, and it is seen in strong teacher learning communities (McLaughlin & Talbert, 2006). If teachers hide poor results, there would be less chance for them to learn through reviewing their current practice.

Challenges of Collaborative Approaches

In schools, staff members and leaders have often faced challenges in improving teaching quality. According to Robertson and Timperley (2011), time is necessary for collaborative activity. When time is sufficient and well managed, it should be possible to allow staff to engage in inquiry and also enable them to feed back into broader learning. In this way new knowledge can be reconstructed. However, there are challenges around creative ways for allocating and managing time for collaborative education of teachers. Tallerico (2005) points out that time for collective learning of teachers is a significant implementation challenge in a model of collaborative problem-solving as well as in other models. That is why time is required for effective practices for professional learning (Timperley, 2008). Teachers are facing this challenge while at the same time they also deal with managing their time for teaching. In dealing with this concern, Tallerico (2005, p. 107) suggests four possible strategies for saving teachers' time: "schedule common planning time, reduce teachers' contact time with students, bank teachers' contact with the student, buy additional time". Principals and leadership teams need to ensure that time, resources and tools are available for teachers to work collaboratively (Breidenstein et al., 2012), for example, establishing "a pool of release time and coordinated classroom visits at a school" (p. 49). Therefore, it is argued that a role of school leaders is to make spare time for learning opportunities of teachers, where those opportunities occur in the interests of effective teaching (Reeves, 2010), for example, through useful feedback discussion between a teacher and a principal after a classroom observation.

Another considerable challenge is reaching a consensus or the need for agreement across individuals' points of view (Breidenstein et al., 2012; Reeves, 2010), which can be hard to achieve when teachers have limited skill in collaboration (Reeves, 2010). Disagreement could be caused by the willingness or commitment of some teachers as to whether they may want to serve the best interests of students in the school. In addition, it may be caused by too many competing goals, which may cause teachers to respond to goals with mistrust, weariness and disengagement (Hargreaves, 2007 as cited in Reeves, 2010). In addition, structural arrangements for a collaborative team might pose some obstacles for the teacher to learn collaboratively (Friend & Barron, 2015). For example, a teamwork structure that allows teachers to learn together should be arranged by considering several characteristics of the team, including team goals, awareness and

commitment of team members of their responsibilities, shared norms (i.e. a set of high expectations, meeting procedures), interdependent teams, and the team possessing diverse types of expertise. These characteristics might need to be considered and developed before a team structure is set up.

Chapter Three: Methodology

This chapter will provide an overview of the research methodology adopted in this study. This overview includes an explanation and justification for the position I have taken, including the research paradigm. The research methodology is interpretive, employing semi-structured interviews and document analysis methods. Hence the focus of this chapter will be a discussion of data analysis, limitations of the methodology - including questions of validity and transferability - and the ethical considerations that arose in the process.

Introduction

This chapter begins with a definition of education research and a focused aspect of educational leadership research. Bassey (1990, p. 35, as cited in Wellington, 2015, p. 13) has defined education research as "systematic, critical and self-critical inquiry which aims to contribute to the advancement of knowledge". Educational research may have an impact on the way educators think and practice (Wellington, 2015). The notion that "educational research is ultimately concerned with people" (Watson, 1953, as cited in Wellington, 2015 p. 12), suggests that educational research should involve people in the whole process (Wellington, 2015). Further, the aim of the present research is to gather knowledge around collaborative practice in an educational context by making use of evidence involving people, in line with the suggestion by Stenhouse (1984, as cited in Wellington, 2015, p. 12) that "educational research [is] systematic activity that is directed towards providing knowledge, or adding to the understanding of existing knowledge which is of relevance for improving the effectiveness of education". Relating to educational leadership, Briggs, Coleman, and Morrison (2012) propose that:

> educational leadership research may be seen as twin-focused. It is a systematic enquiry that is both a distinctive way of thinking about educational phenomena, that is, an attitude, and a way of investigating those phenomena, that is, an action or activity. (p. 18)

They further point out that "Educational leadership research involves analysing the concept of leadership itself, the types and styles of leadership and their relevance to educational settings." (p. 18). Research in the field of educational leadership that focuses on improving the leadership activities of leaders and teachers for positive

impacts on learner achievement could have some impact on the professional development of individual teacher (Middlewood, Coleman, & Lumby, 1999, as cited in Briggs et al., 2012). The goal of the present research is to contribute to the improvement of teachers' capacity, through which my knowledge and skills are to be shared in my own work as an education programme associate in Cambodia.

Research Design or Research Methodology

Research design is often driven by a personal reason or personal disposition, in which the researcher can include their own self-reflection regarding their interests, limitations and talents (Mears, 2009). This helps researchers achieve their research goals, where diverse topics align with a range of personal dispositions (Drew, Hardman, & Hosp, 2008). My area of interest is in contributing to improving the quality of education through collaborative approaches to teachers' professional learning and development.

The aims or purpose of research should enable the researcher to develop and create research questions. The formation of research questions is a prerequisite for research design (Drew et al., 2008). According to Cohen, Manion, and Morrison (2011), a research design is influenced by several factors: (a) research questions, for example, how collaborative approaches to teachers' professional learning and development are implemented in New Zealand primary schools; (b) the research purpose of exploring deeper knowledge and understanding about what are collaborative activities in teacher professional learning and development; and (c) the research position of an interpretive epistemology. Research design is inclusive of planning the project, selecting the literature, selecting a method or multiple method of collecting data, and analysing data. The design is an overarching tool to guide the researcher to produce results that answer the research questions.

The research design enables a researcher to find answers to research questions within their available knowledge and skills as a researcher and the available budget (O'Toole & Beckett, 2013). A type of epistemology or ontology can inform the research design or methodology of a research study. The procedures and logic of a research methodology can in turn inform a research method (a specific technique) to be used for collecting data (Coe, Waring, Hedges, & Arthur, 2017).

My research adopts an interpretive epistemology. According to Wellington (2015), ontology and espistemology are defined as "differing beliefs in the nature of reality (ontology) and the way in which we acquire knowledge of it (epistemology)" (p. 6). Coe et al. (2017, p. 102) give a similar definition of both terms as follows: "ontology is the nature of the social world", whereas " epistemology is how the knowledge of the social world is possible". Bryman (2012) describes epistemology as the way in which we approach our questions in exploring knowledge or practices, while ontology is the way we approach our exploration regarding concerns with the nature of social entities. Johnson and Christensen (2012, p. 12) give a definition of epistemology as: "the study of knowledge, including its nature, how it is gained or generated, how it is warranted, and the standards that are used to judge its adequacy". In short, as Patton asks: "…how do we know what we know?" (Patton, 2002, p. 134).

My aspiration to acquire relevant knowledge and skills for improving professional development of teachers in primary schools in Cambodia is in line with an epistemological approach. This epistemological stand, where knowledge is to be explored, led me to think about which research approach would be most appropriate. Consequently, a qualitative research approach is used in my research design through the development of a research topic together with three research questions, and school types and participants with particular features. An interpretive epistemology is selected as a position for my research study, as this study explores and analyses the practices of collaboration in a community of learners through direct interaction (interviews) with primary school teachers, team leaders, deputy principals and principals. Examining teacher collaboration requires a focus where the researcher takes efforts to perceive and interpret participants' experiences in a social context through interviewing participants (Bryman, 2012; Cohen et al., 2011). Furthermore, according to Wellington (2015, p. 26), the interpretivist researcher aims "to explore perspectives and shared meanings and to develop insights into situations". The present study was conducted in the primary school context, where the teachers' words are used to interpret and understand practice and actions related to collaborative practice. As part of that discussion, questions were addressed of what collaborative approaches and practices might be applicable for in my work in Cambodia where there are limited opportunities for teacher collaboration in teacher learning and performance.

Qualitative Research Approach

A research paradigm is understood as "a perspective about research held by a community of researchers that is based on a set of shared assumptions, concepts, values, and practices" (Johnson & Christensen, 2012, p. 31). A research paradigm is seen as like a window, where the researcher adopts "an approach to thinking about and doing research" (p.31). Consequently, a paradigm will influence how the researcher approaches their research. For my research paradigm, a qualitative approach is the most appropriate 'window', since data are gathered and understood through interpretive processes which are realistic, and it falls into human phenomena, where data are analysed inductively, rather than through a statistical analysis (Cohen et al., 2011, pp. 219-220).

A qualitative study was undertaken to collect evidence of professional learning and development and to record the challenges faced by teachers. The term qualitative research in this context refers to "an umbrella term that encompasses multiple methodologies and methods that typically seek to understand social life as it unfolds in its natural environment." (Lochmiller & Lester, 2017, p. 93). That is, qualitative research becomes: "research that typically studies things in their natural environment and focus on exploring and understanding how people make sense of and experience the world in which they live" (Lochmiller & Lester, 2017, p. 294). The present research aimed to explore teachers' reflections on their experience of collaborative learning in a school interaction. Interpretive research seeks to establish whether social practice makes sense or is effective (Lochmiller & Lester, 2017), and whether or not the findings can be applied in another context (Wellington, 2015). Generalisability is one of the characteristics of quantitative research, in which conclusions drawn from a sample can represent the larger population. In contrast, the context-based approach of qualitative research can use its findings to describe a specific situation in detail for improved understanding by a particular audience (Lochmiller & Lester, 2017). In other words, a social interaction is a primary concern of qualitative research (Creswell, 2014), which allows a researcher to reveal participants' voices through asking questions. According to Johnson and Christensen (2012), qualitative research is to be employed when we want to explore specific knowledge such as how teachers may collaborate in the context of a school environment.

Research Methods

Interview: Semi-structured Interview

According to Lichtman (2011), the qualitative research interview method is a common research method. A benefit of interviews is that they allow researchers to access information that observation or documentary research may not discover (Wellington, 2015); for example, in the present context, interviews can reveal individuals' responses regarding collaborative activities in professional learning and development which may not be issued from an Education Review Office (ERO) Report. Another advantage of interviews is the high possibility for capturing individuals' experience (Davidson & Tolich, 2003). However, to achieve that outcome, the questions need to be clear and use language and terms commonly used by the interviewees (Patton, 2002). For example, discussing teachers' learning and professional development were found to be familiar terms to teachers. Asking questions one at a time and using words that make sense can help interviewees to stay focused and provided quality data. Lochmiller and Lester (2017) assert that interviews that are semi-structured can elicit more in-depth knowledge than she or he is searching for, whereas structured interviews may not. However, one challenging problem was my accent. I had been asked to repeat some questions.

Briggs et al. (2012) identify three types of interview - structured interviews, semi-structured interviews, and unstructured interviews. In qualitative research, the researcher can choose between unstructured and semi-structured interviews (Bryman, 2012). Briggs et al. (2012, pp. 256-257) suggest that "Working within an interpretive paradigm, or when adopting a mixed methods approach, semi-structured interviews are probably the most common type of interview". Unstructured interviews are made without questions constructed in advance, to explore thoughts or life history (Lochmiller & Lester, 2017). In contrast the semi-structured interview allows the researcher to adjust questions and add probing questions or open-ended questions during interviews.

In the present research, a semi-structured interview approach made the process more like a conversation and more flexible (Bryman, 2012; Lochmiller & Lester, 2017), so that participants could tell their experiences in their own words in their 'rich and deep description', rather than be limited by a data collection method of structured interviews and questionnaires (Briggs et al., 2012, p. 24). As a result, unexpected insights and

knowledge emerged. For example, an explanation about two different types of learning community was given by the principal in school B. This provided me with a new understanding in this area.

All interviewees were provided with participant information sheets. However, the information about my research study may or may not have been understood clearly before they decided to participate in the interviews. The reason that they volunteered to take part in my study may have been because they wanted to help me. Therefore, the background of the study should be fully clarified to participants (Wellington, 2015), so that they can provide relevant viewpoints for the aims of a research study. Key questions and sub-questions (see question schedule in Appendix A) were prepared in advance, whereas supplementary questions and follow-up or probing questions, such as 'can you explain more about what are the different forms of professional learning and development, anything else you want to add', were used during the interviews to enhance and clarify the ideas or issues raised. An audio-recording device was used to record the interview to facilitate transcription of the interviews (Cohen et al., 2011). Notes were also taken during the interviews.

Sample Selection and Strategies

According to Wellington (2015, p. 116) "A sample is a small part of anything which is intended to stand for, or represent, the whole". I used two sampling strategies in combination: purposive sampling and convenience sampling. Convenience sampling involved accessing participants through acquaintances who knew school principals. This strategy can help researchers gain access to participants more easily, even though participants are selected based on proximity and accessibility rather than on their personal characteristics (Lochmiller & Lester, 2017). If I used only purposive sampling, I would have been struggling to recruit sufficient participants within a limited timeframe. Purposive sampling involved first looking at ERO reports as to whether the targeted schools met my sampling criteria. Using my networks to introduce me to principals, I contacted two schools that met the sampling criteria by via email and meet in person.

My research had a small sample of six participants, determined by the size of my project. As pointed out by Cohen et al. (2011), a large sample will not necessarily represent the wider population, depending on the sampling strategy. Purposive sampling

can provide information-rich data for a comprehensive study (Patton, 2002). There are limitations in generalising to the general population (Johnson & Christensen, 2012). In this study, the targeted population is staff in primary schools in New Zealand.

The two primary schools in Auckland were selected because (i) they had high student achievement outcomes and (ii) they encouraged and implemented teacher collaboration in communities of learning or professional learning communities. This information was found in the schools' Education Review Reports (ERO). While purposive sampling might not represent the wider population or primary schools as a whole in New Zealand, this means of selection can ensure a quality sample (Cohen et al., 2011). Patton (2002, p. 230) notes, regarding the power and logic of purposive sampling: "This type of sampling can also be called 'criterion sampling". Patton (2002, p. 238) further adds that: "the logic of criterion sampling is to review and study all cases that meet some predetermined criterion of importance, a strategy common in quality assurance efforts".

Before sending out invitations, schools were identified as to whether they met the criteria or not. Before I decided to use my networks or using convenience strategy, about 20 schools were invited. However, none of them accepted my invitation. Only after using networks for accessibility, three schools agreed to participate in my research. Since my sample size was limited to two schools; three participants were needed for each school, one school was rejected. So, I emailed the principal and explained that I already had sufficient schools, and thanked them. As explained in the email (letter) of invitation, it was a matter of the school responding within a specific timeframe or first come first serve. Following permission to research in their schools, consent forms to access the school (Appendix B) were signed by the principals. The principals then agreed to be a participant and facilitate access to two other staff, one team leader and one teacher. These staff were the most suitable informants as team leaders and principals play an important role in the development of a collaborative approach in teachers' learning and development.

Documentary Research and Analysis

My research also involved using documentation review to search for information. Documentation can be primary source of data (Denscombe, 2017). Documentary research (Johnson & Christensen, 2012) included documents used by the Education Review Office, the evaluation review body for the primary education system in New

Zealand. Documentation review can be used to complement evidence or information from semi-structured interviews (Wellington, 2015), and to support data quality and validity by triangulating data.

ERO reviews investigate four main areas of information - context, learning, curriculum, and sustainable performance. Key ERO themes are: (1) What are the important features of this school that have an impact on student learning? (2) How well does this school use achievement information to make positive changes to learners' engagement, progress and achievement? (3) How effectively does this school's curriculum promote and support student learning? and (4) How well placed is the school to sustain and improve its performance?

By reading the ERO review documents, these themes suggested to me key information pertaining to questions of how professional learning and development are implemented in the schools, and how they have been supported by school leadership, norms and culture of learning. Information in ERO reports also includes some features of collaborative activity in the school, which could form some answers to my research question of what collaborative approaches look like in PLD forms. According to Lochmiller and Lester (2017), relevant questions should be indicated in advance when analysing findings from documents. It is a helpful way to ensure that information provides additional answers to key research questions, and to verify information from the semi-structured interviews. Therefore, the reviewing and analysis of the ERO reports were made following analysis of the interview transcripts.

Data Analysis: Semi-structured Interview Analysis

Data analysis is the process of interpreting and explaining findings in qualitative research. To accomplish the aims of the study, data are analysed and interpreted to develop key findings (Denscombe, 2017). The raw data collected in most qualitative research is in the form of text (scripts) (Suter, 2012) or transcripts of interviews (Drew et al., 2008). According to Patton (2002), the purpose of qualitative data analysis is to "uncover emerging themes, patterns, concepts, insights, and understandings" (as cited in Suter, 2012, p. 344). This necessitates coding, categorising the codes, prioritising the codes, and writing annotations (Suter, 2012). The conclusions may support theories or conclusions from other literature, or generate new knowledge (Suter, 2012), which "is not intended to be generalized to a larger population in the same sense...", rather, "the

generalization often sought is the generalization of ideas so that they can be applied in many contexts" (p. 353).

The present research used thematic analysis, "a generic approach to the analysis of qualitative data" (Robson, 2011, p. 474), as a strategy for selecting and analysing the emergent themes (Denscombe, 2017). Initially, themes or categories that I used were acquired from the literature (Bryman, 2012; Wellington, 2015). As the first step in the task of thematic coding, 'chunks' of data were separated into various codes (Bryman, 2012; Cohen et al., 2011). The codes were then allocated by theme using 'networks' (Suter, 2012), that is, the organisational systems that reveal connections that occur over time. For example, in the implementation of collaborative forms for PLD, a theme of 'support system (conditions and environment)' was linked to the way teachers collaborate.

NVivo was used to classify information into codes and bring common (recurring) codes into a theme. Although there are pros and cons in using a computer-assisted qualitative data analysis such as NVivo, I found using it gave some advantages. For example, the information could be organised into a structure and stored in a single location that I could access quickly. I could revise the codes and rearrange them conveniently. Overall, a large amount of information - about 20 pages for each transcript for six participants - could be managed in a shorter time compared with using a word processing programme.

Ethical Consideration and Clearance

The combination of ethical considerations and clearance is an important step for conducting a research study. According to Wellington (2015, p. 112) "ethics and morals play an important part in both educational and scientific research". Ethical considerations are required when research involves people, to ensure that the participants are protected from harm (Bryman, 2012). Mutch (2013) states that, researchers will be able to act ethically if they treat participants with respect, consideration, and fairness. Moreover, the nature of the research topic itself must be ethically appropriate, otherwise this may lead to harmful exploitation or violation of ethical principles (Ary, Jacobs, Razavieh, & Sorensen, 2006). Although there can be various forms of harm, such as physical harm, loss of self-esteem and harm to participants' development (Diener & Crandall, 1978, as cited in Bryman, 2012), the present research should have a minimal impact on participants' emotional stress.

However, since participant stress can never be ruled out, I had to be sensitive to participants during the interviews to gauge whether they felt uncomfortable or not (Bryman, 2012).

The ethical considerations in this research included five key ethical principles outlined by the Auckland University of Technology Ethics Committee (AUTEC), which granted ethical approval. That process allowed me to receive ethical clearance before I could collect data or commence my project (Mutch, 2013). The ethics review served to mitigate the risks which could be harmful to researchers, participants or the academic institution itself (Bryman, 2012).

Applying the requirement for informed consent (Bryman, 2012; Cohen et al., 2011), all interviewees consented to participate in the interviews. Research information was provided to all participants through participant information sheets (Appendix C) and consent forms (Appendix D). The sheets provided participants with information on the purpose of the research, the rights of the participants and the benefits of the research (Burton, Brundrett, & Jones, 2014; Darling-Hammond & Sykes, 1999). This information informed their decision as to whether they wished to be interviewed (Bryman, 2012). Another key aspect of the ethics process was that the selection of participants must not be made under any duress. All participants had the right to withdraw from the study at any time (Mutch, 2013). Before receiving informed consent and starting the interviews, I gained access to the schools from the school principals who had that authority (Burton et al., 2014).

Participants in the selected schools were likely to be known to one another, since the principals had recruited other staff for the study. Clarification on this confidentiality issue was acknowledged to each participant through the participant information sheets, where I indicated that ‘I will do my best not to identify you in the findings, but others might work out that you took part’. To minimise the risk of any breach of privacy or confidentiality, pseudonyms have been used in this dissertation to represent the identities of participants and schools. This means that names of the schools, participants, and any significant terms which might be potentially revealed school identity are not disclosed in the research findings.

Validity and Transferability

In qualitative research, validity is a concern (Davidson & Tolich, 2003). This is because "validity refers to the extent to which a question or variable accurately reflects the concept the researcher is actually looking for." (p. 31). This means that researchers are required to ensure whether the approaches or ideas which are being explored are reflected accurately in the research questions (Bryman, 2012). One key principle to ensure validity is that interview questions should be consistent (Bryman, 2012; Cohen et al., 2011). To accomplish this, interview questions should be tested beforehand (Davidson & Tolich, 2003). To check whether the key research questions conformed with the aims of the research, I conducted a pilot interview prior to the real interviews taking place. During the interviews, follow-up questions were asked to clarify participants' responses and help them provide further relevant information. This allowed the researcher to collect sufficient information related to underlying theoretical concepts and practices.

Reducing bias can also either increase the level of validity or compromise validity (Bryman, 2012; Cohen et al., 2011). To support validity and avoid compromise of validity, all interviews were audio-recorded and then transcribed by a commercial transcriber who signed the confidentiality agreement. Each participant was then given their own transcript for review to confirm what they said. This ensured the validity of my research interviews (Mears, 2009).

The evaluation of research validity is not to yield a level or degree of validity. According to Suter (2012), to increase readers' trust in the validity of a research study, one needs to add additional sources of information to a qualitative analysis of the text. To ensure credibility and validity of a research study, researchers should adopt data triangulation (Bryman, 2012; Cohen et al., 2011). According to Bryman (2012), triangulation is "the use of more than one method or source of data in the study of a social phenomenon so that findings may be cross-checked" (p. 717). In this study triangulation is achieved through semi-structured interviews, in which the answers from teachers and team leaders can be interpreted and explained in comparison with the responses from principals. The interview data were complemented by the selection of relevant information from ERO documents which should be reliable and valid. The documents can assure the validity of documentary analysis (Wellington, 2015).

The transferability of my research depends on whether the results of the study can be applied in different primary schools in a different context to New Zealand, in this case primary schools in Cambodia (Davidson & Tolich, 2003). In this regard, in qualitative research the aim is not to generalise the findings to the whole population, but to aim to provide precise explanation of what interviewees said and did in their particular research sites (Davidson & Tolich, 2003). According to this claim, the research results would be transferable because of the rich detail in the findings providing readers who work as educators or policy makers in Cambodia to judge by themselves how much it is relevant and transferable (Ary et al., 2006).

Chapter Four: Findings

Introduction

The purpose of the interviews was to explore the ways that primary schools in Auckland implement collaborative learning in teacher professional learning and development, including challenges and solutions. Data were collected from two schools, with three participants from each school. Participants in School A were a teacher (TA), a team leader (TLA) and a deputy principal (DPA). Participants in School B were a teacher (TB), a team leader (TLB) and a principal (PB). The findings from these semi-structured interviews with the six participants and information in the two ERO reports of school A (EROA) and school B (EROB) were grouped into four main themes:

1. Learning forms of PLDs
2. Collaborative features in PLD forms
3. Support conditions
4. Challenges and strategic solutions

The ERO reports contained information related to themes 2 and 3 only.

Learning Forms of PLD

Both schools have some collaborative learning forms in professional learning and development programme. Those arrangements are structured into four layers, as noted by the principal in School B. Although School A did not identify layers of PD, their PD programmes are arranged in the same way as School B except the first layer where PD is implemented in the form of Community of Learning (CoL). The first layer is a network of schools or CoL. The second layer is school-wide PD. The third layer is team PD or a syndicate. The fourth layer is personal PD.

Network of Schools or CoL

Both schools implement PLD at the level of partnership and collaboration with other schools in a community or network. This layer of PD is conducted through workshops or meetings, school visits or classroom observations. However, the two schools adopted different approaches. School A has just joined a CoL , an approach introduced by the New Zealand Government in 2016 that aims to benefit teachers' capacity and students' learning within a school community. School B chose to stay out of a CoL, but it has been in a network of schools for 10 years.

We also have communities of learning… we arrange to meet and we talk about things and we can also go into their classrooms, they can come into our classrooms, we can use technology to capture things that are happening in other schools, we have a lot of sharing feedback and feedforward and that's how professional development happens in a very collegial way. (TA)

… different schools have been in the network but the work has been very consistent. There has been work around leadership, there has been work around building teacher capacity and there's been work around community engagement. (PB)

However, the principal of School B identified a dilemma with a CoL. Her belief was that it has a lot of rules and a hierarchical structure where a lead principal and lead teachers are paid too much money, while the teacher level with ongoing PD received an insufficient budget.

…the structure (of CoL) of the resource is very hierarchical and top-heavy and in my view there needs to be a flatter structure, …(PB)

..you need to have more resource where the work's happening and the work is happening where the teachers are in the classrooms. (PB)

Furthermore, the principal addressed some factors such as relationships and an informal structure which may create a collaborative learning network that values the shared vision and appreciates the like needs of teachers' PLD across the networking schools. This factor could benefit all schools in the system to achieve their common goals, as teachers can work together in a critically reflective manner to share and grow their expertise. The purpose of team learning, to accomplish something they want for their networking schools, would be a crucial factor for a successful networking school. This outcome would be implemented well if a resource such as budget is provided and allocated at teacher level.

…In every single instance an effective collaboration is nothing to do with the formal structure of a district or a network. It was to do with the relationships,

with the principals or the people in the network. It was about their shared vision for what they wanted to achieve, and it was their passion. (PB)

School-Wide PD

School-wide PD, which includes teacher only days and staff PD meetings, has been implemented in both schools. According to the responses from the interviewees, this kind of PD is conducted with the aim of providing updated knowledge about a specific learning topic.

> *We have school-wide professional development. Now we have teacher only days in schools during term breaks. During our term break we come back earlier for a teacher only day, with no children, just teachers come and we might get professionals coming in to talk to us about something that's a need in the school. For instance, if we decide how our writing programme really needs to be up-skilled (TA)*

> *……but that also can include teacher only days at the beginning of the year and we also have days through the year we might have teacher only days specifically for professional development... they say we've got a real need to focus on writing, a boy's writing, the professional development for the team will be linked to writing so they can collectively work on something to improve practice across that team in writing… And it might be ESOL students could be a focus (PB)*

A contracted facilitator is engaged as part of a partnership approach with the Ministry of Education. A deputy principal mentions this PD process. The type of learning offered by the facilitator is co-planning and co-teaching, which could allow teachers to receive advice and constructive feedback on how to improve their practice.

> *we've had a facilitator come in and work with each teacher who co-plans and co-teachers alongside teachers to improve practice, and then to improve student engagement in writing. (DPA)*

To enhance staff knowledge, staff members are provided with relevant readings for a PD topic, such as how to do group teaching in mathematics or what are the successful approaches in teaching a subject. In addition, there might be a skills-based event within the school trained either by an external trainer or a teacher who is knowledgeable in that area.

> *...we could be given a reading and we have to read, before the staff meeting happens … and feedback, we feedback in the staff meeting about what is important to us, what did we learn from it, so that's professional learning. (TA)*

Team PD or Syndicate

Team PD or syndicate learning has teachers either teaching at the same grade or at different grades if the school is small, as is School A. The team is led by a senior leader. Its purposes are to discuss an issue, to share ideas, to support one another to solve problems, and to learn about a topic raised by a teacher among the team members. The team members in School B (large school) were teachers from the same grade level, whereas the team members in School A (small school) comprised the junior team (grade 1,2,3) together with the senior team (grade 4,5,6). The team of both schools sometimes act on evidence (student data), sometimes teachers just identify their own needs and approach their team leaders. Team members reflect on the progress of a target in their weekly meetings. At the end of the year, they evaluate progress on the issue/s identified and adjust their PD plan accordingly.

> *…. team meetings where we collaborate together to share our ideas and support each other…. (TLA)*

> *… sometimes you don't reach those targets so you need some professional learning and professional development as to how can I do that? … (TA)*

> *…it just depends on what we're needing to work on, depending on our data; we like do writing PLD. (TB)*

Personal PD

The fourth type of PLD is personal PD. After teachers decide on a goal or inquiry, they can then identify the learning areas that can help them achieve their development goal. Once they identify those areas, they can search for relevant PD or courses offering in the New Zealand Education Gazette. However, not all requests for a course can be made because it depends on the budget available.

> *…I will take this one and I go on this professional development because it's going to help me to part achieve my goal or my inquiry learning……And it depends on what funds are available... (TA)*

Collaborative Features in PLD Forms

Based on interviewees' responses three main approaches to teacher collaboration were used in the two schools - purposeful, or evidence-based collaboration, inquiry-based collaboration, and collaborative activities.

Purposeful or Evidence-Based Collaboration

Participants' collaboration was purposeful because they used student data to plan PLD, to understand the impact of teaching practice on student learning in a particular subject and to adjust their teaching practices. Based on the documentation review and interviews, both schools used student data to determine what they needed to improve on a subject in the following year or term to enhance targeted students. They used student data for collaborative problem-solving. It would be an essential stage for a PLD process, where the goal setting stage would take place.

> *School leaders and teachers use school achievement information very well to track students' learning progress…teachers analyse assessment information carefully to identify childrens' learning gaps... (EROA)*

> *…Teachers use achievement information….and to inquire into the effectiveness of their teaching approaches…The board, senior leaders and teachers use achievement information very well to make positive changes for learners. (EROB)*

In the process of reviewing evidence together, teachers reflect and share what they have been doing. Doing so may help them to avoid making mistakes, to learn quickly and to pick up useful solutions or ideas.

> *…. you don't have to make the same mistakes individually, you can listen to the story of what didn't work from another teacher and say right I won't do that, and so part of it is it quickens up the learning, part of it is it depends their thinking…. (PB)*

> *…. we also talk about the PLD and strategies that have been working for us so that it's shared in case other members of the team want to use that same strategy. (DPA)*

Inquiry-based Collaboration

Comments from interviewees indicated that both schools had PLD processes that involved an inquiry approach. The team or pair tended to use this approach in professional conversations in both formal and informal ways and at any stage of their learning pathways, in contrast to purposeful collaboration that may take place during the planning or goal setting stage to navigate a learning topic throughout a particular time frame. This inquiry approach can allow the teachers to learn more in-depth and build a stronger relationship with colleagues in diverse kinds of conversations and actions that they have with their peers. Collaborative inquiry can also enable teachers to become researchers of their classroom problems. When teachers identify their problems, they bring them to get feedback from peers or team leaders during staff or syndicate meetings. Then they identify solutions through inquiry into their teaching practice or by asking team leaders or peers. Teachers interviewed seemed to be proactive in this task.

> *At the beginning of the year we identify that goal and as soon as we've identified that goal we develop an inquiry into it. So we inquire why we're tackling this. (TA)*

> *… it's about inquiry into their own practice and it's also about developing their curriculum knowledge as well (TLA)*

Engaging with other lead teachers in networking schools (School B) is part of inquiry integration with the implementation of a PD initiative. This inquiry-based engagement aims to find the impact or to find out how a teaching practice is useful. This also involved inquiry conversation with students.

> *I will contact these lead teachers to find out if it's working or have they been doing it every term and I may come in to have a look and so I'll be able to see the evidence on the walls,… and also the conversations with the kids. If you ask the kids and they're able to tell you, I'll know that it's part of every day for the kids. (TLB)*

Assessing the progress of an inquiry or a goal can be done by team leaders through observation. Observation can be made of other schools in the network. This practice was described by team leaders.

> *I've observed and see that might be an area that I think they need more support … (TLA)*

> *We observe, we assess each other and then it just gets the gist, give each other feedback and then it strengthens from there. (TLB)*

Collaborative Activities

The responses from participants in both schools and the findings from ERO reports indicated that teachers demonstrated their learning through various collaborative activities in the school and beyond the school. Collaborative practices amongst participants included were the activities of coaching buddies, peer mentoring and modelling, syndicate, team teaching, professional conversations (i.e. one-to-one conversations or feedback with teachers), observation (for a PLD evaluation, or sharing expertise or teaching strategies), peer review, swapping teaching duties, job sharing, and induction and mentoring processes for beginning teachers.

> *Teachers regularly share strategies that could influence students' success. (EROA)*

When you start teaching the beginning teachers you're given a day where you have mentoring. (TA)

Teachers share teaching approaches and ideas. (EROB)

…. lots of conversations, bouncing ideas off each other, sharing ideas, making sure that everyone's heard… (TB)

Exchange existing in-house expertise was indicated as a part of collaborative learning in both schools.

… that teacher was quite strong with XXX teaching and I wasn't, so I used that teacher's strength and I was strong with writing, teaching writing, so we used the strengths of each other to collaborate our teaching. (TA)

Classroom observation was generally implemented by a team leader, deputy principal or principal. It used a non-evaluative approach in an informal setting in which observers tried to understand 'what' is happening in the everyday classroom, and 'why'. This activity gave opportunities for teachers' learning through having professional dialogues around issues or gaps. School A and B team leaders provided the following comments:

We've done an observation ….so the professional conversations around that help the teachers and to us better understand what's happening in the classroom. (DPA)

… the third term I observe all the teachers of the school just to get a feel for what the teaching practice is looking like right now…(PB)

The purpose of observation is not only for evaluating the impact of professional learning or to see what is going on, but is also about observing for learning. This is when a teacher observes a peer or a teacher who has greater expertise in a particular area.

That's quite important actually, being able to observe somebody who's more of an expert in that area and to see it happening in practice. (TLA)

Collaboration among teachers for PLD can be made within the same grade teacher or different grade, with a focus on student learning. While this was indicated in Schools A and B, School A pointed out that the small size of the school allowed teachers to team up with teachers from a different grade level and that could provide them with more opportunities to exchange ideas. Comments below reflected this practice.

> *…because of the fact that, you know, if we want to collaborate in marking or having a look at how students are learning in their reading or something like that, it would still need to be cross-team collaboration. (TLA)*

> *…. different teachers from different syndicates are able to talk so you don't have to always just be in a team to collaborate. (TB)*

> *I think due to our size there are just quite a lot of opportunities for people to speak to each other at various times. (TLA)*

Both schools have good collaboration with parents to identify the situation of a particular student. This may help a teacher to undertake necessary interventions for improving a student's learning. Through parents, teachers can get greater understanding of a target student. Participants' comments indicated that the meaningful relationship with parents seems to be essential for teacher learning in the schools. For example, School B hired a teacher to facilitate coordination between teachers and parents. This role includes supporting parents to be teachers at home by sharing relevant material and information regarding children's learning.

> *Working partnerships with parents are developing strongly and help to support their children's progress… . (EROA)*

> *The school effectively engages parents and families in authentic partnerships that support students' learning. (EROB)*

> *Well we're actually putting money into parents to build their capacity as first teachers at home so that they can help with learning. (PB)*

Meaningful collaborative interactions can be reflected in ways where collaborators appreciate sharing and strategies for teaching, revealing those strategies openly and honestly. These elements could be part of leadership activities or behaviour in building collaborative learning culture in Schools A and B.

Support Conditions

Leadership Activities

All interviewees indicated school leadership supports for teacher collaboration. Participants' comments highlighted the way in which leadership activities were provided as instructional coaching. This approach involved ensuring various opportunities to learn and plan together, supporting teachers to take a lead (building potential as in-house leaders), managing resources such as budget and time, and having principals undertake facilitation. The principal in School B described the first stage of working with her networking schools, where she facilitated the process for staff to learn one another's school situation. This process was intended to help staff to build a collaborative team across the network, to understand one another and develop a shared vision for mutual professional development.

> *I trained as a facilitator….there are key activities that you can do in collaboration that work at every level but you've got to figure out what to do at the right time….In the first year of our network …you've got to spend time for people getting to know people, you've got to develop a shared vision, you've got to do a little bit of a reality check where are we up to now so we understand our school context …(PB)*

Both schools have used coaching as one of their collaborative approaches to improving teachers' capacity. Peer coaching or coaching buddies has been used in both schools as a way for teachers, team leaders, senior leaders and principals to discuss a learning topic or an inquiry.

> *The principal is a strong and effective leader. She is a learner herself who models YYY and works alongside her teachers using a coaching approach. (EROA)*

So having these peer mentors and coaching buddies has been really good too and powerful. (TLB)

In addition to coaching support, School B has supported teacher-leaders in building an efficient network of learning.

…She's an across network leader. She's just won a deputy principal's job but she won it because of the types of professional development we've done, she's just completing her Masters, she did the coaching training last year and she's presented in different forums… (PB)

Team leaders and leaders of Schools A and B demonstrated their support to colleagues in some positive ways such as giving praise, being respectful, listening, ensuring all voices were heard, being open to learning, being transparent and flexible, and promoting collaboration between schools and parents.

You have to be responsive, be prepared to listen and to change it up and say to people, so what would work for you, what would work better, tell me what would work better, and then let's see if we can do that. (PB)

It's giving people opportunities to choose what works best for them too. (TLA)

We've got an open-door policy, if they have an issue or a problem with PLD they can come and share it… (DPA)

We praise them [teachers] a lot. We sort of showcase them in our meetings … So we're motivating our teachers to do their best job… (DPA)

Leaders in both schools emphasised the benefits of being close to and listening to teachers in order to find out the progress of a PD topic and the impact of discussing it.

So sometimes it's listening to team leaders, sometimes it's listening to conversations in the staff room at lunchtime and just about what people are talking about, sometimes it's specifically asking teachers, oh, how did you find

that professional development, have you been able to use it and where have you used it? (PB)

… through classroom walk-throughs or classroom observations, and then it might be that I noticed that they might need more help with their instructional reading…. it might be helping them find a course they could attend, or it might be helping them find readings. (TLA)

The School B leader noted that, to value the PD of teachers, a leader needs to be a learner among learners, so that teachers will be motivated through this modelling and keep learning to progress to new things.

A school is as good as the weakest teacher and your job is to support every teacher to be the best teacher they can be. To do that, they have to be a learner and you have to support and challenge them to keep learning and to keep working on different things, new things, so that they are constantly working on being more effective as a teacher. (PB)

One of the most critical supports should be the work along the way with teachers, where the principal engages integrally by having inquiry dialogues with teachers. One principal gave an example of inquiry dialogues:

It's about having those discussions and asking the right questions. It's about saying, so what's working so far? … so at the beginning of the year I talk with them [teachers], so tell me about your goals and what you're setting up this year. In the second term I talk about inquiries, so where are you up to with your inquiry, what help do you need? (PB)

Collaborative Learning Culture

A collaborative learning culture within a school can create conditions that enable a teacher to collaborate well in their learning. Some essential elements of collaborative learning culture are mutual trust and respect, healthy relationships, a safe environment for risk-taking, active engagement of leaders and teachers in learning in both formal and informal ways, and building partnership with parents. Leaders are facilitators for collaborative learning or a model of co-learning through encouraging peer

collaboration, believing in the importance of the processes of deep collaboration for improving student outcomes, and having clear goals to ensure the focus on student learning. The principal of School B commented on the value of a culture of high trust.

> *You have to have a culture where there's high trust because when you ask people to be innovative and to try new things, sometimes they don't work. (PB)*

The ERO reports on the two schools addressed the importance of building a good relationship with teachers. Strong relationships would enable teachers to have a high level of trust among themselves. This crucial factor can empower and motivate teachers to learn in an environment where teachers feel safe to approach any personnel in the school. This means also that they are likely to take some risks in their learning, although they may know that their ideas may not be useful. Furthermore, they know that they still will be supported and will receive no negative feedback if they share their thoughts.

> *The school's focus on positive relationships underpins all learning experiences. (EROA)*

> *Strong relationships and connections underpin all practices. (EROB)*

> *… having professional relationships where you trust each other is really important and I think it helps you to be more maybe willing to try new things if you can work on it together. (TLA)*

Deputy principal in School A commented on having an open-door policy for staff members and building a healthy relationship with staff can build trust and motivate teachers to reach out for help without hesitation. Without relational trust, the teacher might come or not come to discuss something with the leaders or someone in the school.

> *I think if you have an open-door policy and …. have built that relationship, it's having relational trust, to trust your teachers that they're going to do their job and that they trust us in what we're going to deliver to them. So, relational trust is a huge point… (DPA)*

A principal emphasised the high trust that leaders should build amongst their staff is aimed at ensuring positive results from what teachers are going to work on, as negative consequences might make them lose trust and motivation.

> *You have to have a culture where there's high trust ……so it's really important that there's no negative outcome because you're encouraging people… to keep working on developing their practice. ……If people think they're going to be punished or there's going to be a negative outcome with them trying new stuff, they just won't do it, they'll just stick to what they think works. (PB)*

Teachers are seen to talk more about their professional learning and development beyond formal setting or working hours. It is a habit of day to day working in their school.

> *I've seen it, you know, teachers are here after school or in the weekends they support each other and talk to each other and share ideas, so it's not just in the times that we arrange, in fact it's afterwards…. (TLA)*

For example, a vital element addressed by all participants was about developing goals. Reviewing data together had become a habit, as indicated by a deputy principal.

> *It's becoming a habit to talk about data and to talk about our target students. (DPA)*

Another important norm in collaborative learning culture is a partnership that the school has with parents. Both schools had established this norm, indicating that school was a place for everyone to learn from each other. School B's ERO report noted this feature, as did one participant.

> *… parent partnerships for learning, and promoting a learning environment where everyone sees themselves as a learner. (EROB)*

> *…having that community parents feeding back to you, so all that link from home-school relationship strengthened. (TA)*

Challenges and Strategic Solutions

Challenges

All interviewees indicated time as a significant challenge. The issue of time occurs when teachers are occupied with tight schedules, which is linked to the school budget. The following comments reflected the concern around time in both schools.

> *The biggest challenge is time, because lots of time is taken having to prepare for the day, having to go to staff meetings, professional development and learning, liaising with parents all the time... (TA)*

> *I guess time, and it's always a key constraint for teachers. (PB)*

Moreover, not only can finding time together be a challenge within a school, but time management can be even more difficult when schools join as a network. A team leader in school B commented on this issue.

> *... the time factor… that can be a challenge if the other school is busy and it's really hard to meet. (TLB)*

A team leader in School A noted that having more in-depth learning requires a significant amount of time so that lacking time can be a barrier to achieve quality PD.

> *Well maybe a challenge can be getting enough time for the depth of the PLD that you might want. (TLA)*

The principal of School B indicated that quality PD could depend also on the budget available. If the school needed to hire an expert in some area of training to staff, the cost could be high.

> *... Another challenge is getting professional development that's quality professional development, so that's also linked to expense… (PB)*

School A tried to have fewer administrative meetings and to keep teachers focused on a particular PD area so that teachers would not be overloaded with too many activities at once. Both schools mentioned using relievers for staff attending PD. However not only

was expenditure for relievers a barrier, but the limited number of relievers was also problematic.

> *So sometimes it can be difficult to get a relieving teacher to come in to the school because there's not that many teachers (relievers). (TLA)*

Another significant challenge described by teachers in School A and B was teachers' behaviours or personalities that might have a negative impact on collaborative learning processes.

> *I think my biggest one, for me personally, though, is not being able to share my ideas. (TB)*

> *Some teachers are not open to that [X]. They're [some teachers] not open … Teachers that just don't want to share information…(TA)*

> *I guess [a problem is] teachers not listening to what you asked them to do. (DPA)*

> *…when you have teachers that won't change…..so letting go of their old habits can be a challenge. (TLB)*

There are some other challenges, such as when teachers have conflicting ideas or consensus can not be reached. However, the issue around peer matching was highlighted as a main issue in how to make people work well together, as mentioned by PB.

> *...well it may not meet my needs or it might not meet the teachers' needs or it may just be that a PD has been put in place but it's actually got no value for our students. (DPA)*

> *it's a bit challenging as well about how to make people work well together that becomes their mindset. (PB)*

Strategic Solutions

Although there is a primary challenge of finding time together for teachers' PLD, both schools were able to deal with this issue by employing relievers to replace teachers for a period, enabling a group of teachers to attend a PD programme. However, there can be a challenge associated with bringing in relievers, because it depends on the school's budget for hiring relievers. Moreover, finding a reliever for the teacher can also be part of the challenge.

> *We will employ say four relievers and we will release four teachers at a time and they meet for an hour and a half and they work together with a facilitator and then the four relievers go to the next team and release the next four teachers so they can meet together, and we do that probably two, sometimes three times a year, ... it's a systemic way of creating time to collaborate. (PB)*

To deal with the issue of time and budget for teachers to learn together, principals can arrange teacher aides or part-time teachers, or entering into 'trade or exchange' expertise with other schools in their network. This emerging idea could save budget while benefiting schools in the PD network.

> *Other things that we do don't have a cost. Sometimes I go and work in other schools and I do trades, … I have an expertise say in X and that principal then comes back and do some stuff in our school if they have an expertise. (PB)*

To be strategic in timetabling included prioritising time and setting a schedule to release teachers earlier in a day for a PD meeting. An example of that was to focus less on administrative issues, as PD should be more important. This idea was supported by a team leader:

> *…..make sure that you're prioritising the things that you think are important…. try and have less of the admin type of things at the meeting…. so that your meeting time is… you can have it more focused of your PLD. (TLA)*

The School B principal described a strategic solution of being flexible, prepared to listen, responsive and explicit to solve the issue of differing PD needs across teachers:

You have to be responsive, be prepared to listen and to change it up and say to people, so what would work for you, what would work better, tell me what would work better, and then let's see if we can do that. And you need to be clear about what you won't give away. So I won't say it's OK not to work on the school priorities, because I need everyone working on the school priorities. But I can be flexible about… if you collaborate in this space over here with the team, it's OK if you don't do the peer coaching if that's not working for you. So it's about being flexible so that everyone feels like they're a little bit in charge of their own learning and they have choice about how it's done. (PB)

In solving the issue of mismatching in peer mentoring and coaching, with the aim of a whole school where everyone can work with everyone without any tension, the school B principal used a strategy that gave opportunities to teachers to work with their preferred colleague from a different grade level or team. However, the principal also wanted to match those with expertise in common, so that they were more likely to debate and challenges each other.

So with peer coaching I would try and put people together who are of a similar experience level. (PB)

In relation to teachers who might not want to accept change, a team leader talked about showing favourable evidence to them to help them accept the new practice, although it takes time. However, relationships remained an important approach to any solution, as noted by a team leader.

The first thing definitely is creating a relationship,…the first thing that I try and do is try it in my classroom… then I bring it to the team meetings and go, OK, this is what I've done and this is how it's been successful, and so there's slow changes, and then giving other teachers' ideas of, you could try this, and when they see that it's working within other classrooms, then they tend to try it, give it a go…(TLB)

Chapter Five: Discussion and Conclusion

Introduction

The research findings in Chapter 4 are discussed in this chapter. Three main significant results are presented relating to means of teacher collaboration, some challenges and solutions, and some applicable practice for the researcher's work in Cambodia. The discussion is supported by relevant literature reviewed in Chapter Two and some new literature.

Means of Teacher Collaboration

A Form of PLD: Networking School

Participants revealed some forms of PLD involving collaborative approaches in this research. Four primary types of PLD structures are networks and community-based PD, school-wide PD, team PD, and individual PD. All of these had been implemented in the two schools. In the elaboration of these forms by interview participants, it may be concluded that staff and school leaders needed to work and learn collectively in order to address an issue related to student learning or meeting a standards agenda. As noted by Lindstrom and Speck (2004), professional development is often a collaborative learning process, and when using that method, the expert knowledge of teachers continues to grow and be shared among teachers and leaders to meet their respective needs. This definition was reflected in participants' responses. However, the effectiveness of collaborative learning does not mean that individual learning is not necessary. A teacher in school A commented that learning is needed from outside if that area of expertise is not available in the school. Teacher A said that *"Then when you come back, you have to feed that [learning] back into your goal and your inquiry learning to see how has that course helped you"* and her peers. The value of individual PD was that teachers who participated in training were able to use it for addressing a problem and then shared the knowledge in a syndicate or a school-wide PD.

Learning through collaboration with other schools in the same community can be called a community of learning (CoL). School A was a member of this kind of partnership. The New Zealand Government adopted this type of collaborative learning with the aim of increasing student achievement and ensuring collective responsibility for effort (Education Review Office, 2017). However, School B did not join a CoL as they did not

want to change their existing structure of a networking cluster of six schools. The main reason they were not part of CoL was the benefit of teacher learning.

In the network, teachers work collectively to achieve two key strands. Some of the factors that have enabled teacher collaboration within the networking system that school B had been part of were relationships amongst the team leaders across the network, a shared vision which reflected the passion of each school, and the informal structure of the networking system. An informal arrangement has been facilitated by principals in which the leadership development of individuals or potential senior leaders was created. The structure could enable the process of building collaborative learning where everyone who has a related ability or possesses a particular strength or expertise could share these in a professional development context. This finding is supported by the concept of the network developed by Hargreaves (2003, as cited in Hatcher, 2008). Hargreaves thought that horizontal relationships and participatory approaches seemed to be a core feature of effective networks; they are the keys to transform teachers' capabilities in an environment that allows teachers to be more innovative and collaborative through facilitating knowledge and transferring practice. Furthermore, Robertson and Timperley (2011) have noted, that networks benefit schools to improve the quality of learning through an innovative environment which enables institutions to collaborate on building a range of standard vital areas such as curriculum and professional support.

While there was insufficient data regarding collaborative learning in the CoL from participants in School A, the School B principal noted some disadvantages of CoL. She believed that the system of CoL required the school to follow some rules where the structure required was more hierarchical than the system of networking schools. The CoL structure had a lead principal and lead teachers who were paid at a level that resulted in less budget for implementing activities at the teacher level, that is, where 90% of the budget was for the wages of principals and lead teachers, so only 10% of the budget was available for teacher PLD. The School B principal commented that, in a networking system:

> *Whereas our network system has probably 50% of the money with the teachers, probably about 40% at least is with the experts and our evaluation experts and*

people who we buy in to add value to the professional development, and probably 10% is resources and admin and doing Ministry milestone stuff.

The budget allocated in the network was mainly for teacher learning, used for creating release time for the facilitator and to support teachers with a resource for an innovative programme that they are developing and trialing. The main objective of the system was to exchange knowledge, skills and teaching practices for raising pupil achievement. This objective could have been achieved when the network structure was flat, and based on the important perspective of being not too formal in its structure, but rather to demonstrate the importance of the relationship among leaders and teachers within the network, to reflect their common vision and interests. As stated by PB:

It was actually about individual leaders and their schools or groups of teachers who are all passionate about something, and they just wanted to work on that together…. And they do far more than you could ever mandate them to do. They go far beyond that because they're passionate about it

This could mean that teachers in the school are given opportunities for networking learning to pursue their interests while they also work together to fulfil a need for their student achievement. Although a network structure can be flexible being both centralised and distributed, or combined (Townsend, 2015), the network system should ideally have a flat structure, as suggested by PB, with some network events such as regular workshops, classroom observations and expert-led training.

Collaborative Features

The collaborative experiences described by participants may reveal three important and interconnected collaborative features or strategies – purposeful collaboration, inquiry-based collaboration, and collaborative activities. This reflects the perspective of many researchers who view collaboration as the activity that involves goals for improving student learning, so it is purposeful (Guskey, 2000; Timperley, 2008). Collaboration is viewed as the practice of reflection through inquiry-based conversation so that teachers can learn more in-depth (Sharratt & Planche, 2016). The present findings indicated that student achievement data and other relevant data such as teacher survey and student survey were used to develop an inquiry or a goal for teacher professional learning and development at any level. For example, at the syndicate level, team members and facilitators review data together to work with target students or to address an issue. This

event might be a type of collaborative model for PD – collaborative problem-solving - as pointed out by Tallerico (2005). Teachers in the present study presented their goals at a team meeting at the end of each term. By doing so, they were able to share their idea, to discuss and to get feedback from team members and their team leaders. Before the goals were created, the task of analysing student data had been done by teachers. This practice of raising an issue which was translated into a goal and then brought to a team meeting were also similar to the joint work of the teacher to solve a problem together which is indicated by Timperley et al. (2007).

As shown in the ERO reports of Schools A and B, it is indicated that teachers can identify students' learning gaps by analysing assessment information carefully. This indicates that the learning needs of students would then be at the central focusing area for a team or syndicate to be developed into their PD plan. For example, as mentioned by school B principal, the reviewing of student outcomes data was conducted in term 4 and then converted into a goal of writing for teacher PD in the following year. Goal-setting by reviewing student data was central to ongoing PD. The principal and team leaders facilitated the implementation of a PD topic as a school-wide PD or as a team study. This finding would be supported by Sharratt and Planche (2016), who view student work or data as at the centre of the professional conversation. Collaboration to improve quality of teaching and learning would involve evidence of student learning. However, to make progress, there needs to be engagement in inquiry-based discussion or conversation by teachers, team leaders and principals.

All interviewees perceived that inquiring activity implementing in their learning may be demonstrated as collaborative problem-solving in which a PD plan is developed with their peers or team leaders. To solve a problem, firstly the teachers might do inquiries by themselves, for example a teacher in School A reported on what she had done for improving skill on how to do testing for reading. In this inquiry process, some reflective questions emerged, then she might seek for support or help from her peers or a team leader during a syndicate meeting or a staff PD meeting. The teacher in School A commented that *"what am I not doing, check with somebody and ask them can you help me with this, I need this, show me how to do that, then come back to the class and do it.".* A teacher in school B noted that:

> *I do my own inquiry and we do it for the year and then we bring our and then we have to present it to the staff...then we all talk what was good and they give*

me feedback and we talk about next steps, what I could do next time or what they could do in their practice and then we collaborate then the next person will share their inquiry, watch it, talk about it, share ideas what could have been done, feedback, feedforward, so everyone has an inquiry to share.

Teacher B seemed to perceive inquiry as a good way to build her learning by sharing experience and practices so that a best one or an appropriate one could be tested in their classroom. The teacher checked her learning and practice of the skill with her peers, asking other teachers if they can help her to improve the skill. Both teachers in this study indicated that they use this ability to develop their knowledge and to achieve their goals.

The inquiry approach was found to be an essential skill in professional conversations in both schools. According to a survey described by Sharratt and Planche (2016), the establishment and encouragement for the implementation of the inquiry approach or skill as a critical strategy in a culture of collaborative learning could contribute to school improvement processes. Furthermore, the collaborative inquiry processes of both schools might have provided chances for teachers and team leaders to gain a professional conversation or dialogue that avoids judgmental processes or non-evaluative purposes. Instead, words of encouragement, as well as praise for a successful story, have been demonstrated by principals and deputy principal of the two schools. Therefore, the present findings suggest that a core feature of teacher collaborative learning at all levels is a collaborative inquiry, as indicated by participants in this study. The norm and practices common in collaborative inquiry are asking thoughtful questions to reflect, feedback and feedforward by using student data, and bringing the professional conversation around the focus topic to a team meeting or staff meeting, so that team leaders and principals can support it. Robertson and Timperley (2011) emphasise that, when teachers use an inquiry approach which includes activities such as exploration and questioning around an issue of student learning in their professional learning, effective practices of teaching should then be identified. In the present study, it was revealed that when teachers involved their peer mentors or coaching buddies, they were able to reflect what they had been doing by asking some thoughtful questions so that they could get feedback and feedforward. While both schools implemented peer-coaching, this practice has been recognised by many countries as a useful feature for

teacher PD. Some studies use the term ‘ peer-coaching’ for peer collaboration that may help improve teacher performance (Rhodes & Beneicke, 2002).

Classroom observation may be conducted before the activity of peer coaching happens. Sharratt and Planche (2016) suggest that the first step of an inquiry or goal evaluation is observation. Some participants explained that they observed each other in the classroom for the purpose of evaluating a new teaching approach to give feedback. This process may help deepen teacher learning where they are facilitated to raise questions (for example, during a team meeting or a whole staff meeting) that have emerged through classroom observation in addition to details of student achievement data. This work is in line with Sharratt and Planche (2016) who suggest that successful learning occurs when questions are asked in response to the evidence collected.

Supporting Conditions

The supporting factors indicated by participants in both schools were empowering teachers or teacher leadership, relationships and trust, and collaborative learning culture. Those features were related to the leadership practices of principals and deputy principals toward team leaders and teachers in achieving collaborative learning forms in PLD in the two schools.

Empowering Teacher Leadership

Both schools have promoted learning through various types of teacher and team leader participation such as forming syndicates in the school and staff meetings for PD. This systemic PD aims to be a platform for teachers to learn together critically. Leaders of both schools provide support that could maintain or influence the collaborative process for the implementation of PLD in their schools, through which teachers are empowered or leadership development of senior and potential leaders may have been developed. Teachers were valued for their capacities and actual progress. They were encouraged to take charge of their learning within the study group and within the whole team across the school. This kind of leadership for collaborative teacher learning is supported by Robinson (2011) who identified that the impacts for student learning occur when leaders promote the participation of teacher learning. Participation in decision-making by teachers, supported or led by skilled and capable principals, is seen as a contributing factor for successful collaborative practices within the school (Cardno, 2012). The deputy principal of School A described teacher participation in PD decision-making

where staff involvement was encouraged through a transparent decision-making process. An open-door policy was also in place, supporting teachers to approach their leaders not only in formal but also informal settings such as during a tea break. Leadership practice support by the principals in both schools was devoting time for classroom observation for providing feedback and discussion with regarding a new instructional strategy or for assisting novice teachers who are new to the school. The classroom walk-through or observation is believed to offer chances to individual teachers to have conversations with the principal regarding curriculum and instruction (DuFour & Marzano, 2009). Productive discussion can enable teachers to reflect and act on ideas discussed. However, according to Robertson and Timperley (2011), to achieve productive conversation leaders should possess some essential skills. They should be skilful in coaching and reflective inquiry leadership, and able to provide analytical feedback.

The principal of School B described empowering their staff through distributed leadership practices. This leadership practice can enable senior leaders to work alongside team members to build capacity for learning and teaching, not only within the school but across the network. Distributed leadership practices were reflected in some of the behaviours or activities of the participating principals. The principal in School B described various opportunities created for a team leader to lead a PD programme. This approach could allow the team to plan together and enable a team leader to take the lead in a PD initiative within a particular time frame to raise the quality of a learning subject. Applying this approach might indicate that the principal demonstrates a crucial dimension of effective leadership, by "promoting and participating in teacher learning and development" (Robinson 2007, cited in Robertson and Timperley,2011, p. 21). Muijs and Harris (2003) explain that teacher leadership can provide "a way of teachers working together to improve the learning experience of young people" (p. 445). Creating potential senior leaders within the school would be possible when the facilitating and observing process is performed skillfully and efficiently by the principal in addition to creating leadership opportunities for team leaders in which relationships, mutual trust, and recognition are offered.

Relationships and Trust

Relationships

Responses from Schools A and B emphasised valuing their staff to learn through making sure that staff voice and opinions are being heard. Leaders and senior leaders valued and appreciated teachers' efforts, no matter whether that effort had a positive or negative result. Furthermore, the principals continued to encourage teachers to improve their teaching practice further. As a consequence, a healthy relationship between leaders and teachers was maintained. Strong relationships in the school are a significant factor for various forms of collaborative learning (Sharratt & Planche, 2016). The collaborative learning environment can be sustained for the quality of teaching when trust and strong relationships exist in the school. This study's findings also reflected the point of building teacher relationships mentioned by Robinson and Lai (2006), which leads to an increased level of teacher collaboration that ultimately can result in improvements in teaching practice. Harmony between teachers, leaders and senior leaders created a context where understanding of the personal and professional situations of teachers was demonstrated among the team and across the two schools, for example, paying more attention to staff concerns. Consequently, one fundamental characteristic of both schools might be that hard questions can be asked without causing defensive reactions.

Trust

Furthermore, the leadership support of both schools was explained by the team leaders and leaders of both schools in manners of valuing different ideas, praising, respecting, being open to sharing, listening to others, and promoting collaboration between parents and school. This support could establish trust within the school. Once the level of trust is high, it can lead teachers to challenge and share a perspective or ideas collaboratively. This could mean that teachers will be able to carry out productive conversation. As confirmed by Marzano et al. (2005), leadership approaches of a principal should link to the behaviours that pay more attention to staff concern and trying to understand their needs and conditions. The work of such strategy would be something stated by Cardno (2012), who notes that honesty and respect for others exhibited by leaders can build trust in schools. With low trust, teachers in both schools would not learn collaboratively. One example revealed in the findings was that trust among the team needed to be in place before a classroom observation was conducted. This is in line with advice suggested by Sharratt and Planche (2016), that to build trust and ensure buy-in

from teams to work together in classrooms or classroom observation would require some tips. Those tips would be to "be sincere about fear, …choose a focus that matters,… use a non-evaluative protocol,…model risk-taking,…honour imperfection" (p. 157). Therefore, it is essential that building trust should be developed first before a peer observation can be conducted effectively.

Collaborative Learning Culture

According to the findings from both document analysis and semi-structured interviews, both schools have built a culture that supports the collaborative learning of teachers within and beyond the school. That culture is formed on the perception of having mutual trust and respect, having a personal and professional relationship, allowing risky ideas, and active participation of teachers and team leaders with principals and deputy principal in both formal and informal settings. Furthermore, in such a culture, leaders in this study were identified as a resource person who encourages peer sharing and coaching, while they were also modelling learning through co-learning, co-teaching, or co-planning. The interaction in the school and outside the school, such as the working relationships with other schools, communicating the impact and addressing the issues with parents indicated a constant working and learning culture in both schools. The findings of this study further revealed that the voice of staff members in both schools was treated as essential, as they tended to listen to each other respectfully. Being respectful in their engagement can build a strong working relationship and mutual trust that can create a culture of collaborative learning. Thus, such collaborative work is situated in a culture of learning with a clear purpose and open for feedback. This may be situated in an authentic interaction as indicated in the literature of Battersby and Verdi (2015). Marzano (2013, as cited in Battersby & Verdi, 2015) states that genuine interaction is about having open sharing lessons learned regardless of failures and mistakes, so that teachers can have opportunities to analyse and critique their practice to facilitate self-reflection for improving their performance.

Challenges and Solutions on Teacher Collaborative Learning

Both schools identified time as a challenge. However, it is widely understood that time is a challenge happening in almost every school. To learn effectively in a PD programme, sufficient time is required (Timperley, 2008). To enable collaborative activities, time is a necessary factor (Robertson & Timperley, 2011). The time issue is also addressed by Tallerico (2005). He noted that when schools want teachers to learn

collectively in any model of PD, such as collaborative problem-solving, time is a significant challenge. The present study revealed that time is divided and managed for many tasks of teachers. For example, teachers may spend time outside of classroom hours to communicate with parents, prepare lessons for the next day and mark students' work, and thus little time is left for them to join in some learning forums such as whole staff PD meetings, syndicates or peer meetings. Teachers' tight schedules may hinder teachers' chance to participate in a learning process even where opportunities to learn are encouraged by principals.

Some authors have identified time issues as a challenge both in a school and in a system (Sharratt & Planche, 2016). A networking school has the issue of different times for PD, as indicated by a team leader of School B. This challenge can cause difficulties in scheduling a workshop for their learning initiative as well as for practising a new teaching approach together and then observing and reviewing the practice. However, if the school has sufficient budget, it can be spent to hire relievers to enable teachers to join training.

Both schools use the strategy of relievers. However, in using this solution, School A indicated that they have limited budget available for managing teacher replacement. In contrast, School B had little concern about the budget because their networking system allocated budget to teacher PD rather than administration and salaries of leaders and senior leaders. Furthermore, School B saved budget through a trade-off strategy where the principal had expertise in something and exchanged that with other schools in the network. I think such trade-offs would be beneficial in Cambodian education context when there is a robust school-to-school relationship and trust.

While time and budget were often identified as a problem, another significant issue was how to facilitate people working well together. A challenge in peer mentoring and coaching that School B implemented recently involved matching suitable people to work in pairs. The advice that PB gave, reflected the literature, that pairs should be in a similar situation (Lindstrom & Speck, 2004; Robertson & Timperley, 2011).

Key Applicable Teacher Collaboration to Researcher's Own Work in Cambodia

The current New Zealand and Cambodian education systems and contexts are different in several dimensions. Nonetheless, there are three areas that I would like to address in my work in an education programme to support the Ministry of Education, Youth and Sport in Cambodia. Those three areas are teachers' motivation, leadership practices for fostering teacher collaborative learning, and the use of student data. They would be applicable and significant for growing workforce collaboration in the education system in Cambodia, through the quality of school-to-school partnerships (cluster system), to strengthen it in a way that is purposeful, and through inquiry-based projects or engagements of particular interest to teachers to improve learning for children.

Teacher Motivation

The education system structure can have a negative impact on teachers' motivation. The networking system implemented in School B enabled me to understand more about how a networking learning system can be a platform to share knowledge and practice collaboratively. It is a community of practice where strengths, expertise, knowledge or skills can be shared for the common interests of the schools in the network. The cluster school system in Cambodian primary schools has been identified as needing improvement (Ministry of Education Youth and Sport & UNICEF Cambodia Country Office, 2016). As this system is being improved, a learning approach of peer mentoring has been introduced through a pilot programme of cluster strengthening and mentoring. However, the system structure appears to be hierarchical. Technical and leadership support has been provided by educators in the district offices of education. Two other levels - provincial teacher training colleges and provincial offices of education - are also assigned to provide technical support to cluster-based mentors in four subjects: math, literature (Khmer), science, and social science. In addition to this role, personnel from the central level will monitor and evaluate the peer mentoring programme quarterly. Although this mechanism may aim to ensure the success of the peer mentoring programme, any pressure seen in this top-down approach may cause a negative impact on the level of teacher motivation, as teachers and school principals may feel they are not trusted in operating the programme. The motivation of teachers toward professional learning depends on the level of trust and how much trust is obtained from leaders and peers (Tschannen-Moran, 2009). To gain greater motivation in teacher collaboration, teachers firstly need to fully understand the meaning of a collaborative environment that will provide advantages to their learning and career development. Secondly, principals'

leadership support needs to focus on everyone in the school as a learner, not only teachers but also principals as learners. Teachers need to be supported to be leaders in their learning and teaching. Thirdly, relational trust needs to be built through which teachers' abilities and success are appreciated and valued, for example, when they express their feelings or raise ideas. If teachers gain high trust from their leaders and have a good relationship with leaders and peers, they will be keen to join and complete thoughtful conversations even outside of school time (Sharratt & Planche, 2016).

Leadership Practices for Teacher Collaborative Learning

The role of cluster directors, principals and team leaders could be developed with the leadership practices that foster collaborative learning. Such practices are reflected in some of the practices of distributed leadership that principals and team leaders in School B demonstrated. As a role model for being learners, they might be able to create informal conversations to learn from their teachers while at the same time understanding their needs. An open-door policy also allows teachers to approach principals and leaders without hesitating to voice their ideas, encouraging them to share their knowledge or expertise. This can be done by creating an environment with high trust which can be built through appreciating the ability of each staff member and giving them chances and flexibility to make their own choices regarding selecting their learning material and learning activities in the classroom, for example. This would make teachers feel like they are in charge of their learning.

The system in Cambodia has a level of the district. This level provides support directly to school levels more than other approaches from central ministry departments. Thus, the leadership support at the level between district and schools need to be strengthened. This mechanism structure is similar to the system in the United States, where district administrators have a responsibility to support the school to improve its performance. In the research of Louis et al. (2010), principals' efficacy was addressed as a critical effect on schools and students that had to be demonstrated by district superintendents. That research indicated that "One of the most powerful ways in which districts influence teaching and learning is through the contribution they make to feelings of professional efficacy on the part of school principals" (p. 128). District members in Cambodia are advised to shift their way of working to build such efficacy, as these "beliefs determine how much effort people will expend and how long they will persist in the face of failure or difficulty. The stronger the feelings of efficacy, the longer the persistence" (Bandura,

1997, p. 77, cited in Louis et al. 2010, p. 128). One way to enhance the efficacy of teachers in schools in Cambodia is through scaling up a school-based management approach. Doing that could reduce the top-down control from centrally-based management to individual schools. In addition, leadership support from districts to schools could be driven by student learning outcomes rather than by a focus on administrative and political arenas. Therefore, the mechanism of district schools could be "the mechanisms that encourage trust and collaboration and build strong networks among teachers and create strong partnerships with administrators" (Rubinstein & McCarthy, 2016, p. 1115). These approaches might differ from the existing system of a top-down and bureaucracy approach in Cambodia, but they can potentially contribute to the work of school partnerships to achieve education quality and student achievement.

Leaders could also be facilitators for teacher learning, as they navigate the learning pathway for career development of teachers, helping teachers to decide which PD learning topic they want to focus on or who they want to learn with. Sometimes peer mentoring may not be their preferred style of learning. Thus, it might be a challenge to implement such a programme in the cluster school system in Cambodia. While the issue of peer selection may potentially happen, one essential and applicable strategy to deal with this problem could be taken. The principal in School B noted, in relation to how to help staff work well together, that the key question is whom a teacher might want to work with in peer mentoring, and whether a particular pair could achieve the expected learning outcomes. To be effective, the mentor and their peer should have similar strengths and experience to enable them to challenge each other. PB commented that:

> *When you've got an experienced teacher and a less experienced teacher it tends to be a bit of a power - you know, the younger teacher is perhaps going to listen more, and the older teacher perhaps is going to talk more and it's not always two-way, it could be a bit of a dilemma; sometimes it's good, but sometimes it's not. So with peer coaching, I would try and put people together who are of a similar experience level*

This pairing strategy could be tried, but the pair might need to be similar in age. According to social norms and culture in Cambodia, young people tend to respect older people, potentially resulting in younger and the less experienced teachers merely listening and feeling less competent in the learning process. In contrast, teachers in more equal situations might debate around innovative ideas relating to curriculum. A

principal may understand the behaviour and capacity of particular staff better than others. Therefore a cluster system in Cambodia could give an opportunity to principals and cluster directors to identify who might be mentors and mentees. Cluster directors or educators from the district level may provide some advice and resources (technical knowledge and skills, or relevant reading for a PD topic) to principals to perform this role.

Another facilitating task for collaborative learning is when cluster-based learning is provided as a workshop or training facilitated by a team leader or a principal who is expert in an area linked to the cluster's goals. The expertise in the cluster might be shared when it is appropriate. Otherwise an external expert or a technical person will be requested. To transform shared knowledge into practice may require clusters to arrange school-to-school meetings, peer review and coaching, and classroom observation, to follow up and see how well the new instructional methods work. Classroom observation is one of the most influential tools for teachers to gain insight into students' learning, although it requires a lot of effort, for example, to explore the learning of an individual student (MacBeath & Dempster, 2009). This task would be led by peer mentors or lead teachers in the particular learning topic or initiative. The meeting should always be purposeful with clear target outcomes developed based on student data. Furthermore, opportunities to observe other classrooms could be provided to teachers. For example, teachers with less expertise might be given the opportunity to observe teachers who can deliver the new instructional method.

Student Data

Teacher evaluation reports and student assessment data are crucial for collaborative teacher discussion to identify the needs or the problems of teaching and student learning in the classroom. In this regard, the cluster might prioritise competency and skills in how to assess and analyse student achievement data in cluster PD opportunities. This topic could also be included in a peer mentoring programme along with other critical areas such as how to coach and efficiently mentor, how to conduct classroom observations and how to provide constructive feedback. While any PD developed topic in peer mentoring aims at strengthening teachers' capacities to achieve the shared purpose of raising the achievement of student learning in the primary schools in Cambodia, mentoring through particular expertise in data analysis could be prioritised. Teachers would normally have used student data widely for their collaborative problem-

solving in New Zealand, whereas the competence of primary school teachers in Cambodia might be limited to using data to solve problems collectively. If this competence is still not improved, the inquiry-based conversation that is being encouraged and utilised in peer mentoring may not be productive for teacher professional development for student learning, as the dialogue may not about the actual issues happening in their classrooms and schools. Therefore, with support from the district level, school directors could provide structured opportunities created through collegial groups, peer mentoring or syndicates for teachers to participate in data-use sessions or training with experts. Follow-up actions after training could be made with assistance from school team leaders or peer mentors who are knowledgeable and skillful in the area.

Research Limitation

In general, every research project would have some limitations, as each research method has its weak and strong points. The small number of participants interviewed in this study is not large enough to generalise from its findings. While small sample size may limit generalisation, especially in qualitative research, representativeness depends on the sampling strategy (Cohen et al., 2011). Although this study employed convenience sampling, which in theory could prevent the researcher from accessing the targeted participants, the two schools participating in this study met the criteria outlined in purposive sampling strategy. Nonetheless, the responses from participants may not be driven or influenced by their own beliefs and values (Wellington, 2015). This issue can hide some of the realities of collaborative approaches to PLD, as well as its challenges. However, some of the participants' perspectives were validated alongside the ERO reports, received from a reliable and independent source, the Education Review Office.

Further Research

Further research on teacher PLD in Cambodia is recommended. Since peer collaboration among teachers needs to be promoted in Cambodian education system, the research should be undertaken in Cambodia with a larger sample size. This approach would allow the researcher to identify some limitations on authentic collaboration in the teaching workforce and what impacts genuine collaboration can have on student learning in the schools in Cambodia. The education system in New Zealand is different from the education system in Cambodia, for instance, the level of district authority in education does not exist in New Zealand. Thus, this study of teacher collaboration in

New Zealand would not be able to give relevant knowledge and ideas of strengthening structure for working collaboratively at a district level, working for school improvement. Future research should involve participants from district offices of education and primary schools in Cambodia to identify practical ways for improving teacher collaboration in professional learning and development.

Conclusion

Collaborative learning in primary schools in Auckland, New Zealand may have provided a useful practice for raising student achievement. Among many forms of PLD implemented in the primary school, the networking school system is a kind of collaborative learning system. Its system structure could be more beneficial to teacher learning than the structure of CoL. However, most school-based professional learning and development of teachers, whether in school, networking or community level approaches, may transfer some of the necessary features of collaborative approaches, such as purposeful collaboration, inquiry-based collaborative inquiry and collaborative activities, into PLD forms (syndicate, school-wide PD, network-based workshop in the network). Purposeful collaboration is a process of teacher learning which may involve the discussion of solving a problem and setting a goal. A problem or a goal or an inquiry is identified by analysing student assessment data. The use of student data is to develop a PD plan that aligns with teachers' need, ultimately to fill the gaps of learning of target students. Therefore, evidence of student learning is used for deciding on a goal of improving teaching and learning quality. Peer mentoring and coaching, classroom observation and reflection are among the activities implemented in structured PLD forms. These collaborative features are the approaches that align with those indicated in teacher collaborative learning forms, as identified by many researchers. The enabling or supporting conditions for teacher collaborative learning was also discussed, including leadership development for senior team leaders to lead professional learning and development of team members through a study group or a syndicate. The study group can become a learning routine when the resources, for a new learning initiative for teachers, such as budget for relievers, is available. These approaches are possible where the school demonstrates appropriate impactful leadership practices that develop a learning culture, motivating and creating teacher leaders (distributed leadership) across the school to focus on improving student learning through ongoing professional development. The principal's roles as both a learner and a facilitator would be a part of a leadership practice that models learning and development across the school. Another

contributing factor for the teachers to learn collectively is the relational trust which might be built through valuing and appreciating the capacity and progress of teachers. However, teachers and leaders face the challenge of time commitment. To address this issue, sufficient resource in terms of budget, opportunities and time are needed. Those resources need to be well managed for the primary purpose of professional learning and development of teachers. Learning from the present research study could enable the researcher to have some ideas and knowledge for working in Cambodia. Relevant applicable areas for professional development of primary school teachers in Cambodia are teacher motivation, leadership practice for teacher collaborative learning, and the importance of using student data. In the processing of collecting quality student data, the quality of student assessment and data analysis needs to be improved so that school PD developed from the data can be matched with actual teacher needs for school improvement, teaching and learning quality.

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Appendix A

Interview Schedule – Teacher and Lead Teacher

1. How is teacher professional learning and development implemented in your school?
2. What do collaborative approaches look like in those forms?
3. What are the supporting conditions/environment for collaborative approaches for your learning in those forms of professional learning and development?
4. What challenges you face in collaborative approaches to teachers' professional learning and development for teachers and school leaders in New Zealand primary schools?
5. How do you deal with those challenges?
6. How do your collaborative approaches link your professional learning and development with your performance?
7. What impact do your collaborative approaches to teachers' professional learning and development have on your student learning?
8. Do you have any recommendations for improving the current practices/implementation of teacher collaboration for PLD within your school and within this community of learning?
9. Is there anything else you would like to add?

Interview Schedule – Principal

1. How is teacher professional learning and development implemented in your school?
2. What do collaborative approaches look like in those forms?
3. What are the supporting conditions/environment within the school and community for collaborative approaches to PLDs?
4. What are the challenges or constraints of implementing collaborative approaches to PLD?
5. How do you deal with those challenges?
6. How do you foster teacher collaboration in PLD?
7. How does collaborative approaches link professional learning and development with your teachers' performance?
8. What impact do collaborative approaches to teachers' professional learning and development have on your student learning?

9. Do you have any recommendations for the current processes or mechanisms of teacher collaboration for PLD within your school and within this community of learning?
10. Is there anything else you would like to add?

Appendix B

Permission for researcher to access school staff

Project title: ***Collaborative Approaches to Teachers' Professional Learning and Development in New Zealand Primary Schools***

Project Supervisor: ***Dr. Ruth Boyask***

Researcher: ***Sina Sam***

- ○ I have read and understood the information provided about this research project in the Information Sheet dated 21 July 2017.
- ○ I give permission for the researcher to undertake research within _____
- ○ I give permission for the researcher to access the staff _____

Principal's signature:

.....

Principal's name:

.....

Principal's Contact Details (if appropriate):

……..
……..
……..
……..

Date:

Approved by the Auckland University of Technology Ethics Committee on 04 September 2017, AUTEC Reference number 17/284.

Note: The head of the organisation should retain a copy of this form.

Appendix C

Participant Information Sheet - Principal

This sheet will be provided to principals who will be participating in the survey.

Date Information Sheet Produced:

21 July 2017

Project Title

Collaborative Approaches to Teachers' Professional Learning and Development in New Zealand Primary Schools

Kia ora. My name is Sina Sam, and I was previously an education programme assistant at the United Nations Children's Fund (UNICEF) office in Cambodia. I am currently enrolled in the Master of Educational Leadership degree at Auckland University of Technology (AUT) and am writing a dissertation as part of the degree's requirements. I would like to invite you to participate in my research project about collaborative approaches to teachers' professional learning and development.

I would like you to give permission for me to access your staff. I would also like you to agree to being interviewed yourself.

What is the purpose of this research?

The aim of this study is to explore ways in which collaborative approaches to teachers' professional learning and development is implemented in New Zealand primary schools. I also wish to explore the challenges facing principals and teachers who set up and implement collaborative approaches to teacher's professional learning and development respectively, and how they overcome those challenges. I want to identify what aspects of New Zealand primary schools' collaborative approaches to teachers' professional learning and development might inform my own work in education programmes in Cambodia.

How was I identified and why am I being invited to participate in this research?

We have selected you and your school as a result of information relating to primary schools in New Zealand was collected from the Education Counts website and the Education Review Office website. Your school was selected based on the following criteria: (1) the school must be encouraging and implementing teacher collaboration in communities of learning or professional learning communities; and (2) the school must have high student achievement outcomes.

How do I agree to participate in this research?

If you agree to allow me to access staff at your school, please email me the attached permission form. If you agree to participate in an interview, please email me to accept the invitation. Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research?

First, I would like you to advertise the research by putting the attached advertisement in your staff room. Secondly, if you agree to participate and if you are selected to

participate in semi-structured interview I will interview at a mutually agreed time. This interview will take about an hour and will focus on how teacher professional learning and development is implemented in your school. You will be interviewed at your school. The information provided will only be used for the purposes of this study. The interviews will be taped and transcribed. I will provide you with a transcript of the interview to check before data analysis is undertaken.

What are the discomforts and risks?

It is unlikely there will be discomforts and risks because the study will not obtain personal information.

How will these discomforts and risks be alleviated?

You have the right not to answer any particular question that makes you feel uncomfortable.

What are the benefits?

Thi study will benefit both the researcher and the research participants and will contribute to enhance knowledge and understanding about effective collaborative approaches to teachers' professional learning and development. In addition, this study will enable the researcher to complete a Master Degree of Educational Leadership. As a research participant, you will be able to express your thoughts, knowledge and experience about collaborative approaches in primary schools, and will be provided with a summary of the research findings upon your request.

How will my privacy be protected?

Your identity, including the name of your school and the names of principal or deputy principal, lead teachers and teachers will not be disclosed to colleagues in your school, and will be protected using pseudonyms in the final dissertation. Given that there is a small pool of potential participants who come from the same school and are likely to be known to each other, I will do my best not to identify you in the findings, but others might work out that you took part. The recordings made of the interviews will be securely held for six years, after which they will be destroyed. All the files related to this research will be kept in password protected digital files or in locked cabinets.

What are the costs of participating in this research?

There are no costs of participating in this research except the time you spend being interviewed. If you are selected to participate in a semi-structured interview, then this will mean giving about an hour of your time.

What opportunity do I have to consider this invitation?

You will have one week to decide whether or not to participate in this study.

Will I receive feedback on the results of this research?

Yes, you will be provided with a summary of the research findings upon your request. If you are interested in the final thesis report of this research, it will be available online on the AUT Scholarly Commons (http://aut.researchgateway.ac.nz/) or I can send it to you.

What do I do if I have concerns about this research?

- Any concern regarding the nature of this project should be notified in the first instance to my supervisor, Dr Ruth Boyask. Her email is ruth.boyask@aut.ac.nz and her phone number is +64 921 9999 extension 7569.
- Concerns regarding the conduct of this research should be notified to the Executive Secretary of AUTEC, Kate O'Connor. Her email is ethics@aut.ac.nz and her phone number is +64 9 921 9999 extension 6038.

Whom do I contact for further information about this research?

Please keep this Participant Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:

Sina Sam, email: samsina80@gmail.com

Project Supervisor Contact Details:

Dr Ruth Boyask, email ruth.boyask@aut.ac.nz; phone +64 921 9999 extension 7569.

Approved by the Auckland University of Technology Ethics Committee on 04 September 2017, AUTEC Reference number 17/284.

Participant Information Sheet - Teachers

This sheet will be provided to teachers who will be participating in the survey.

Date Information Sheet Produced:

21 July 2017

Project Title

Collaborative Approaches to Teachers' Professional Learning and Development in New Zealand Primary Schools

Kia ora. My name is Sina Sam, and I was previously an education programme assistant at the United Nations Children's Fund (UNICEF) office in Cambodia. I am currently enrolled in the Master of Educational Leadership degree at Auckland University of Technology (AUT) and am writing a dissertation as part of the degree's requirements. I would like to invite you to participate in my research project about collaborative approaches to teachers' professional learning and development.

What is the purpose of this research?

The aim of this study is to explore ways in which collaborative approaches to teachers' professional learning and development is implemented in New Zealand primary schools. I also wish to explore the challenges facing principals and teachers who set up and implement collaborative approaches to teacher's professional learning and development respectively, and how they overcome those challenges. I want to identify what aspects of New Zealand primary schools' collaborative approaches to teachers' professional learning and development might inform my own work in education programmes in Cambodia.

How was I identified and why am I being invited to participate in this research?

You have responded to an advertisement in your school. Your school was selected based on the following criteria: (1) the school must be encouraging and implementing teacher collaboration in communities of learning or professional learning communities; and (2) the school must have high student achievement outcomes.

How do I agree to participate in this research?

If you agree to participate in this research, please email the researcher (address below) to accept the invitation. Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research?

If you agree to participate and if you are selected to participate in a semi-structured interview, I will interview at a mutual agreed time. This interview will take about an hour. All your contact information and answers will be kept confidential. Interviews will also be held with two other participants from your school. You will be interviewed at your school. The information provided will only be used for the purposes of this study. The interviews will be taped and transcribed. I will provide you with a transcript of the interview to check before data analysis is undertaken.

What are the discomforts and risks?

It is unlikely there will be discomforts and risks because the study will not obtain personal information.

How will these discomforts and risks be alleviated?

You have the right not to answer any particular question that makes you feel uncomfortable.

What are the benefits?

This study will benefit both the researcher and the research participants and will contribute to enhance knowledge and understanding about effective collaborative approaches to teachers' professional learning and development. In addition, this study will enable the researcher to complete a Master Degree of Educational Leadership. As a research participant, you will be able to express your thoughts, knowledge and experience about collaborative approaches in primary schools, and will be provided with a summary of the research findings upon your request.

How will my privacy be protected?

Your identity, including the name of your school and the names of principals, lead teachers and teachers will not be disclosed to colleagues in your school, and will be protected by the use of pseudonyms in the final dissertation. Given that there is a small pool of potential participants who come from the same school and are likely to be known to each other, I will do my best not to identify you in the findings, but others might work out that you took part. The recordings made of the interviews will be securely held for six years, after which they will be destroyed. All the files related to this research will be kept in password protected digital files or in locked cabinets.

What are the costs of participating in this research?

There are no costs of participating in this research except the time you spend being interviewed. If you are selected to participate in a semi-structured interview, then this will mean giving about an hour of your time.

What opportunity do I have to consider this invitation?

You will have one week to decide whether or not to participate in this study.

Will I receive feedback on the results of this research?

Yes, you will be provided with a summary of the research findings upon your request. If you are interested in the final thesis report of this research, it will be available online on the AUT Scholarly Commons (http://aut.researchgateway.ac.nz/) or I can send it to you.

What do I do if I have concerns about this research?

- Any concern regarding the nature of this project should be notified in the first instance to my supervisor, Dr Ruth Boyask. Her email is ruth.boyask@aut.ac.nz and her phone number is +64 921 9999 extension 7569.
- Concerns regarding the conduct of this research should be notified to the Executive Secretary of AUTEC, Kate O'Connor. Her email is ethics@aut.ac.nz and her phone number is +64 9 921 9999 extension 6038.

Whom do I contact for further information about this research?

Please keep this Participant Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:

Sina Sam, email: samsina80@gmail.com

Project Supervisor Contact Details:

Dr Ruth Boyask, email ruth.boyask@aut.ac.nz; phone +64 921 9999 extension 7569.

Approved by the Auckland University of Technology Ethics Committee on 04 September 2017, AUTEC Reference number 17/284.

Appendix D

Consent Form

For use when interviews are involved.

Project title: ***Collaborative Approaches to Teachers' Professional Learning and Development in New Zealand Primary Schools***

Project Supervisor: ***Dr. Ruth Boyask***

Researcher: ***Sina Sam***

- ○ I have read and understood the information provided about this research project in the Information Sheet dated 21 July 2017.
- ○ I have had an opportunity to ask questions and to have them answered.
- ○ I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.
- ○ I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.
- ○ I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.
- ○ I agree to take part in this research.
- ○ I wish to receive a summary of the research findings (please tick one): Yes○ No○

Participant's signature:

……

Participant's name:

……

Participant's Contact Details (if appropriate):

……

……

……

……

Date:

Approved by the Auckland University of Technology Ethics Committee on 04 September 2017. AUTEC Reference number 17/284.

Note: The Participant should retain a copy of this form.

Appendix D: consent form

Appendix E

Confidentiality Agreement

For someone transcribing data, e.g. audio-tapes of interviews.

Project title: ***Collaborative Approaches to Teachers' Professional Learning and Development in New Zealand Primary Schools***

Project Supervisor: ***Dr. Ruth Boyask***

Researcher: ***Sina Sam***

- ○ I understand that all the material I will be asked to transcribe is confidential.
- ○ I understand that the contents of the tapes or recordings can only be discussed with the researchers.
- ○ I will not keep any copies of the transcripts nor allow third parties access to them.

Transcriber's signature:
.....

Transcriber's name:
.....

Transcriber's Contact Details (if appropriate):
.....
.....
.....
.....

Date:

Project Supervisor's Contact Details (if appropriate):
Dr. Ruth Boyask: ruth.boyask@aut.ac.nz,
phone +64 921 9999 extension 7569.

Approved by the Auckland University of Technology Ethics Committee on 04 September 2017, AUTEC Reference number 17/284.

Note: The Transcriber should retain a copy of this form.