Peer Mentoring: A Professional Development Tool for Teachers in Bhutan

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This thesis is presented for the Degree of Doctor of Education of Murdoch University,
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DECLARATION

I declare that this thesis is my own account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary education institution.

Tshewang Rinzin
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Teacher professional development is important to provide ongoing opportunities for teachers to enhance their teaching and learning practices. This study investigated ways in which peer mentoring may support the development of a professional learning community among beginning and experienced teachers in Bhutan. A social constructivist perspective framed the approach to peer mentoring which encouraged both beginning and experienced teachers to use evidence from classroom observations and engage in social interaction during the post-lesson discussions. The study used qualitative methodology to explore and understand the teachers’ authentic experiences of peer mentoring. The participants were four groups of three teachers (two beginning and one experienced) working in four different schools in Bhutan. Multiple data sources included pre-peer mentoring survey, semi-structured interviews with the teachers, observation notes maintained by the participants and researcher’s onsite observation notes. The findings confirmed that peer mentoring provided opportunities for teachers to collaborate, discuss and share new ideas with each other. In addition, observations and discussions helped teachers analyse and refine their teaching and learning practices. Initially some beginning teachers found it difficult to provide feedback to the experienced teacher in their group but over time the observation tool and collegial discussions enabled them to provide feedback. The peer mentoring enabled beginning teachers to be more confident in their practices and provided opportunity for experienced teachers to rethink their teaching and learning practices. The findings also highlighted inherent challenges related to managing classes for observations and time constraints for post-lesson discussions. For the groups that met regularly, mentoring as a school-based professional development provided opportunities to share knowledge, resources and improve collegial support. This offered
possibilities for creating an effective learning environment that supported instructional development and helped in building a professional learning community.
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List of Abbreviations

BT – Beginning Teachers
ET – Experienced Teachers
ICT – Information Communication and Technologies
NBIP – National Based In-service Programme
In - Interview
OECD – The Organisation for Economic Co-operation and Development
PD – Professional Development
PISA - Programme for International Student Assessment
S1 – School1
S2 – School2
S3 – School3
S4 – School4
SBIP – School Based In-service Programme
T3 – Teacher Tracker Tool
TALIS - Teaching and Learning International Survey
TPSD – Teacher Professional Support Division
CHAPTER 1

Contextualising the Research

Education has played a vital role in the social, economic, political, cultural, intellectual and environmental development of Bhutan and the country continues to give great importance to its education sector as a lever to propel the country forward (Ministry of Education, 2014b). Teachers and their professional learning are a key part of the ongoing development of the education sector in Bhutan and the provision of quality education. Thus, professional development programs are vital to develop individual skills, knowledge, expertise and characteristics as a teacher (European Commission, 2010).

Although the reward of education has been remarked as diverse and fulfilling, with the current generation of the Bhutan’s policy makers, nation builders, bureaucrats, educators and businessmen being the products of Bhutanese education system (Ministry of Education, 2014b), there are emerging challenges confronting the nation. With globalisation of the economy and rapid technological changes, the Bhutanese education system has come under increased public criticism for not being able to provide quality education to meet the new challenges and opportunities (Gordon, 2013; Ministry of Education, 2014b; VanBalkom & Sherman, 2010). One challenge identified for achieving quality education is related to teachers and it is widely accepted that the quality of education hinges on teachers’ quality and motivation (Ministry of Education, 2014b; Royal Education Council, 2009). Therefore, to motivate the teachers in the field and to improve their competency, the Bhutan Education Blueprint 2014-2024 recommended the Ministry of Education to establish a professional development sector in accordance with the Teacher Human Resource Policy 2014 and In-service master plan to provide Professional Development (PD) programs for teachers.

PD programs are essential to keep teachers motivated, up-to-date about new research on how children learn, developing capacities with emerging technology tools for teaching and
learning, enhancing classroom management skills and updating new curriculum resources (Hudson, 2013; Mansfield & Thompson, 2016; Organisation for Economic Co-operation and Development [OECD], 2005; 2009). They also provide teachers with ongoing opportunities to learn and continuously improve their teaching practices (Kwakman, 2003).

In a nationwide survey conducted in 2013, 95% of teachers in Bhutan responded that PD was the most important factor contributing to teacher quality (Ministry of Education, 2014b). In Bhutan, teachers are required to undertake at least 80 hours of Professional Development (PD) in a year (Ministry of Education, 2014b). However, with about 9279 school teachers in the field (Ministry of Education, 2019) and due to limited time and funding, it may not be realistic for Bhutan to provide PD to all the teachers and fulfill the objective of obtaining 80 hours of PD per teacher in a year (Ministry of Education, 2014b). Peer mentoring is proposed as a professional development program that could provide a forum for teachers to formulate and address some of the practical problems they face in schools in terms of content and teaching pedagogy. It would be relevant to the context of teaching, a sustainable and cost-effective form of professional development. This could also be counted towards achieving 80 hours of required PD in a year.

School-based mentoring programs as professional development have played a prominent role in supporting the initial preparation and professional development of beginning teachers in many parts of the world since 1980 (Hobson et al., 2009; Richter et al., 2013). According to Hudson (2013), in addition, there was a positive impact on personal and professional development of the experienced teachers involved in mentoring programs. They improved their teaching styles and strategies, enhanced their knowledge and use of Information Communication and Technologies (ICT), improved self-reflective skills, built leadership skills, became more confident and understood more about their mentoring roles (Hobson et al., 2009; Hudson, 2013).
Moreover, school-based mentoring could be carried out through collaborative learning sessions among teachers (beginning and experienced) and can be a cost-effective way to engage teachers in PD (Hudson, 2013). It would be within the school settings and would not involve external experts (OECD, 2014). For a small economy like Bhutan, this could provide relatively immediate access and on-going support to accommodate the different needs of all teachers. Peer mentoring could enhance the communication skills, problem solving skills and pedagogical knowledge of teachers. Kwakman (2003), Postholm (2012) and Willis (2002) claim that effective learning takes place within the schools where teachers are working in cooperation with other teachers supported by school leaders. Additionally, peer mentoring could be an invaluable assistance to those who are new to the teaching profession (Achinstein & Fogo, 2015; Hudson, 2012).

Therefore, the aim of the research is to explore the development of peer mentoring in Bhutanese secondary schools. Using a social constructivist perspective, the research focuses on supporting the professional learning of teachers by assisting them to collaborate among themselves within school and encouraging them to participate both as mentor and mentee, regardless of their level of work experience. This would enable them to work towards building a professional learning community.

To provide background to the study and the way the education system operates in Bhutan, a brief history of education practices in Bhutan is provided followed by a description of the education system in Bhutan and the background to teacher education in Bhutan. The chapter also explains the research context, followed by the significance of the research and concludes with an organisation of the thesis.
A Brief History of Education Practices in Bhutan

Education in Bhutan has undergone significant changes over the last 60 years, and these are closely related to its geography and governance. It has successfully transitioned from a complete monastic education towards a modern mass education system and in the last twenty years the Bhutanese education system has become mostly independent from India (Namgyel & Rinchhen, 2016). Further, it continues to experience major educational reforms in terms of achieving access to education, achieving quality of education, achieving equity in education, and achieving system efficiency (Ministry of Education, 2014b). These changes are relevant to this research as the reforms emphasise decentralisation processes and empowering teachers to enhance their capabilities with a positive impact on the quality of education.

Bhutan is a small landlocked Himalayan Kingdom, situated between China (Tibet) in the north and India in South, East and West, with a small population of about 727,145 (National Statistical Bureau, 2018). Seventy one percent of its nearly of 39,000 sq. km is covered by forest (National Statistical Bureau, 2018). Due to its mountainous geography, schools have been difficult to access and prior to the 1980s students had to walk for days on foot to reach a school as there were few schools and no road network (Dorji, 2005). Neither were there proper classrooms or hostels, and students were taught in make-shift huts, lived in temporary shelters made of mostly bamboo and wood. More recently, school infrastructures (classrooms and hostels) and other recreational facilities have been developed but even today some schools are still isolated and are not connected with motorable roads.

Education practices in the form of monastic education began in Bhutan as early as the 8th century through informal relationships between a master and his disciples (Dorji, 2005). The formal monastic education started in the 17th century at Chari monastery in Thimphu (Dorji, 2005) and was the predominant form of education in Bhutan until the early 20th
century (Gyamtso & Maxwell, 2012). As in the monastic education system, current teachers are highly respected in the society. When the monastic education was predominant, every family sent a son to the monastery to become a monk. However, this situation changed in the 1960s when the Third King of Bhutan, Jigme Dorji Wangchuk decided his country should join the rest of the world by shedding its self-imposed isolation policy (Powdyel, 2016; Thinley, 2016). It was important for a small nation to be able to communicate with the rest of the world and become a part of the global community (Namgyel & Rinchhen, 2016). This was in line with the initiation of its first Five Year Plan for socio-economic development in 1961 (Dorji, 2016; National Statistical Bureau, 2018). Since then, the country has seen a rapid expansion and growth of education in Bhutan. From just 11 schools, 90 teachers and 400 students in the 1960s (Dorji, 2005), Bhutan now has 1633 schools, tertiary institutes, technical training institutes, day care centres, non-formal centres, extended classrooms, monastic education centres, with 11, 515 teachers, lecturers, instructors, trainers and 251,704 students (Ministry of Education, 2019).

When modern education started in Bhutan in the 1960s, schools were few and far from each other and people were reluctant to send their children to schools (Namgyel & Denman, 2008). Over the years, Royal Government of Bhutan had to send many students to boarding schools in India which brought changes in the development of the country, contributing to people developing their acceptance and more children enrolling in schools (Namgyel & Denman, 2008). This led to the opening of more schools throughout the country by borrowing the British system (via post-colonial India). English was chosen as the medium of instruction in all Bhutanese schools to enable Bhutan to participate in modern world activities without any difficulties (Dorji, 2005). Many teachers were invited from India to fill in the gaps in teaching different subjects like Science, Humanities, Maths and English. This was mainly because the curriculum and textbooks were mostly borrowed from some of the
English medium schools in India (Thinley, 2016). Today, all subjects are taught in English except for the national language, Dzongkha and Environmental Studies, which is taught during the first four years of primary schooling (Pre-primary-year three). From 1961 to this day, the Education system of Bhutan has gone through many changes in terms of its structure, policies, and curriculum. It continues to build a secular education system to offer learning opportunities in a world-class learning environment (Ministry of Education, 2014b).

After a century of unprecedented development under the hereditary monarchy, the much loved and respected visionary fourth King of Bhutan, Jigme Singye Wangchuk handed the power of governance to the people of Bhutan by introducing democracy in 2008, which was much against the wishes of the people. The first elected government was formed by a political party, the Druk Phuensum Tsogpa (2008-2013) and in 2013 during the second parliamentary election people elected another political party, the People’s Democratic Party to form the government (2013-2108). In 2018, during the third parliamentary election the people of Bhutan favoured a new political party, the Druk Nyamrup Tsogpa to form its current government.

The successive governments of Bhutan continue to accord high importance to the education sector in its nation building process. The first elected government emphasised improving the quality and motivation of teachers by initiating a system of recognition and rewards, providing subject-specific training for both preservice and in-service teachers. They increased the number of teachers and support staff in schools so that teachers could concentrate on their academic responsibilities without being burdened by non-academic responsibilities. One of the significant initiatives of the second democratically elected governments was the Bhutan Education Blueprint 2014-2024: Rethinking Education (Ministry of Education, 2014b). This document proposed a ten-year roadmap (2014-2024) to examine the challenges of the current education system with a focus on improving access to
education, raising the quality of education, closing achievement gaps and maximising the system efficiency (Ministry of Education, 2014b). Some of the key recommendations to the Ministry of Education by the Bhutan Education Blueprint 2014-2024: Rethinking Education was to enhance the quality of PD programs and to create a forum for sharing best practices, for strengthening School Based In-service Programs (SBIPs) and for ensuring teachers and supervisors collaboratively develop continuous PD programs. This is proposed to occur across the five hierarchical levels of teachers in schools in Bhutan (Ministry of Education, 2014a).

**Education System of Bhutan**

Schooling consists of seven years of primary education (Pre-Primary-6), followed by four years of lower and middle secondary (7-10) and two years of higher secondary (11-12). Bhutan provides free education from pre-primary to grade 12. After higher secondary, students who complete grade 12 compete for government scholarships on a merit basis to pursue higher education within Bhutan or abroad. Those students who do not qualify for government scholarship programs pursue their higher education through private/self-funding. They have the option of studying within the country or abroad.

Until recently, there were several higher education colleges spread across Bhutan, administered by the Royal Government of Bhutan. However, in 2003 Bhutan established its first university, the Royal University of Bhutan (RUB) to provide tertiary education in Bhutan, bringing the existing colleges together (Maxwell, 2019; Namgyel & Denman, 2008). In addition, RUB establishes programs of studies and granting of degrees, monitors course quality and teaching effectiveness in member institutions and coordinates exchange and sharing of resources among member institutions.
The University now administers two affiliated colleges and nine constituent colleges including two colleges related to education, Paro College of Education and Samtse College of Education.

**Background of Teacher Education in Bhutan**

The first Teacher Training Institute (TTI) was established at Samtse in 1968 with 41 students, who graduated to teach primary school students. It was followed by the establishment of a Teacher Training Centre (TTC) at Paro in 1975 to train early childhood teachers (Thinley, 2016). With the introduction of the Bachelor of Education (B.Ed.) in 1983, TTI was renamed as the National Institute of Education (NIE), and its name was changed to Samtse College of Education in 2003 when it became a member college of the Royal University of Bhutan (RUB). Similarly, TTC was renamed as National Institute of Education in July 2000 after the introduction of B.Ed. programs. Later, in 2003, it separated from the Ministry of Education to become a part of the Royal University of Bhutan and renamed Paro College of Education. The teacher education colleges grew in terms of number of students, teaching staff, infrastructure, programs and many other recreational facilities.

Today, the two colleges of education serve as premier educational institutions in the country, which provide programs for primary and secondary teachers. In the winter of 2009, the three-year Bachelor of Education program was replaced by a four-year Bachelor of Education program. This move was not just to increase course content but to help preservice teachers to understand a holistic approach to education with games and sports and cultural programs, with the aim to improve the overall quality of teacher graduates (Royal Education Council, 2009). Currently, both the colleges of education offer two preservice programs, a four-year Bachelor of Education (B.Ed.) after completing grade 12 and a one-year Post
Graduate Diploma in Education (PGDE) after the completion of a formal first degree. Both
the colleges also offer various postgraduate award bearing courses for in-service teachers.

In the colleges of education, student teachers are exposed to a broad range of
programs. Each cohort of student teachers take units specific to their elective subject/s as well
as general education courses. The general education courses include teaching skills and
strategies, education assessment and evaluation, Dzongkha (national language), English,
curriculum studies, action research, educational psychology and agriculture. The mix of
academic and pedagogical content in the program was well received by the students
(VanBalkom & Sherman, 2010). Student teachers participate in a teaching practicum as part
of their course for a period of six months during the second year of their B.Ed. course. They
have the opportunity to translate their theoretical knowledge into practice with the help of an
associate teacher (mentor) and supervising lecturer from the college of education. This is the
highlight of the program, which is enjoyed and benefitted by most of the student teachers
(VanBalkom & Sherman, 2010).

However, a key question is whether the colleges of education in Bhutan prepare
teachers to adequately engage the students and whether they are motivated to continue
teaching once they assume their full-time teaching responsibilities. Many beginning teachers
remark that their preservice education had insufficiently equipped them with the skills and
knowledge demanded by the daily challenges of teaching. In Bhutan, studies conducted by
Fricot (2009), Royal Education Council (2009) and VanBalkom & Sherman (2010) at the
time of the introduction of the four-year B.Ed. highlighted that teachers were inadequately
prepared in the colleges of education to face real classroom situations. The studies underlined
some critical challenges related particularly to initial teacher preparation at the colleges of
education, and in-service teacher preparation. A key finding was that there was a
disconnection between the campus-based courses and the activities of the teaching practicum.
For instance, in teacher education colleges, teachers learned various teaching skills and strategies, where lecturers demonstrated student-centered approaches (Gyamtso & Maxwell, 2016) but many resorted to traditional chalk and board method of teaching in the field. In terms of using teaching learning material, most of the teachers demonstrated at the front of the class rather than handing over to students to enhance their learning. When it comes to classroom management, most of the teachers resorted to corporal punishment when it was officially declared that corporal punishment was banned in schools. In addition, it was also highlighted that there was a lack of adequate coaching and mentoring from a competent associate teacher and a lack of constructive feedback on lessons. Consequently, the Royal Education Council (2009) recommended that the colleges of education restructure the training programs and reinforce partnerships with schools to support and strengthen the Teaching Practice experience of the young teachers. This was further reiterated in the Bhutan Education Blueprint 2014-2024: Rethinking Education to strengthen collaboration between the colleges of education and schools to reform their programs (Ministry of Education, 2014b).

One major approach of the Ministry of Education to address the issue of quality of education is to rethink educational strategies to ensure that school students are able to gain appropriate knowledge and develop higher order thinking skills. Moreover, the rising expectations of the people over the quality of education in Bhutan and the problem of teachers leaving the profession have highlighted an urgent need to enhance the system’s capability and initiate bold steps for fundamental transformation. The Bhutan Education Blueprint 2014-2024 proposed rethinking education more holistically and taking radical steps to respond to the challenges and changing needs of the Bhutanese education system (Ministry of Education, 2014b). One of its major initiatives was to focus on raising the quality of education by up-skilling the teachers’ content and pedagogical competencies.
Accordingly, a new sector, Teacher Professional Support Division (TPSD) was formed in 2016 to initiate relevant and continuous PD programs in schools, maintain a database of teachers availing themselves of PD programs and ensure that all teachers receive at least 80 hours of PD in a year (Ministry of Education, 2014b). Currently, the Ministry of Education provides or facilitates PD programs for teachers through National Based In-Service Programs (NBIP) and School Based In-Service Programs (SBIP) (Ministry of Education, 2014a).

**The Research Context**

Bhutan’s emphasis on improving the quality of education is well founded as international studies show that one of the most important factors determining the quality of education is the quality of teachers (Darling-Hammond, 2000; Feiman-Nemser, 2001b; OECD, 2005). It is imperative for teachers to be academically and professionally competent (Helgevold et al., 2015; Richter et al., 2011). They need broad knowledge of subject content, teaching skills and strategies, classroom management skills and a positive attitude towards teaching and learning. Therefore, professional development (PD) programs for teachers are essential in enhancing the quality of teaching and learning in schools. The Ministry of Education, Bhutan organises and facilitates various PD programs for teachers in Bhutan but according to the Ministry of Education (2014b) teachers attend the National Based In-service Programs (NBIP) depending on the value attached to the certificates and the facilitation by experienced and competent facilitators. On the other hand, the content of the program is compromised when a week-long NBIP is reduced to an hour-long PD at school level (Ministry of Education, 2014b). Moreover, a majority of the PD programs are subject to the availability of funds. Therefore, the Bhutan Education Blueprint 2014-2024 recommended
the Ministry of Education to allocate a separate budget to conduct relevant and continuous PD programs to enhance the quality of teachers.

As a teacher in Bhutan for over twelve years, I have undertaken various roles in four different schools (beginning teacher, head of science department, academic head, vice principal). From my personal experience of the education system, I have seen that newly graduated teachers from the colleges of education are excited but nervous about going into their first classroom in their first school. Most enter their first school with many expectations in terms of support from the senior colleagues about how things work in school but soon realise that everybody has their own role to play. They work hard in transferring what they have learned in college to teach their students. However, these beginning teachers are overwhelmed when they realise the magnitude of their responsibilities in the school. They are given similar responsibilities as teachers who have been teaching for many years. Gordon (2013) described some of the educational challenges faced by the education system of Bhutan, such as teacher morale, teacher isolation, teacher rotation, overcrowded classrooms, lack of accessible space, lack of latrines, lack of supplies and lack of guidance from parents to their children. Even under such circumstances, teachers put in much effort but may be concerned by the lack of support from the school administration. These challenges, if not addressed, would result in a high rate of teacher attrition and degradation of the quality of education. The Annual Education Statistics 2019 revealed that about 3.89% of the teachers of Bhutanese public schools left the profession every year for various reasons (Ministry of Education, 2019). The statistics show an increasing rate of teacher attrition rate from 2.0% in 2014, 2.5% in 2015, 3.5% in 2016, 3.99% in 2017, 4.02% in 2018 and 5.44% in 2019. With this increasing negative trend, it is important for the government to initiate programs to enhance professional development and retain teachers in their profession for longer periods of time.
Although the Ministry of Education initiates various NBIPs for the professional development of teachers, as stated earlier, due to lack of time and funding, only 31% of the teachers have attended NBIPs (Ministry of Education, 2014b) and the rest did not have the opportunity to avail themselves of adequate professional development to enhance their professional competency. Hence, schools undertake a school level monitoring system as one form of SBIP and is currently followed in all schools in Bhutan. The subject department appoints one amongst them (normally an experienced teacher) as the head of department (HOD), who would be responsible for observing the lessons of the teachers in their subject group. The school principal/vice principal would observe the lessons of the heads of departments, but the frequency of lesson observation differs from school to school.

The current school level monitoring system in Bhutan is often conducted as a formality of the school/department but does not have set goals or objectives related to professional development. It lacks structure and standards in terms of lesson observation and feedback. Moreover, continuity or follow up of previous lesson observations does not take place due to poor documentation and lack of a culture of feedback sessions. There is also limited collaboration and sharing of ideas between the teachers and the actual essence of lesson observation, which is to share ideas, help fellow teachers recognise their good practices and difficulties in teaching, is lacking. Considering the importance of professional development for teachers and the opportunities afforded by teacher collaboration, this study investigated the ways that a peer mentoring program could support the professional learning of beginning and experienced teachers in Bhutan. Thus, the following research questions were developed.
Research Question
The study will address the following central research question:

In what ways can peer mentoring program support the development of a professional learning community of beginning and experienced teachers in Bhutan?

Sub-questions

How do teachers experience peer mentoring and in what ways do the experiences of beginning and experienced teachers differ?

In what ways do observations and discussions as a part of peer mentoring support the development of a professional learning community?

Significance of the Study

This study is significant in several ways. First, it will be an original contribution to knowledge about peer mentoring in the Bhutanese education system. There is no available literature on mentoring pertaining to the education system in Bhutan to date. Therefore, the study provides contextual local knowledge and contributes to ideas and practices for mentoring developed around the world.

Second, the peer mentoring aims to enhance the theoretical and practical knowledge of beginning and experienced teachers through regular interaction in a first ever peer mentoring experience in Bhutan. As there is no existing model of peer mentoring for teachers in Bhutan, a peer mentoring model was developed for the study. In doing so, it aims to focus on school-based professional development, where beginning and experienced teachers support each other through lesson observations and informal interaction. It aims to help teachers learn from each other and apply new knowledge and skills developed through interaction in improving their teaching practices. Additionally, it aims to promote the idea of
sharing expertise with each other so that each teacher contributes their own special knowledge and experiences during the discussion.

Third, it provides support for both beginning and experienced teachers. Beginning teachers often experience their first teaching in some of the remote schools and often in difficult situations. They are confronted with numerous personal and professional challenges (Helgevold et al., 2015) and need support and timely guidance. The peer mentoring model was designed as a support system for beginning teachers with potential to strengthen and build their quality and professionalism, enhance job satisfaction and reduce teacher attrition (Helgevold et al., 2015; Ingersoll & Strong, 2011; Ingersoll & Smith, 2004; Lai, 2010). Apart from the several benefits for the beginning teachers, studies have shown that peer mentoring also supports experienced teachers in enhancing their knowledge about new teaching methods, ICT tool in teaching and understanding youth culture (ulvik & Langørgen, 2012). This would serve and support the experienced teachers as an ongoing professional learning process. This kind of collaboration aims to foster the feeling of professionalism in each meeting and enhance a professional learning community.

Fourth, the study was designed to provide insight on how observations and discussions during peer mentoring could foster the feeling of professionalism in each meeting and support the development of a professional learning community.

Summary

Over the past 60 years, Education in Bhutan has undergone significant changes and successfully transitioned from a completely monastic education system to a modern mass education system. Education plays a vital role in the overall development of Bhutan and the quality of teachers are key to the provision of quality education. Professional development
(PD) programs are essential to motivate the teachers and enhance their teaching competency. Currently, schools in Bhutan undertake a school-level monitoring system as PD but it lacks structure and standards and is often conducted for administrative purposes. This study proposes peer mentoring as a relevant, school-based, sustainable, and cost-effective professional development program for teachers to enhance teaching and learning practices. This study seeks to make a contribution by adding knowledge about peer mentoring in the Bhutanese education context as a school-based professional development program to help beginning and experienced teachers enhance their theoretical and practical knowledge.

**Organisation of the Thesis**

Chapter 1 provided a brief history of the education system in Bhutan, and its teacher education program followed by the research context, research questions and significance of the study. Chapter 2 outlines the literature review on the concept, types, approaches and impact of PD. It also discusses on mentoring as PD for beginning and experienced teachers, peer mentoring and peer observation and feedback and finally challenges of peer mentoring. Chapter 3 presents details of research methodology and the theory on which the analysis of data was based. It highlights the research design, data collection methods and ethical considerations. Chapter 4 discusses peer mentoring and traditional mentoring, the peer mentoring process with special emphasis on Teacher Tracker Tool (T3) and observation rounds. Chapter 5 reports the research findings. Chapter 6 provides the discussion and conclusion of the study. It also includes the limitations and implication of the current study and possible directions for future research.
CHAPTER 2

Literature Review

This chapter examines the concept of professional development, types of professional development, approaches and impact of professional development. It also discusses mentoring for beginning and experienced teachers, peer mentoring, lesson observation, feedback and the challenges of peer mentoring.

Searches about professional development literature were conducted using relevant databases including SAGE, Eric, A+ Education, ProQuest and Google Scholar. There were three stages of the review of literature: the first one was regarding the professional development of teacher, the second stage was concentrated on mentoring beginning and experienced teachers and the third stage was focused on lesson observation and feedback. In the first stage, some of the key words used when searching the literature regarding the professional development of teacher were: “teacher professional development”, “types of professional development”, “impact of professional development”, “approaches of professional development”. In the next stage, key words like “mentoring teachers”, “peer mentoring”, “mentoring beginning teachers”, “mentoring experienced teachers” and “mentoring veteran teachers” were used to search for literature regarding mentoring. Due to the different terms used to describe beginning teachers in different countries like the United States of America (USA), the United Kingdom (UK), Canada, Finland and Australia, several key words were used to find literature regarding mentoring in the databases: “mentoring beginning teacher”, “mentoring novice teacher”, “mentoring new teacher”, “mentoring early career teacher”. Finally, some of the key words used in searching the literature regarding observation and feedback were: “lesson observation”, “peer observation”, and “lesson feedback”.
Teacher Professional Development

Concept of Professional Development

The teaching profession is a learning profession and teachers must develop throughout their career (Niemi, 2015). Teachers’ roles are changing, and they need to continuously develop their knowledge and skills (Darling-Hammond & McLaughlin, 1999) to meet the demands of more diverse students, new curriculum, new teaching and learning strategies, increased pressure for school performance, work effectively within their profession and with other organisations (Villegas-Reimers, 2003; OECD, 2005). Professional Development (PD) provides a platform for the teachers to improve their quality and promote student learning (OECD, 2016; Shea et al., 2018). Students’ learning depends on the type of teaching methods used by teachers in the classroom (OECD 2016; Shea et al., 2018; Villegas-Reimers, 2003). Teachers need to develop certain practical and complex skills along with specific knowledge, ethical values and attitudes to be able to influence students’ learning (Avalos, 2011; Kwakman, 2003; Zimmerman et al., 2017). Therefore, teacher’s competency is one of the main factors determining the quality of education (Huang, 2016; OECD, 2005; Richter et al., 2011; Villegas-Reimers, 2003).

Professional Development is conceptualised as the process of development of a person’s professional role and it is an integral component of self-development (Bellibas et al., 2016; Villegas-Reimers, 2003). Villegas-Reimers (2003) states “professional development for teachers is a lifelong process which begins with the initial preparation that teachers receive (whether at an institute of teacher education or actually on job) and continues until retirement” (p. 8). OECD (2009) defined teacher professional development as “activities that develop an individual’s skills, knowledge, expertise and other characteristics as a teacher” (p. 49). The European Commission (2010) defined teacher professional development as “the body of systematic activities to prepare teachers for their job, including initial training,
induction courses, in-service training, and continuous professional development within school settings” (p. 19). These definitions indicate that professional development for teachers begins with initial teacher preparation courses and continues throughout their tenure as teacher in the form of formal or informal activities within the school settings to develop their characteristics as a teacher. Thus, PD for teachers essentially refers to learning how to learn and applying their knowledge to support the learning of their students (Avalos, 2011; Postholm, 2012). Learning to overcome the challenges related to advancement in technology, educational policies and societal demand is one of the best ways teacher can set an example of being lifelong learners to the students (OECD, 2014).

Teacher PD include formal programs like workshops, seminars, induction, mentoring and informal experiences like discussion with colleagues, reading and watching professional materials or lesson observations and feedbacks (Coldwell, 2017; OECD, 2009; 2014; Richter et al., 2011). These programs are conducted for teachers in schools all over the world to enhance their teaching competence, retain high-quality teacher workforce and improve student outcomes (Bautista et al., 2015; Huang, 2016; Kwakman, 2003; Niemi, 2015; OECD, 2009; 2016; Shea et al., 2018; Villegas-Reimers, 2003).

**Types of Professional Development**

Different types of PD have been developed and implemented in different countries to promote and support teachers throughout their careers (European Commission, 2010; Villegas-Reimers, 2003). OECD (2005) distinguished PD programs according to the different purposes they serve. For example, conferences and seminars are organised to facilitate the implementation of educational policies and reforms; short courses and self-study are undertaken to prepare staff for new functions or roles; group work and action research are organised to develop a program for school development or to solve a problem and finally
Some teachers participate in long-term courses for personal professional enrichment (European Commission, 2010; OECD, 2005).

According to Villegas-Reimers (2003) teacher professional development activities can be grouped into two models: one that requires organisational or institutional partnership to be successful like university-school partnerships, inter-institutional collaborations, schools’ networks, teachers’ networks etc. These are the formal learning opportunities (workshops or graduate courses) with specified curriculum, where information is disseminated by an expert (Feiman-Nemser, 2001a; Mansfield and Thompson, 2016). The other model is the one that can be implemented on a smaller scale like in a classroom or a school, where it is more informal and does not follow a specified curriculum (Feiman-Nemser, 2001a). These include supervision in the classroom, students’ performance assessment, self-directed development, co-operative or collegial development, action research, coaching and mentoring (Hudson, 2013; Villegas-Reimers, 2003). In these informal learning environments, teachers are not merely a recipient of knowledge rather they reflect on their own practice or collaborate with colleagues to develop learning goals and strategies to enhance learning (Hamilton, 2013; Richter et al., 2011). PD activities of this kind are cost effective (Hudson, 2013) as schools make use of the available resources to facilitate their learning. Effective professional learning takes place in a situated learning atmosphere as it is school-based, incorporated into teachers’ daily work, collaborative and teacher driven (Hamilton, 2013; Kensington-Miller, 2012; Mansfield & Thompson, 2016; Postholm, 2012). However, there could be some practical limitations in schools such as budgets, resources and time that might affect the quality of these kind of PD programs (Glazer & Hannafin, 2006).

In a survey conducted by TALIS to determine the participation rate by type of PD activity (2007-2008), 93% of the teachers from the participating countries mentioned “informal dialogue to improve teaching” as the most often used PD activities during the
survey period while PD programs like “qualification programs” was the least common with only 25% of teachers’ participating (OECD, 2009). This report indicated that informal dialogue to improve teaching is common around the world. It encouraged more informal dialogues among teachers that could enhance positive relationships, develop trust, build confidence and improve teaching practices.

However, as PD is dependent on the needs of the teachers and students in each school, region and country, there is not one model or form of PD that can be implemented in any institution or context. Educators must evaluate their needs, cultural beliefs and practices to implement the most suitable PD in their situation (Avalos, 2011; Villegas-Reimers, 2003).

**Country Approaches to Teacher Professional Development**

The requirement for teachers to participate in PD has differed widely across countries. When the OECD surveyed countries in 2005, some countries (e.g., Denmark, Chile, France, Germany, Greece, Ireland, Israel, Italy, Japan, Korea) had no minimum requirement for teachers to engage in PD in a year while other countries (e.g., Finland, Hungary, the Netherlands, Scotland, Sweden, Switzerland, some states in Australia) had the equivalent of a week (30-40 hours) per year as the minimum requirement. While Austria had a relatively low requirement of 15 hours per year, Sweden had 104 hours per year and 169 hours for the teachers of the Netherlands (OECD, 2005). More recent figures showed that Singaporean teachers could avail themselves up to 100 hours of voluntary PD activities in a year (Bautista et al., 2015), while the teachers in Bhutan need to undertake 80 hours of PD in a year (Ministry of Education, 2014b).

According to OECD (2005), the minimum requirement for teachers to participate in professional development in different countries ranges from zero to 169 hours in a year.
However, not every teacher is able to avail or complete the required number of hours of professional development due to barriers like increased workload, limited budget, irrelevant context, lack of time and lack of employer’s support (OECD, 2014). In 2013 TALIS surveyed 107,000 teachers in 30 participating countries and found that an average of 80% of teachers in Japan, Korea and Portugal had clashes with their work schedule while more than 80% of teachers in Italy, Portugal and Spain reported a lack of incentives for participating in PD (OECD, 2014). Further, 44% of teachers, who participated in the TALIS survey considered professional development activities to be too expensive (OECD, 2014).

Provision of formal PD also differed across countries. Countries like France, Germany, Korea, and Spain provided PD to in-service teachers through state agencies involving universities and teacher training institutes. In contrast, other countries like Denmark, Finland, Hungary, Italy, the Netherlands, Norway, Sweden and Switzerland provide PD according to the demand of the schools and they have deregulated the market for PD to non-government agencies, private consultants and training firms for offering PD to teachers (OECD, 2005). While in Bhutan, the Ministry of Education is currently the main provider of PD to teachers.

Participation in PD has changed over time. According to the 2000 PISA survey, the rate of teachers participating in PD was about 40% on average. Then the highest participation rates were in Sweden, Finland, Denmark, Norway and Switzerland having at least 50% of their teachers attending the PD programs and lowest in Italy, Korea, France and Hungary (OECD, 2005). However, the rate of teacher participation in PD was almost 89% on average according to a survey conducted by TALIS in 2007-2008 (OECD, 2009). It was an increase from 40% to 89% and the survey showed that the participation rate for teachers in countries like Korea and Hungary has increased from approximately 30% in 2000 (OECD, 2005) to
90% in 2008 (OECD, 2009). This suggested that PD engagement for teachers has been given major importance by the participating countries.

Similarly, the types of courses have changed over time. The 2005 OECD survey found the highest participation of teachers in PD to be in programs like ‘courses and workshops’ with about 94% and the lowest participation was in a program like ‘observational visits to other schools’ with about 52%. However, OECD (2009) reported that the teacher participation rate in formal PD programs like ‘courses and workshops’ was down to 81% and teachers participated more in informal programs like ‘informal dialogue to improve teaching’ with about 93% participation. Therefore, an ideal situation might be involving teachers in cooperative lesson planning followed by peer-observations and post-lesson discussions which could provide ample opportunity for them to interact among themselves and provide feedback on a common subject. Constructive and fair feedback had a positive effect on teachers’ confidence, teaching practices, job satisfaction and on their feelings of self-efficacy (Khachatryan, 2015; Mansfield & Thompson, 2016; Muijs et al., 2018; OECD, 2014; Parr & Hawe, 2017).

**Impact of Professional Development on Teacher Development and Retention**

It is widely acknowledged that teacher preparation in teacher education colleges or institutes is rarely adequate to meet the new challenges and opportunities of students and communities (Feiman-Nemser, 2001b; Gordon, 2013; Martin et al., 2015; Mizell, 2010; OECD, 2014). On the other hand, Day and Gu (2007) argue that teachers are at greater risk of being less effective at the later phase of their career as they do not necessarily learn through experience. Therefore, teacher professional development is necessary to provide ongoing opportunities for teachers to learn from experts and peers to enhance their content and pedagogical knowledge, enhance self-efficacy and improve their teaching learning practices.
at all stages of their careers (Achinstein & Fogo, 2015; Borko, 2004; Day & Gu, 2007; Richter et al., 2011; Zimmerman et al., 2017).

Participating in PD programs provides teachers with firsthand experiences with new pedagogical approaches that are designed to make teaching and learning more effective (Coldwell, 2017; Zimmerman et al., 2017). They could help teachers feel more confident in implementing new pedagogy and influences their teaching efficacy (Zimmerman et al., 2017). Professional development programs would keep teachers up-to-date with new teaching practices (Niemi, 2015; OECD, 2005) and provide effective learning opportunities for the students, which in turn could contribute effectively to the constantly changing society. Teachers need care, support and access to professional development programs to keep them up-to-date with the recent changes in the curriculum, use of technology, assessment and evaluation of students’ works.

Studies have shown that teachers do not leave the teaching profession due to lack of PD (Coldwell, 2017) but in most countries’ teachers leave the profession largely due to heavy workloads, limited remuneration, and lack of adequate support from the school administration (Ingersoll & Strong, 2011). Access to high-quality PD, however, can decrease teacher burnout and enhance teachers’ commitment to be in the profession for a longer duration (Coldwell, 2017; Zimmerman et al., 2017). It is important to provide meaningful professional development opportunities to both beginning and experienced teachers to support their commitment to stay in the profession for a longer period of time (Bressman et al., 2018; Coldwell, 2017; Zimmerman et al., 2017).

Further, Coldwell (2017) suggested that PD does not determine the length of time teachers stay in their profession. However, those teachers who are strongly engaged in PD programs perceived that PD improved their professional knowledge, increased their
confidence, increased job satisfaction, enhanced classroom practice and thereby increased their intention to stay longer in the profession (Devos, 2010; Ingersoll & Strong, 2011; Richter et al., 2011). Depending on the content or focus of the PD program, it might also influence career progression for the teachers (OECD, 2005). PD programs focused on leadership development might provide opportunities for teachers to engage in leadership roles like school principals or deputy principals (in countries like Greece, UK and Bhutan) and the PD programs focused on subject-specific areas might enable the teachers to obtain promotion within the subject field (Coldwell, 2017; OECD, 2005). While teachers in some countries like Israel and USA are required to complete mandatory PD programs for recertification (OECD, 2005).

An article in Kuensel, Bhutan’s National Newspaper dated 15/04/2017, reported that 200 out of 8605 (2.3%) teachers voluntarily resigned from the teaching force within the first four months of 2017. This is more than the number of teachers who had resigned annually in the previous eight years (Kuensel, 2017). Early intervention, like incorporating mentoring and induction in the schools may have prevented the departure of some of those teachers. Reviews conducted by Ingersoll and Kralik (2004), Ingersoll and Smith (2004), Ingersoll and Strong (2011) suggested that support and assistance for beginning teachers has a positive impact on their commitment and retention. They also indicated that teachers who were mentored during the initial years of teaching were less likely to leave the teaching profession. However, a literature review conducted by Waterman & He (2011) found that the connection between mentoring programs and new teacher retention is inconclusive. They highlighted the complexity of mentoring as a process and the need for investigating questions around mentoring relationships such as “how” and “in what context”. As shown by Kemmis et al. (2014), mentoring can be conceptualised and implemented in different ways and these methods are likely to influence the outcomes for teachers.
The PD programs could be very effective if they focused on clearly articulated priorities, provided ongoing school-based support to classroom teachers, dealt with subject matter as well as suitable instructional strategies and classroom management techniques, and created opportunities for teachers to observe, experience and try new teaching methods (Huang, 2016; OECD, 2005; Villegas-Reimers, 2003).

**Mentoring**

*Mentoring as Professional Development for Teachers*

Creating opportunities for professional development activities within the school can be a relatively inexpensive way of fostering learning and co-operation among teachers. Studies claim that effective professional learning takes place when a program is school-based, incorporated into teachers’ daily work and teacher driven (Hamilton, 2013; Kensington-Miller, 2012; OECD, 2016; Postholm, 2012; Shea et al., 2018).

In a small economy like Bhutan, the government considers ways to negotiate the costs related to professional development programs due to its relatively large number of teachers (9279) (Ministry of Education, 2019) for a small population (727,145) (National Statistics Bureau, 2018). In 2018-2019 financial year, only 1186 participated in NBIP (Ministry of Education, 2019). Hudson (2013) asserts that school-based mentoring provides a cost-effective form of professional development programs for teachers at all levels as it takes place within the school settings by utilising resources like expertise in developing PD programs. A peer mentoring program could help teachers gain new ideas, develop new teaching styles and strategies, enhance their knowledge and use of ICT, improve self-reflective skills, become more confident and develop greater understanding of mentoring (Hobson et al., 2009).
Nevertheless, it is important to consider factors that could influence a successful mentoring program. This can include having trained mentors working with beginning teachers regularly, providing additional administrative support, and allowing frequent interaction between mentor and beginning teachers through formal and informal meetings (Wang et al., 2008). Frequent collaboration among teachers for professional learning has shown great impact on teachers’ self-efficacy (Kwakman, 2003; OECD, 2014; Zimmerman et al., 2017). To maximise the influence of mentoring on beginning teachers, there should be a match by grade level or by subject (Waterman & He, 2011). If mentors are randomly assigned to beginning teachers, they might resent the mentoring program and become counterproductive (McCann & Johannessen, 2005). In addition, Hudson (2016) and Hudson and Hudson (2018) revealed that poor partnering could result in negative outcomes.

**Mentoring as Professional Development for Beginning Teachers**

It is widely accepted that beginning teachers face challenges related to teaching, confidence, self-esteem, belonging to the place and profession, so providing on-site support and guidance is critical during the beginning years of teaching (Boreen & Niday, 2000; Edwards & Nuttall, 2015; Feiman-Nemser, 2001b; Hobson et al., 2009; Hudson, 2012; Ingersoll & Kralik, 2004).

Mentoring plays and an important role in developing beginning teachers’ opportunities to learn within the context of teaching (OECD, 2016). Supporting and guiding beginning teachers has shown positive impact in the areas of commitment, retention, instructional practices, adapting to their school contexts and learning to teach in a consistent way with curriculum standards (Hallam et al., 2012; Ingersoll & Smith, 2004; Ingersoll & Strong, 2011; Wang et al., 2008). School-based mentoring for beginning teachers has played a prominent role in supporting the initial preparation and professional development of
beginning teachers in many parts of the world since the 1980s (Edwards & Nuttall, 2015; European Commission, 2010; Hobson et al., 2009; Richter et al., 2013). The 2013 TALIS survey results showed that around 75% of teachers work in schools whose principals reported that informal induction and mentoring programs were available to new teachers and 50% of the teachers reported that they had participated in formal induction and mentoring programs (OECD, 2014). It was also reported that 60% of the school principals supported mentoring as one of the most influential professional development programs for beginning teachers (OECD, 2014).

Studies have shown that intervention programs like mentoring have helped beginning teachers during the first year of their career in improving the quality of teaching and staying longer in their profession (Gjedia & Gardinier, 2018; Wang et al., 2008). Mentoring could make necessary connections between theory and practice, support the professional and personal growth of beginning teachers (Roehrig et al., 2008) and where experienced teachers fill the role of mentor, mentoring could provide professional development opportunities for experienced teachers as well. Mentoring programs in the form of professional development have helped beginning teachers reduce the feeling of isolation, increased self-confidence and enhanced professional growth (Aslan & Ocal, 2012; Hobson et al., 2009; Richter et al., 2013).

Although, Bhutan Civil Service Rules and Regulation 2018 (BCSR 2018) mandates that “An agency shall assign a mentor for the new employees for a period of one year for proper induction into the Civil Service” pg. 75 (Royal Civil Service Commission, 2018), beginning teachers are left on their own after the introduction and initial orientation to the school system. There is a lack of formal instructional and psychological support, which is a very important component of induction for beginning teachers (Edwards & Nuttall, 2015; Richter et al, 2013). Wang et al. (2008) reported that beginning teachers preferred lesson
observation and lesson-based discussion as components of induction. A peer mentoring program could help beginning teachers in their personal and professional development by enhancing their content knowledge, teaching pedagogy and foster better communication skills. This could be achieved through lesson observation and feedback during the post-lesson discussion meetings. It could also help beginning teachers to develop adequate connection between the theoretical knowledge they learn in colleges of education and practices in school.

**Mentoring as Professional Development for Experienced Teachers**

Mentoring has also shown positive impact on personal and professional development for experienced teachers who take part in a mentoring process (Hobson et al., 2009; Murray et al., 1998; Zuckerman, 2001). They could gain new ideas, learn new and improved teaching styles and strategies, enhance their knowledge and use of ICT (Bressman et al., 2018), improve self-reflective skills and become more confident about self, understand more about mentoring and the needs of beginning teachers (Jewell, 2007; Murray et al., 1998). Experienced teachers, who have taken part in a mentoring process, reported satisfaction and pride when they saw progress in their teaching (Maor & McConney, 2015). In addition, some mentors advanced in their careers as a result of being mentors (Hobson et al., 2009).

Experienced teachers could learn from beginning teachers, as beginning teachers are flexible, hard-working, adaptable, enthusiastic with new ideas, competent in using information communication technologies (ICT), with good communication skills and maintaining positive relationship with students (Ulvik & Langørgen, 2012). Having graduated from recent preservice teacher education, beginning teachers could offer current knowledge, new methods of teaching and a different point of view about various aspects of teaching and learning to their school and to experienced teachers (Ulvik & Langørgen, 2012).
Schools could develop a culture of sharing and building trust among beginning and experienced teachers so that they learn from each other through some initiatives like peer mentoring. This would allow beginning and experienced teachers to come together often for discussion and sharing ideas on teaching and learning practices. In the process, they could develop positive relationship and trust among themselves. However, for this to be effective, schools would need to consider beginning teachers as resources and not some unskilled newcomers (Ulvik & Langørgen, 2012).

*Peer Mentoring*

A study by Richter et al. (2013) distinguished two approaches to mentoring: transmission-oriented and constructivist-oriented. In transmission-oriented mentoring, the mentor assumes the role of an expert and transfers their knowledge to the mentee who is a passive recipient of the knowledge or information (Richter et al., 2013; Salleh & Tan, 2013), with little opportunity for the mentors to have input or respond to the communication from the mentors (Ambrosetti et al., 2017; Clarke, 2006; Salleh & Tan, 2013). This reinforces the hierarchical relationship between the mentor and mentee, which can develop dependency rather than autonomy (Martin, 1995) and constrains development of a mentoring relationship. Moreover, in this top down approach, the mentor leads, advises, directs and assesses the mentee (Richter et al., 2013). It focuses on acclimating beginning teachers to the profession (Bressman et al., 2018).

On the other hand, in constructivist-oriented mentoring, learners construct knowledge by connecting new information to their previous knowledge through social interaction with a mentor, who manages the flow of discussion and provide advice when necessary (Kemmis et al., 2014). The group/pair act as a forum for collective reflection where authentic problems are discussed, analysed and solved together (Kemmis et al., 2014). Pennanen et al.
(2020) informed that the conventional one-to-one mentoring approach has been increasingly replaced with new approaches like peer mentoring, mentoring circles and peer-group mentoring. There has been a shift from “knowledge transmission to knowledge construction, collaborative meaning making and common creation of professional knowledge” (Pennanen et al., 2020, p. 355).

Peer mentoring is based on a constructivist view of learning (Richter et al., 2013). It is like educative mentoring (Feiman-Nemser, 1998) and collaborative self-development (Kemmis et al., 2014) in which the mentors interact with beginning teachers in a way that supports inquiry and enables them to learn from their practices (Strong & Baron, 2004). It involves teachers observing one another's teaching, engaging in a reciprocal relationship of sharing observations and feedback, and working cooperatively to confront issues outside the classroom context and address technical aspects of their professional roles (de Lange & Wittek, 2020; Forbes, 2004; Spezzini et al., 2009). It focuses on localised professional learning, where teachers provide individual or collective support to each other through informal interaction and lesson observations (Hamilton, 2013). Richter et al. (2013) asserted that beginning teachers who experienced constructivist-oriented mentoring showed higher levels of efficacy, teaching enthusiasm, job satisfaction and lower levels of emotional exhaustion. Moreover, teachers learn from each other within their school context (Glazer & Hannafin, 2006; Hamilton, 2013) by sharing knowledge and expertise (Geeraerts et al., 2015; Kemmis et al., 2014; Pennanen et al., 2016; Tirri, 2014). This provides an opportunity to collaborate among teachers of similar field/subjects by sharing and reflecting on their experiences and the challenges they meet at work and apply what they learn within their own school context.

Geeraerts et al. (2015) argue that peer mentoring is based on the ideas of socio-constructivism, dialogue and knowledge sharing. Here the knowledge is constructed based on
prior knowledge, conceptions, experiences and beliefs. The role of peers in peer mentoring is to provide general feedback and help each other determine areas for future growth. Moreover, in peer mentoring the planning of lessons could be done in collaboration with peers or based on the feedback on their previous lessons, so it is non-evaluative in nature and promotes each other’s experimentation and risk taking with different teaching styles and pedagogies.

In peer mentoring the relationship between mentor and mentee is conceptualised as non-hierarchical, equal and reciprocal, where both play the role of mentor and mentee (Kemmis et al., 2014; Pennanen et al., 2016; Wilkinson et al., 2014). It is a professional relationship based on mutual respect, collegiality and trust (Hudson, 2016; Wilkinson et al., 2014). Here the mentor does not act as an expert. In this model, it is important to develop a trusting relationship between the mentor and mentee because the learning is focused on mutual support and growth. Hudson (2016) revealed that it is important to achieve trust and respect between mentor and mentee by sharing information and resources to develop positive relationships. This could be achieved through open communication in a supportive and friendly environment (Hudson, 2016). In addition, de Lange and Wittek (2020) reported that trust is made visible through interactions that support contribution from peers.

Mentees (beginning teachers) construct their own knowledge from their experiences and prior knowledge in conjunction with social interactions with the mentors (experienced teachers), who may manage the flow of discussions and occasionally provide advice if it is appropriate. When beginning teachers work with peers they support each other emotionally by sharing their ups and downs in a supportive atmosphere. They are more likely to feel equal and be able to discuss various issues and concerns even at a personal level. This support helps the beginning teachers to build up more confidence in teaching by reducing stress, isolation and teacher burnout (Nguyen, 2013). Thus, peer mentoring provides a platform for the beginning teachers to take ownership of their work and provide a source of support and co-
learning (Schmidt, 2008).

Different models of peer mentoring have been practiced in various parts of the world to help the personal, professional and emotional growth of teachers: For example, a peer-to-peer observation model was used where teachers employed peer observation to learn from each other (Hamilton, 2013); a one-on-one peer mentoring model was used where teachers focused on sharing content knowledge of the subject (Kensington-Miller, 2012); a peer-group mentoring model was used to support the professional development of teachers (Geeraerts et al., 2015; Kemmis et al., 2014; Tirri, 2014); and a collaborative apprenticeship model was used to encourage peer-teachers to learn and implement new teaching skills and strategies through four developmental phases called introduction, developmental, proficient and mastery (Glazer & Hannafin, 2006).

Results from studies related to these different models implemented in practice, provide evidence that peer mentoring could offer teachers with on-site learning opportunities that were ongoing, accessible, and cost-effective. Further, they could promote an active learning environment to suit individual teacher’s goals and objectives. Moreover, peer mentoring that is set up among teachers teaching similar subjects within the same school could provide teachers the opportunity to meet each other regularly to share their experiences, resources and new ideas more easily (Geeraerts et al., 2015; Glazer & Hannafin, 2006; Hamilton, 2013; Kemmis et al., 2014; Kensington-Miller, 2011, 2012; Shea et al., 2018; Tirri, 2014). The lesson observation carried out by peers were reported to be normally enjoyable and stress-free because the relationships were built on mutual trust with the motive to support each other and to provide feedback to help each other for future development (de Lange & Wittek, 2020; Forbes, 2004).
Benefits of Peer Mentoring

There were several benefits of peer mentoring revealed in the literature. It was not only beneficial to the beginning teachers but teachers with more experience also benefited from this support system (Geeraerts et al., 2015). In peer mentoring, each participant brought their own perspective and knowledge about the topic for discussion. The study conducted by Richter et al. (2013) provided evidence that beginning teachers who experienced constructivist-oriented mentoring or peer mentoring improved their confidence, enabling them to put difficult experiences into perspective, and increased their morale and job satisfaction.

Beginning teachers often struggle with classroom management due to their limited experience in identifying realistic expectations, establishing rules and consequences, and developing effective strategies for responding to student behaviour (Edwards & Nuttall, 2015; Wang et al., 2008). When the efforts to manage the classroom environment do not go according to their intended effect, the beginning teachers shoulder the blame more than the experienced teacher and question their own abilities. Participating in peer mentoring builds confidence and allows teachers to come up with constructive ways to deal with classroom management issues in a supportive and collaborative environment (Forbes, 2004; Hairon & Dimmock, 2012; Nam et al., 2013). The other classroom management issue experienced by beginning teachers was managing time effectively during the lesson. In such circumstances, the participants could discuss the issues and modify their lessons concerning the length of activities, discussions and presentations.

According to Forbe’s (2004) study, participants in peer mentoring helped each other in structuring the lesson in a coherent manner and in organizing the teaching materials for the lesson. They also helped each other in adapting teaching learning strategies according to the needs of the learners. Forbe reported that the high level of anxiety about being observed by
another teacher declined as the participants became immersed in the mentoring process, and they began to welcome the input from discussions about issues associated with observations. The study also reported that the participants had a high level of emotional fulfillment in their collaboration and suggested that the interactions were always friendly and fruitful. One significant area in which peer mentoring provided support was time management. It helped beginning teachers in learning to manage their time and balance their personal and professional life. Often, the beginning teachers were rather sceptical in attempting new instructional strategies to teach certain concepts but involvement in peer mentoring helped the process of risk-taking in attempting new or difficult approaches to instruction (Hendry & Oliver, 2012).

The development of a professional identity as a teacher plays an essential role in enhancing the self-confidence and motivation of new teachers and reinforcing their competencies (Geeraerts et al., 2015). So, provision of emotional support during the first year of teaching is essential to develop the self-confidence and motivation of a beginning teacher. In peer mentoring the participants provide each other with emotional support by sharing their success and failures because their relationship is based on an equal relationship with another teacher with whom they could discuss any issues or concerns. They are usually equal in terms of, expertise, power, and hierarchical status (Nguyen, 2013). They are able to talk freely and openly in this type of relationship, which helped in reducing stress during the early years of teaching.

**Challenges of Peer Mentoring**

Peer mentoring encourages peer dialogues and experience sharing to enhance the professional development of beginning and experienced teachers (Heikkinen et al., 2012). By sharing and discussing the issues related to teaching, the participants can better understand
the difficulties of teaching (Kriewaldt et al., 2018; Mansfield & Thompson, 2016; Pennanen et al., 2020; Windsor et al., 2020). But however beneficial, the peer mentoring model has some limitations.

The aim of peer mentoring is to include and provide equal opportunity to all the members of the group to observe the lessons of their peers, reflect critically and share their perceptions in a collegial manner (Forbes, 2004; Heikkinen et al., 2012; Kensington-Miller, 2012) during a team meeting. In this scenario both mentors and mentees benefit from the process of mentoring (Maor & McConney, 2015). However, confidentiality and trust issues may arise in this regard and assurance may be needed from members that nothing that is said during the mentoring process would be used against them by members of the group, including the experienced teacher. Obtaining assurance from all the participants before the beginning of the mentoring process would be beneficial to maintain the notion of privacy and confidentiality.

In peer mentoring, both the beginning and experienced teachers are encouraged to assume the role of a mentor and mentee: however, the experienced teacher would manage the peer mentoring process of his/her group. As a result, the experienced teacher as mentor, needs experience, high self-esteem and readiness to act as group leader when necessary (Heikkinen et al., 2012). Without any support and training, the experienced teacher may not be able to deal with certain situations in a constructive way within the group process. According to Aspfors and Fransson (2015), mentor education in mentoring beginning teachers is very important to address the ethics of guidance, themes related to interaction and the collective meaning-making process.

Grouping in peer mentoring could be based on similar teaching subjects and not on the familiarity and comfortability of the participants. This may be suitable for some to share the content knowledge of their subject, but it may constrain them from being open and
talking freely. Moreover, this could restrict them from gaining expertise related to teaching methods/pedagogy from other teachers in the school (Geeraerts et al., 2015). Only observing those familiar teachers may also limit what a teacher may observe and learn from colleagues with whom they are less familiar (Hamilton, 2013).

**Lesson Observation and Feedback**

Lesson observation is the process of observing others’ teaching, with the overall aim of improving their teaching practices (Bowe & Gore, 2017; Dos Santos, 2016; Gore et al., 2015, 2017; Hendry & Oliver, 2012). According to Kim & Silver (2016), O’Leary, (2012), and Dos Santos (2016) it is one of the best ways to reflect a teacher’s own teaching by observing others and receiving specific feedback from the observers. Additionally, Hamilton (2013) claimed that it enhances confidence, promotes reflective thinking and builds collegial atmosphere. Besides, it provides a platform for teachers to collaborate, discuss and disseminate new ideas and good practices with each other. Providing constructive and fair feedback has a positive effect on teachers’ job satisfaction and self-efficacy (OECD, 2014). Feedback sessions encourage teachers to actively engage in understanding others’ points of view through listening, questioning and suspending judgement (Hadar & Brody, 2016). However, it is important to regard feedback as a tool to improve teaching practices and in turn to improve student learning outcomes (Darling-Hammond, 2000; Muijs et al., 2018; OECD, 2014). Nearly 80% of the teachers across TALIS participating countries, on average, reported that they received feedback following classroom observation (OECD, 2014) and this helped them in improving their teaching (Timperley, 2015).

A study by Hamilton (2013), indicated that peer to peer observation gave many teachers choice, on-site learning opportunities and increased collegial respect. In addition,
Hendry and Oliver (2012), identified four benefits of participating in peer observation. They were: (a) learning how to use new strategies by watching; (b) gaining affirmation of current practice by watching; (c) seeing things as not too difficult to do; and (d) learning from feedback given by the observer. While in a traditional one to one mentoring, Parr and Hawe (2017) highlighted the difficulty of being the sole “judge” and “source of knowledge” to “tell” the teacher what they think about their teaching.

Preservice teachers often engage in professional conversation with the university lecturers, mentor teachers and colleagues during lesson observations and feedback sessions. However, the professional conversations become limited once they assume the role of a full time teacher and the observations often became supervisory and for administrative purpose only (Dos Santos, 2016; Khachatryan, 2015). It is important to consider lesson observations and feedback as a means for both beginning and experienced teachers to enhance their teaching and learning practices (Muijs et al., 2018; O’Leary, 2012). Further, van der Lans et al., (2016) reported that increasing the number of lesson observations and peer observers increases the reliability of teacher effectiveness.

Many teachers, including experienced teachers are not always aware of their teaching and their interaction with students. Lack of valid and accurate information about classroom instruction could hinder teachers’ professional growth (Hamilton, 2013; Muijs et al., 2018). Therefore, feedback from classroom observation is a practical and effective means of providing teachers with the information they need about their classroom behaviour. It enables teachers to reflect critically (Darling-Hammond et al., 2009) on their own teaching experiences and develop self-awareness to improve their classroom instruction (de Paor, 2019). Feedback sessions would stimulate dialogue and discussion among the teachers.
regarding their strengths and weaknesses in teaching and consequently make desirable changes to their teaching and learning practices (Parr & Hawe, 2017).

However, it is important for teachers to receive reliable and authentic feedback to enhance their teaching practices (van der Lans et al., 2016). A study conducted by Windsor et al. (2020), reported that using evidence-informed feedback on teaching practice that encouraged and supported post-lesson discussion led to growth in teachers’ practices. Thus, observing lessons by multiple observers and providing feedback in a group discussion could address the reliability and validity concerns (van der Lans et al., 2016). In addition, joint observations involving multiple people flattened hierarchical perceptions and provided conditions for the development of collegial exchanges (MacDougall et al., 2013). Such discussions could provide teachers with deeper insight into student learning and prompt them to adjust in terms of both content and pedagogy in future lessons (Shea et al., 2018).

Summary

The literature reviewed in this chapter highlighted concepts and issues to an investigation of the development of peer mentoring as a school-based professional development program for teachers in Bhutan. Professional development is conceptualised as the process of development of person’s professional role and for teachers it begins with initial teacher preparation courses and continues throughout their tenure. Different types of teacher PD are developed and implemented for various purposes around the world, including workshops, seminars, induction, mentoring, discussion with colleagues, reading, lesson observation and feedback. However, it is understood that there is no one form of PD that could be implemented in every institution or context. The requirement for teacher participation in PD in different countries ranges from zero to 169 hours in a year. Studies suggest that teachers who strongly engage in PD programs have enhanced professional
knowledge, confidence, job satisfaction, classroom practices and intention to stay longer in
the profession.

School-based professional development programs like peer mentoring is a cost-effective way to foster learning cooperatively among teachers. Engaging in peer mentoring program helps teachers develop personally and professionally. It helps beginning teachers reduce feeling of isolation, increase self-confidence and enhance professional growth. On the other hand, experienced teachers engaged in peer mentoring program learn new and improved teaching styles, improve reflective skills, enhance their teaching and may advance their careers. Ideally, peer mentoring focusses on learning through sharing in an enjoyable and stress-free environment because the relationship is built on trust with an intention to support each other in developing their teaching and learning practices. However, there are challenges related to maintaining confidentiality of the conversations and provision of non-judgemental feedback during the post-lesson discussion.

Lesson observations and post-lesson discussion meetings is a platform for teachers to collaborate, discuss and disseminate new ideas of teaching practices with each other. Moreover, observing other teachers’ lessons and receiving feedback from observers is one of the best ways to reflect teachers’ own teaching. Observing lessons by multiple observers addresses the reliability and validity concerns of the feedback. The following chapter outlines the theoretical framework and research design incorporated in this study.
CHAPTER 3

Methodology

The purpose of this research was to investigate the development of a peer mentoring model for teachers in Bhutan. The peer mentoring focused on school-based professional development, where beginning and experienced teachers supported each other through lesson observations and providing feedback during the post-lesson discussion meetings. The methodology for the study needed to enable an understanding of teachers’ experiences related to peer mentoring and how it supported the development of a professional learning community.

This chapter examines the theoretical and methodological considerations underpinning this research. The first section discusses the social constructivist perspective in relation to its appropriateness for the study on peer mentoring which encourages exchange of ideas and joint knowledge construction through social interaction based on prior knowledge and experiences (Heikkinen et al., 2012; Korhonen et al., 2017; Richter et al., 2013). The next section examines the description of the research design and the relevance of qualitative methodology for the study. Further, it also discusses the selection of schools as the research sites and the recruitment and selection of participants. Finally, the chapter explains the data collection methods and data analysis strategies used in this research.

The research was designed to address the following central research question:

In what ways can peer mentoring program support the development of a professional learning community of beginning and experienced teachers in Bhutan?

More specifically, the study focused on the following sub questions:

How do teachers experience peer mentoring and in what ways do the experiences of beginning and experienced teachers differ?
In what ways do observations and discussions as a part of peer mentoring support the development of a professional learning community?

**Theoretical Framework**

A focus of this study was investigating beginning and experienced teachers’ experiences of peer mentoring and what they learned through interacting with each other. Thus, a social constructivist perspective was adopted as a theoretical foundation for the research and the development of peer mentoring. The perspective has its origin in the work of child development psychologists Piaget (1983) and Vygotsky (1978), and learning theorists like Bruner (Wood et al., 1976). A common emphasis is that learning is an active and social process, with reality constructed through shared social activity with others rather than pre-existing, and knowledge constructed through these cultural and social means (Vygotsky, 1978).

Social constructivism suggests that learning experiences are constructive and cumulative through collaboration between learners and knowledge is co-constructed by those who share similar learning situations (Lincoln & Guba, 1985). This involves interaction between people within an environment that favours knowledge sharing, collaboration and reflection to solve problems. Peer interaction during peer mentoring could enable peers to share and build on each other’s experiences and understanding to co-construct meaning (Heikkinen et al., 2018; Hobson et al., 2019; Ingersoll & Smith, 2004; Korhonen et al., 2017). Using a social constructivist perspective would help in understanding what is learned by the beginning and experienced teachers during peer mentoring.

Further, social constructivism asserts that individuals construct their own reality of the world around them and make sense of their own experiences (Hatch, 2002; Lincoln & Guba, 2013). However, it is dependent on the social and cultural conditions of the society in which one lives (Grbich, 2007; Patton, 2015). This study provided a platform that encouraged both
beginning and experienced teachers to engage in lesson observations and discussions to share their experiences and learn from each other during peer mentoring. During the conversation and interaction with each other, both the beginning and experienced teachers would exhibit certain understanding of the skills and knowledge that are inherent in becoming an effective teacher and add to their knowledge. There are opportunities for questioning, clarifying, reflecting and exchange of ideas for joint knowledge construction to take place, which would benefit both the beginning and experienced teachers (Heikkinen et al., 2012; Korhonen et al., 2017; Richter et al., 2013).

**Research Design**

To understand the experiences of the teachers on peer mentoring, the study was predominantly qualitative with multiple methods. Qualitative research is chosen with the aim to explore the problem or an issue (Creswell, 2007) or understand how people cope in the real-world settings (Yin, 2015). This study explored the authentic perceptions and experiences about peer mentoring as a school-based professional development program for school teachers in Bhutan. It also explored the possibilities of developing a professional learning community that could enhance professionalism among the teachers in Bhutan.

Moreover, there is very limited research conducted in the Bhutanese educational context and particularly on teachers’ experiences on peer mentoring. Qualitative research is appropriate as it allows the researcher to gain different views and perspectives of the people (Creswell, 2007; Yin, 2015). This study explored various experiences of peer mentoring by the beginning and experienced teachers, the impact it had on their professional and personal development, and the factors that encouraged or constrained them from integrating peer mentoring in their day to day teaching and learning.
Including multiple sources of evidence rather than relying on a single source provided an opportunity to triangulate different sources (Yin, 2015). The multiple source of data collection used in this study were: (a) a survey (pre-peer mentoring); (b) observation notes maintained by the participants (during the mentoring program); (c) semi-structured interviews of beginning and experienced teachers (near the end of the research component of the mentoring program); and (d) the researcher’s onsite observation notes. These are detailed in this chapter.

**Schools Selection (Research Site)**

The research design was to include participants from four schools where there were beginning and experienced teachers teaching similar subject areas. Initially, I anticipated including four schools from four different districts that I was familiar with and where I had worked during my twelve years tenure as a civil servant in Bhutan. After my initial inquiry, three schools out of the four had to be excluded mainly due to non-availability of enough beginning teachers to fulfill the criteria for the peer mentoring program. For the purpose of this study, the participant selection criteria were set as follow: (a) beginning teachers, those teachers who have been teaching for less than five years; (b) experienced teachers, those teachers who have been teaching for more than five years; and (c) beginning and experienced teachers must be teaching similar subject area (Science, Maths, English, or Arts) in the same school. Only one of the schools had teachers that met the participant selection criteria and could form one peer mentoring group. The next option was to contact nine middle and higher secondary schools in that district. Choosing schools from the same district would ease travelling time between schools, especially if they were close to motorable roads.

An application to the Director General, Ministry of Education, Bhutan was submitted for permission to conduct my research (see Appendix A). After obtaining approval from the
Director General (see Appendix B) I wrote emails to nine middle and higher secondary school principals (see Appendix C) of the same district to gain permission to conduct my research. Most of the school principals responded positively to my proposal but unfortunately five out of nine schools were excluded due to the lack of beginning teachers or insufficient number of beginning teachers that met the participant selection criteria. Four schools appropriately qualified as participating schools for my research.

**Participants Selection**

After seeking an approval from the Ministry of Education and school principals for conducting the proposed study, the school principals provided a list of beginning and experienced teachers as potential participants for my research after each had consented to be contacted. I sought an expression of interest from ten beginning teachers via email to participate in the proposed study. After receiving consent from the beginning teachers, I sought an expression of interest from the experienced teachers of the same school via email. From there, I narrowed down my selection to twelve participants (four experienced and eight beginning teachers) based on the participant selection criteria.

For this peer mentoring, I grouped three teachers as peers, comprising of two beginning teachers and one experienced teacher teaching similar subjects in the same school. Teachers teaching Biology, Chemistry and Physics were grouped as a Science Group and teachers teaching History and Geography were grouped as an Arts Group. In the four participating schools, I had three Science groups and one Arts group but no Maths or English groups. This was mainly due to the non-availability of enough beginning teachers who fulfilled the participant selection criteria.

The following Table 3.1 lists the participants (using pseudonym) in their groups, teaching subject area and teaching experience.
Table 3.1
Participant Information

<table>
<thead>
<tr>
<th>School</th>
<th>Participants</th>
<th>Subject area</th>
<th>Experience (no. of years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School1</td>
<td>Dechen</td>
<td>Arts</td>
<td>More than 5</td>
</tr>
<tr>
<td></td>
<td>Delha</td>
<td></td>
<td>Less than 1</td>
</tr>
<tr>
<td></td>
<td>Chojay</td>
<td></td>
<td>Less than 1</td>
</tr>
<tr>
<td>School2</td>
<td>Pema</td>
<td></td>
<td>More than 10</td>
</tr>
<tr>
<td></td>
<td>Tshering</td>
<td>Science</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Singye</td>
<td></td>
<td>Less than 1</td>
</tr>
<tr>
<td>School3</td>
<td>Jampel</td>
<td></td>
<td>More than 10</td>
</tr>
<tr>
<td></td>
<td>Sonam</td>
<td>Science</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Puran</td>
<td></td>
<td>Less than 1</td>
</tr>
<tr>
<td>School4</td>
<td>Lhaden</td>
<td></td>
<td>More than 10</td>
</tr>
<tr>
<td></td>
<td>Norling</td>
<td>Science</td>
<td>Less than 5</td>
</tr>
<tr>
<td></td>
<td>Seyum</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Data Collection

The different data gathering methods used in this study are described in this section. They are survey, observation notes maintained by the participants, semi-structured interviews of beginning and experienced teachers and researcher’s onsite observation notes. These methods were carried out to obtain deeper understanding of teachers’ experiences of the school-level monitoring system and peer mentoring. Further, this would also help in understanding the impact of observations and discussions in developing a professional learning community.
Survey (Pre-peer mentoring)

The survey was developed to gain an understanding of current school-based professional development activities in the school and teachers’ expectations of peer mentoring. It comprised of closed-ended and open-ended questions (see Appendix D). Four of eighteen questions were related to the school-level monitoring system in Bhutan and were aimed to provide the researcher with information about the current school-level monitoring system. Questions related to whether it involved lesson observations and feedback sessions and whether teachers had opportunities to observe other teachers in the school. Other questions were aimed at acquiring information about the expectations and experiences of the beginning teachers and in obtaining details of any professional development activities they had attended or were offered at their school. The survey was sent to twelve selected participants via email and they were requested to complete the survey and send to the researcher via email. Their responses would be reserved within the knowledge of the researcher only. The survey was analysed in Microsoft Excel application, see Appendix E for the details of the analysis report. Their responses helped in the development of the peer mentoring program.

Lesson Observation Notes (during peer mentoring)

The observation notes provided information about the focus of observation and discussion points, which provided some understanding of the social and instructional support provided by the peers to each other over the time of the peer mentoring. To support and guide lesson observations and post-lesson discussion during peer mentoring, the participants used the Teacher Tracker Tool (T3) (see explanation in Chapter 4: The peer mentoring: An Intervention). They noted their observation and post-lesson discussion points including the feedback provided to the teacher being observed. The participants also included a factual log
of events and any significant incidents that occurred during the peer mentoring. Each observer used the T3 tool on their personal laptops or a printed version. A copy of each set of observation notes was sent to the researcher via email.

Semi-structured Interview (near the end of peer mentoring)

To understand teachers’ experiences of the peer mentoring program and how it helped in developing a professional learning community, a face to face semi-structured interview was conducted with each participant (see Appendix F). The peer mentoring was implemented between regular school activities, participants of peer mentoring also engaged in school-level monitoring system alongside. Therefore, they were asked to describe, explain and share their perceptions of the current school-level monitoring system, their experiences of peer mentoring and any personal and professional support gained from taking part in the peer mentoring program. Interviews focused on the personal experiences as a beginning or experienced teacher. It included questions that prompted them to share how they perceived that their teaching has been influenced by involvement in peer mentoring. Specific questions included: (a) what do you think about the peer mentoring program as an experienced/beginning teacher?; (b) how is peer mentoring different from the current school-level monitoring system?; (c) In what ways has the experience of peer mentoring affected your teaching and learning? The interview was conducted in a place suitable to the participants (e.g., classroom, conference room) for about 45-60 minutes. The participants were informed that they could stop the interview at any time and hold the right to refuse to answer any specific questions if they did not wish to answer. The interviews were conducted in English and audio recorded with the permission from the participants. It was later transcribed by the researcher.
Researcher’s Onsite Observation (near the end of peer mentoring)

To gain a better understanding of the participants’ perspectives and engagement in peer conversations, the researcher observed participants’ interaction (two in each school) during the lesson observations and lesson discussions. Conversations were audio taped with the permission from the participants and transcribed later. Most observations undertaken during the school visits were focused on the participants’ interaction with each other during the post-lesson discussion and how the nature of their discussions led to the development of a professional learning community. The extracts from the detailed description of the observation notes written by the researcher was used during the interviews. The researcher observed all interactive activities that participants were engaged during the school visit. The privacy and confidentiality of the participants was respected at all times.

Ethical Considerations

This section discusses the process of providing information about the research, obtaining consent and ensuring anonymity. Information regarding confidentiality and access to data is also presented. The process was to ensure that the research, involving human participants, complied with relevant standards and was conducted with the highest possible ethical integrity.

The ethics approval was obtained from Murdoch University Human Research Ethics (see Appendix G) and then the permission for conducting the research with the teachers in Bhutan was sought from the Director General, Department of School Education, Ministry of Education, Bhutan. Following which, the researcher contacted the school principals to seek permission for their school as a possible research site. Principals were assured of the confidentiality and anonymity of the participants and schools. As soon as the principals granted their approval and the list of potential research participants were received, the
researcher contacted the teachers (beginning and experienced) to seek their expression of interest for their participation in the proposed study. An information letter (see Appendix H) outlining the research was developed and sent to the potential participants to be read before they signed a consent form (see Appendix I) for their record as well as for the researcher. Participants were also assured of their confidentiality and anonymity throughout their participation in the research by providing pseudonyms.

All the semi-structured interviews were transcribed using pseudonyms for the participating schools (School1, School2, School3, School4) as well as the participants to provide anonymity. The pseudonyms for the participants were suggested by the participants themselves. The names address and other identifying information were kept in a secured place and not revealed to anyone without the participants’ consent. Confidentiality was also maintained by keeping all the data on a password protected computer under the researcher’s care.

Data Analysis

This section presents the analysis of the data gathered during the research. This research adopted Braun and Clarke’s (2006) six phases of thematic analysis approach. This approach offers a clear and usable framework for doing thematic analysis. According to Braun and Clarke (2006), thematic analysis is a qualitative analytic method for systematically identifying, analysing and reporting insights into patterns of meaning (themes) across a data set. A theme captures something important in relation to the research questions (Braun & Clarke, 2006). The six phases of thematic analysis are shown in Table 3.2.
Table 3.2

Phases of Thematic Analysis (Braun & Clarke, 2006, p. 87)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description of the process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarising yourself with your data</td>
<td>Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.</td>
</tr>
<tr>
<td>2. Generating initial codes</td>
<td>Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.</td>
</tr>
<tr>
<td>3. Searching for themes</td>
<td>Collating codes into potential themes, gathering all data relevant to each potential theme.</td>
</tr>
<tr>
<td>4. Reviewing themes</td>
<td>Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic ‘map’ of the analysis.</td>
</tr>
<tr>
<td>5. Defining and naming themes</td>
<td>Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.</td>
</tr>
<tr>
<td>6. Producing the report</td>
<td>The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.</td>
</tr>
</tbody>
</table>

**Familiarising Yourself With Your Data**

This phase involved familiarising with the depth and breadth of the data by reading and re-reading the transcripts. The interviews of the individuals were collected in the form of
audio recordings and these recordings were transcribed by the researcher. The process of transcription was done by listening to the audio recordings carefully and writing the responses down in Microsoft word processor. While doing so, it provided an opportunity for the researcher to be immersed in the data and be fully aware of each of the respondent’s point of view. It was an excellent way of becoming familiar with the data (Braun & Clarke, 2006). While coming across incomplete sentences, pauses and comments during the transcription phase, interruptions were included without changing the overall meaning or expressions desired by the participants. The transcripts were sent to individual participants for validation via email. After receiving positive responses and without having to add or change anything with transcriptions the transcribed data were read carefully, line by line to understand the overall meaning and gain familiarity with their responses. An extract of data transcription for a short segment of data is shown in Appendix J.

**Generating Initial Codes**

In this phase, codes were produced thus reducing data into small chunks and organising data in a meaningful and systematic way. Each of the transcribed interview questions and responses were transferred to a cell in a Microsoft Excel application and while doing that, headings were written down to describe all aspects of the content. Each sentence or group of sentences of the interview transcripts were assigned with codes, which identified an interesting feature of the data (Braun & Clarke 2006). This included words or short phrases used to describe the selected data from the responses to questions asked during semi-structured interviews. Similarly, the observation notes maintained by the researcher were read thoroughly to identify the statements that were relevant to the research questions being studied and assigned codes. Finally, the lesson observation sheets maintained by the participants during lesson observation and post-lesson discussion were read to look for
similar statements maintained in the researcher’s notes and were grouped under similar codes. Anything unfamiliar or different statements were noted and assigned a new code. The Table 3.3 shows an example of codes generated for a short segment of data.

**Table 3.3**

*Generating Codes*

<table>
<thead>
<tr>
<th>Responses</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant: We did not have any discussion about that before observation, we didn’t discuss about the teaching skills or methods as well as what to teach in the next lesson. So, we just prepared the lesson which was to be continued normally in the next session whether there is an observation or not.</td>
<td>No discussion about teaching skills or methods before observation/during planning</td>
</tr>
<tr>
<td></td>
<td>Prepared lessons individually</td>
</tr>
<tr>
<td>Participant: I feel that it would have been better if I had discussed with them because we have one senior teacher who is experienced as well my friend who is also good in teaching. So, it would have been better, but I couldn’t do it because of the time constraint as well as the location of where I am living right now. I am five kilometres away from the school and as soon as the school is over, I have to start towards home and in the morning also I have to start quite early from home. Without personal car or bike, I have to walk, and public transportation is also not there. Due to this I could not do it very often. And in school I have teach, correct homework, class works and no time at all sir.</td>
<td>Regret not discussing with peers</td>
</tr>
<tr>
<td></td>
<td>Would have helped</td>
</tr>
<tr>
<td></td>
<td>Time constraint</td>
</tr>
<tr>
<td></td>
<td>Staying far from school</td>
</tr>
<tr>
<td></td>
<td>Don’t have bike or car, no public transport</td>
</tr>
<tr>
<td></td>
<td>Busy with teaching, classwork and homework correction during school time</td>
</tr>
</tbody>
</table>
**Searching for Themes**

This phase involved sorting all the different codes into specific themes once all the data had been coded and collated (Braun & Clarke 2006). In this step of coding process, the integration of data took place, where clusters of similarly coded units were regrouped under a higher order category to reduce the number of codes and assigned a more conceptual name. These themes captured something significant or interesting about the data or research questions (Braun & Clarke, 2006). Then a new list of categories were worked through and very similar ones were removed. Towards the end of this step, the categories that were similar or somehow close to each other were put under overall themes. The Table 3.4 shows the initial themes that are identified to a short segment of data.

**Table 3.4**

*Generating Initial Themes*

<table>
<thead>
<tr>
<th>Code</th>
<th>Initial theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>No discussion about teaching skills or methods before observation/during planning</td>
<td>No shared experience</td>
</tr>
<tr>
<td>Prepared lessons individually</td>
<td></td>
</tr>
<tr>
<td>Regret not discussing with peers</td>
<td>Sharing experiences</td>
</tr>
<tr>
<td>Would have helped</td>
<td></td>
</tr>
<tr>
<td>Time constraint</td>
<td>Problems of beginning teachers</td>
</tr>
<tr>
<td>Staying far from school</td>
<td>Issues of beginning teacher</td>
</tr>
<tr>
<td>Don’t have bike or car, no public transport</td>
<td></td>
</tr>
<tr>
<td>Busy with teaching, classwork and homework correction during school time</td>
<td></td>
</tr>
<tr>
<td>Gained lots of confidence</td>
<td>Advantage of lesson observation</td>
</tr>
<tr>
<td>Helped in preparing my lessons well</td>
<td></td>
</tr>
<tr>
<td>Learned to plan lesson in detail</td>
<td></td>
</tr>
<tr>
<td>Helped students to understand better</td>
<td></td>
</tr>
<tr>
<td>Confidence, audibility, board management, student activities as well as use of questioning skills, use of ques, writing difficult concepts.</td>
<td>Positive feedback</td>
</tr>
<tr>
<td></td>
<td>Negative feedback</td>
</tr>
<tr>
<td></td>
<td>Post-lesson discussion</td>
</tr>
</tbody>
</table>
Reviewing Themes

In this phase the refinement of initial themes took place. It was considered whether the identified initial themes worked in the level of coded data extracts or in the context of the entire data set. Thus all the data associated with each theme was read and considered as to the validity of each theme in relation to the data set. Some of the initial themes collapsed into each other and formed one theme and the ones that are not coherent with the data set had to be reworked to form a new theme or discarded them from analysis (Braun & Clarke, 2006).

For example, the initial themes like sharing experiences and learning from others were collapsed under an overarching theme developing a culture of professional learning. Similarly, the initial themes like advantage of lesson observation and positive/negative feedback were put under an overarching theme impact on teaching and learning practices. These overarching themes were identified during the literature review or related to the theoretical framework, thus the thematic analysis was both inductive and deductive.

Defining and Naming Theme

According to Braun and Clarke (2006), define and refine means “identifying the essence of what each theme is about and determining what aspect of the data each theme captures” (p. 92). It includes what the theme is saying? How are the initial themes related to each other and to the overarching theme? Four main themes were identified in this study, they are: (a) differences between school-level monitoring system and peer mentoring; (b) impact on teaching learning practices; (c) developing a culture of professional learning community; and (d) challenges of peer mentoring. Table 3.5 and Figure 3.1 illustrates the final thematic mapping for two of the four main themes identified in this study.
Table 3.5

Generating Main Themes

<table>
<thead>
<tr>
<th>Initial theme</th>
<th>Main theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing experiences</td>
<td>Developing a culture of professional learning</td>
</tr>
<tr>
<td>Problems of beginning teachers</td>
<td>Developing a culture of professional learning</td>
</tr>
<tr>
<td>Issues of beginning teacher</td>
<td>Challenges of peer mentoring</td>
</tr>
<tr>
<td>Advantage of lesson observation</td>
<td>Impact on teaching learning practices</td>
</tr>
<tr>
<td>Positive feedback</td>
<td>Impact on teaching learning practices</td>
</tr>
<tr>
<td>Negative feedback</td>
<td>Impact on teaching learning practices</td>
</tr>
<tr>
<td>Post-lesson discussion</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3.1 Final Thematic Map (Showing Two of the Four Main Themes)

Producing the Report

This phase involved the final analysis and writing of the report. The report of the data analysis is presented in chapter 5, Results.

All the emerging themes summarised the experiences of peer mentoring by the participants and whether the observations and the discussions throughout peer mentoring led
to the development of a professional learning community. Throughout the analysis, the researcher avoided misinterpretations by remaining honest to the original transcripts and their contexts and by using them as evidence for interpretations so that anyone can assess their authenticity and credibility.

**Triangulation of Data**

Triangulation facilitates the validation of data through cross verification from more than two sources of data (Miles & Huberman, 1994). It also tests the validity, authenticity and credibility of the findings obtained through different methods of data collection. Moreover, researchers assert that if data from two or more sources converge on the same information, the likelihood of error is reduced. In this research, the multiple data collection methods like the pre-peer mentoring survey, the semi-structured interview of teachers, researcher’s observation notes and the observation notes maintained by the teachers, were designed not only to provide broad and deep understanding of the experiences of peer mentoring by the teachers but to strengthen the study through triangulation.

**Summary**

A social constructivist perspective was adopted as the theoretical framework, which posits that knowledge is co-constructed through social interaction within those who share similar learning situations. Teacher participants were selected from four schools in Bhutan, and four different data collection methods were used, allowing for triangulation of the data. All obligatory approvals for the research were obtained from Murdoch University, the Ministry of Education in Bhutan, school principals and the participants. Finally, the data analysis used Braun and Clarke’s (2006) six phases of thematic analysis to form the main themes. The development of the peer mentoring process is presented in the following chapter.
CHAPTER 4

Peer Mentoring: An Intervention

Teachers are consistently cited as the most significant factor influencing student outcomes. Thus, it is important to continuously support teachers throughout their career to reflect upon their teaching and critique their practice. This would improve the quality of their teaching and in turn improve student outcomes (OECD, 2005). It is important to initiate and engage teachers in various professional development activities to promote their knowledge and skills (Avalos, 2011).

In Bhutan, the Ministry of Education organises and funds various professional development programs for teachers. These include workshops, conferences and seminars both within and outside the country but due to the large number of teachers and limited funds most of the teachers do not get these opportunities to avail themselves of such professional development programs. However, the Ministry of Education instructs individual schools to organise school-based professional development programs to support and promote the knowledge and skills of teachers. It includes faculty meetings, committee meetings, exchange programs and lesson observations. Research has shown that school-based professional development programs offer opportunities for teachers to apply what they learn on-site within their own school contexts (Hamilton, 2013).

As explained in Chapter 1, the school-based monitoring system in Bhutanese schools follows the hierarchical order of observation without systematic follow up, structure or standards of lesson observation. They provide limited collaboration among the teachers and are often conducted to fulfil the administrative formality of a school or department. The introduction of peer mentoring aimed to support teachers to collaborate among themselves through lesson observations and discussions.
In this chapter, the development and implementation of the peer mentoring program is explained. The chapter begins with outlining the general aims and objectives of the peer mentoring program including the basis for forming groups of three teachers (two beginning and one experienced) as peers. It is followed by describing the use of the integrative pedagogy model in organising lesson observations and post-lesson discussion during the observation rounds. Finally, to assist the teachers during the observation rounds, the implementation of a lesson observation tool, the Teacher Tracker Tool (T3), adapted from the work of Kriewaldt and colleagues (Kriewaldt et al., 2018) is explained.

The Peer Mentoring Program

The general aim of the peer mentoring program was to provide school-based professional development opportunities for teachers, in which they could interact with each other during lesson observations and post-lesson discussion. Building on social constructivism, the peer mentoring program sought to:

- Provide opportunities for teachers to interact with each other
- Provide constructive experience for beginning teachers
- Enhance the teaching and learning practices of teachers
- Develop a professional learning community

It was designed to benefit not only the beginning teachers but also the teachers with more experience. It aimed to support and help the beginning teachers overcome personal, professional and instructional needs during the initial years of their career. In addition, it could also make differences in the ability of new teachers to understand the school culture and assist in transitioning into a new school community. Moreover, it could help experienced teachers collaborate with beginning teachers and re-consider their own teaching practices.
Thus for peer mentoring, a group of three teachers as peers was formed, comprising two beginning teachers and one experienced teacher teaching similar subject (e.g., Science, Maths, English, Arts) in the same school. According to Kriewaldt et. al (2018), a group of three teachers supported higher quality dialogues among the members.

Peer mentoring is underpinned by social constructivism as it enables the promotion of learning and sharing expertise among the beginning and experienced teachers to build a professional learning community. In the peer mentoring, learning takes place by examining the current practices through respectful interactive relationships between the beginning and more experienced teachers by exchanging ideas and providing critical feedback during the post-lesson discussion meetings. Therefore, this study adapted the integrative pedagogy model (Heikkinen et al., 2012; Tynjälä, 2008) to develop a professional learning community. The adapted model of integrative pedagogy is presented in the following section.

**Integrative Pedagogy Model**

This model constitutes four basic elements of professional expertise (Heikkinen et al., 2012; Tynjälä, 2008), and each of these elements can be related to peer mentoring. The first is theoretical and conceptual knowledge, which is the knowledge learned through texts (printed or digital), figures, discussions or lectures. The second is practical and experimental knowledge, also called procedural knowledge which is gained through personal experiences and through social interaction. It is a knowledge of how specific things are done. The arrow between theoretical and practical knowledge show the importance of interaction between the two types of knowledge. It signifies the transformation of theoretical knowledge into practical experiences and the explication and conceptualisation of practical knowledge gained from work experiences. The third element is self-regulative knowledge, it includes metacognitive and reflective skills. It consists of a strong self-regulation of one’s own
activities and being aware of one’s own strengths and weaknesses. This can be achieved by reflecting the feedback provided by the observers during the post-lesson discussion. The arrow between theoretical and self-regulative knowledge, practical and self-regulative knowledge signifies that development of self-regulative knowledge requires reflection of their own theoretical and practical knowledge. The fourth element is socio-cultural knowledge, it is the knowledge embedded in every workplace and social community, which has its own traditions, culture and practices and that can be learned only by becoming involved in it. In this model the ovals are enclosed by a circle as it represents the integration of four elements into peer mentoring that contributes towards developing a culture of professional learning.

Peer mentoring is a mediating process that uses the mediating tools of writing (lesson preparation, observation notes), observing and discussing to further develop teachers’ theoretical, conceptual and content knowledge (see Figure 4.1). Theoretical and conceptual knowledge constituted as the content knowledge of their teaching subjects, teaching pedagogies (skills and strategies) learned in the colleges of education or through other professional development programs in the school, is be explicated, conceptualised and transformed through the peer mentoring process. The teachers build on content knowledge from previous studies, through lesson preparation, classroom teaching using various teaching skills and strategies and mediated through feedback from observers. In teaching, practical or experiential knowledge is developed through reflecting on teaching and feedback discussed with peers. The interaction between experienced and beginning teachers provide an opportunity to discuss and apply theoretical knowledge into practical experiences. The post-lesson discussion meetings allow teachers being observed to share their views and concerns about the particular lesson. The observers, on the other hand provide feedback, support and advice based on their observation. This help teachers to reflect on their strengths and
weaknesses and further develop teaching competence. This enhanced their self-regulative knowledge and further contributed in better understanding of the practical problems and deepened the conceptual understanding of the content and pedagogical knowledge. The socio-cultural knowledge of the workplace is learned and developed by being involved in a common environment and sharing understanding of what is important in the workplace and how it operates. In peer mentoring, beginning teacher learn from the experienced teacher in their group as they share their understanding of the school’s culture and tradition. The application of integrative pedagogy model is further explained in the following section on the observation round.

Figure 4.1 Integrative Pedagogy Model
The Observation Round

The integrative pedagogy model underpinned the observation rounds during peer mentoring to establish and develop a culture of professional learning. The four elements are integrated and incorporated during lesson preparation, lesson observation and post-lesson discussion. Three teachers as peers were involved in the observation rounds for the duration of three months. Each teacher in a group took a turn to teach a lesson, while the other two observed the class using the T3 tool, which guided their observations. The observation rounds included individual lesson preparation, lesson observations followed by post-lesson discussion in a place and time suitable to all the peers.

The Figure 4.2 illustrates the observation round carried out among the teachers during peer mentoring followed by an explanation on specific activities that took place before, during and after the lesson observation.

Figure 4.2 The Observation Round
**Before the Observation**

Before the observation, the teacher being observed was to prepare lessons by referring to various sources like the syllabus, curriculum materials, text books, libraries, guide books and most importantly by reflecting on their own experiences. They would have reflected on the feedback provided by the observers in their previous lessons and carefully focus on the needs of the students. It would ensure teachers have adequate content knowledge and the skills to help students learn. In addition, this would help teachers to make their teaching systematic, orderly and ensure smooth flow of the lesson. Overall, this would help in developing the conceptual or theoretical knowledge of their teaching subject and in enhancing their pedagogical knowledge. The observers selected one or more elements of the T3 tool in consultation with the teacher being observed for observation. They would agree on the focus of the observation and on a common day and class (time) for lesson observation.

**During the Observation**

Classroom observations were used to enable teachers to share ideas and support them in developing the way they teach and build awareness about the impact of their own teaching. For the teacher being observed, it was to help in developing their practical or experiential knowledge because prior to lesson observation, a specific focus on any teaching skills or strategies was negotiated based on the content to be taught and individual teachers’ need. The observers would use the elements of the T3 tool agreed in consultation with the teacher being observed. The T3 tool was to assist and guide the observers to record descriptions of what the teacher and students are making, saying, doing or writing during the lesson. During observation, the teacher would execute the planned lesson and the observers would focus on the way how the teacher demonstrated the teaching skills and strategies and how the lesson was conveyed to the students. They would also document the teacher’s movement and
interaction with the students during the lesson. The role of observers was to collect evidence
to provide critical feedback and support the teacher being observed to enhance their
effectiveness as a teacher. They would record what happened during the lesson and choose
not to be judgemental on the quality of teaching. In addition, the focus of the observers was
to stay neutral at all times, gather information and provide critical feedback during post-
lesson discussion meetings.

After the Observation

The lesson observations were followed by feedback sessions during the post-lesson
discussion meetings. It was crucial for the peers to actively listen to the feedback and clarify
any areas of feedback using examples. It provided opportunities for the peers to reflect on the
strengths and weaknesses of their teaching practices. The post-lesson discussion guide
questions in the T3 tool provided focus for the discussion. It included some general
observations on the content of the teaching subject and pedagogy. It involved factual and
evidence-based conversation between the peers. The post-lesson discussions session was
conducted in a place and time suitable to all the peers. These discussions were to be
constructive, non-judgemental and based on mutual respect and trust among the teachers. The
observers were to provide honest feedback using the evidence collected during the
observation. The teacher being observed was to remain open to feedback and also explain
their approach to the lesson and how it went from their point of view. They made notes on
important points for further discussion and sought suggestions from the observers. Finally,
important and interesting ideas from the post-lesson discussion were to be implemented in
their future lessons.
The following section includes the explanation of the Teacher Tracker Tool (T3), a guide on how to implement the five different elements of the tool before, during and after the lesson observation.

**The Teacher Tracker Tool (T3)**

To support the mediating process of peer mentoring, an observation tool, the Teacher Tracker Tool (T3) (see Appendix K) was provided to teachers to guide their observations and enable them to document and provide evidenced-based feedback to their peers. The Teacher Tracker Tool (T3) is a descriptive observation tool that captures non-judgemental, evidenced-based feedback of a teacher teaching a class (Kriewaldt at al., 2018). The use of such tools guided mentoring conversations that foster teachers’ professional development to change the social practices in their classrooms (Windsor et al., 2020). Additionally, Hudson (2014) suggested the development of feedback tools so that more informed and objective feedback could be provided by mentors. Thus, the standardised protocol implemented in peer mentoring supported teachers to document each other’s teaching practices and developed greater opportunities for collaboration.

This tool enabled observers to collect evidence during classroom observation and use it as discussion points during the post-lesson discussion meetings. The T3 tool has been adapted from the version used with pre-service teachers at the University of Melbourne. Since the majority of the contents in the T3 tool is consistent with the observation forms used by the colleges of education in Bhutan, the T3 tool has been adapted by including similar contents and excluding some of the contents that are not in the context of the Bhutan education system or not familiar to the teachers in Bhutan. For instance, the Australian Institute for Teaching and School (AITSL) standards that was included in the original version of T3 tool do not have relevance to the education system of Bhutan, so it has been removed.
In addition, some of the seating arrangement map of the classrooms like E shape format, vertical desks format and discussion chart format used in Australian classrooms have been removed or modified according to the classroom arrangements that exist in Bhutanese schools. All the regular teachers who graduated from the two colleges of education in Bhutan are familiar with observation forms.

The T3 tool has five different tools that supported the peer mentoring process (Kriewaldt et al., 2018). They are:

**Descriptive Notes: Make, Say, Do, Write**

Here the observers make note of what the teachers and students are doing, saying or writing during the lesson. For example, in the teacher column, “Good morning everyone, how are you all today?” and in the student column, “Good morning teacher”. The Descriptive notes focused on the actions of the teacher and students in a class during the lesson. The Figure 4.3 below shows an observer’s action of writing down their observations using the T3 tool.
Checklist of Observed Behaviours

The checklist provided a snapshot of what takes place during the lesson. Here the observer marks the checklist on various aspects of a teacher’s action (observed, not observed or not applicable) while enforcing classroom rules, roll marking, outlining the learning objectives, recapitulating the previous lesson, repetition of difficult concepts, visual demonstration, using cues, relating the topic to the real world, while questioning and while lesson debriefing. It is a quick recording method of teacher’s action and interaction with the students during the lesson. Moreover, this element of the tool provides objective feedback to the teachers being observed without having to say directly by the observers. The Figure 4.4
below shows the observer’s action of marking the checklist and writing down examples during their observation using the T3 tool.

**Figure 4.4 Sample of Checklist Maintained by Observer**

**Verbal Flow**

Here the observer draws a line for the verbal flow of teacher/student while interacting with each other. The observer may draw the flow by using a pencil from the tool using any colour in their computer or they could manually draw on a printed form. The Figure 4.5 below shows the observer’s action of mapping the teacher’s interaction with the students during their observation using the T3 tool. The shorter green lines represented questions
directed to the whole class and the longer green lines represented the students’ response to the teacher. On the other hand, the longer red lines represented the questions directed straight to an individual student. This can also be used to evaluate the concentration of interaction between the teacher and students and distribution of questions by the teacher in different parts of the classroom.

*Figure 4.5 Sample of Verbal Flow Maintained by Observer*
**Proximity Chart**

The observer may also use the same tool to mark the physical movement of the teacher while interacting with students during the entire lesson. The Figure 4.6 below shows the observers action of drawing the movement of the teacher during their observation using the T3 tool.

*Figure 4.6 Sample of Proximity Analysis Maintained by Observer*
**Post-Lesson Discussion Questions**

Here the observer makes use of the post-lesson discussion guide questions. For example; which elements of the lesson worked? Which elements of the lesson would you change next time? Why? What is the focus for the next lesson? What strategies could you use? Does research and theory have anything to offer here? The observers would write their comments or feedback in the response column to use as a basis for discussion and later give the form to the teacher. The Table 4.1 below shows an observer’s action of writing down their observations using the T3 tool.

### Table 4.1

**Sample of Post-Lesson Discussion Guide Questions**

<table>
<thead>
<tr>
<th>Questions to the Teacher being observed</th>
<th>Response to Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>What did you notice after reviewing the data? collected in the T3 observation record? What is interesting? Do you see any patterns in the data?</td>
<td>Outlining the lesson was done verbally Pace of lesson was a bit fast Time management needs to be taken care of Voice was loud and audible throughout Addressing students by name and equally by roll no - Poor in time management - Audibility was very good</td>
</tr>
<tr>
<td>What evidence did you collect? What conclusions can you draw from this evidence? Did your students learn the objectives /Learning Intentions based on the success criteria?</td>
<td>- Limited use of board, but it is the nature of subject Intonation of voice was very good Calling roll numbers after asking the whole class was good Students might have understood as they were able to answer the recap questions</td>
</tr>
<tr>
<td>How useful is this T3 feedback tool? How did it support your learning?</td>
<td>- It is very helpful - Departmental meetings often take place - The tools help me to reflect myself</td>
</tr>
<tr>
<td>What strategies could you use? Does research and theory have anything to offer here? How did the lesson go? Which elements of the lessons worked? How do you know? What is the focus for the next lesson? Where to from here?</td>
<td>- PowerPoint with video - Projector - Visual demo will make them effective listening - I would say satisfactory Use audio visuals in future lessons where possible and appropriate</td>
</tr>
</tbody>
</table>
Training the Participants

Before beginning with peer mentoring, participants were invited to attend an information session in their own schools. The following information about the study was presented to the participants;

- Aims and objectives of the study
- Importance of Professional Development (PD) for teachers
- Emerging challenges of Bhutanese Education System
- Research context
- Significance of the study
- Concept of Peer Mentoring and the process
- Data Collection Methods and procedure
- Introduction to Teacher Tracker Tool (T3)

It was explained that they would help each other analyze and refine the quality of their teaching and learning practices and all members would be co-mentors and co-mentees. However, the experienced teacher in a group would act as a facilitator and guide to encourage the beginning teachers to discuss their experiences freely among the peers.

The session, for the purpose of training the teachers, took about four hours in each school. It attempted to simulate what the real implementation of the T3 tool during the lesson observations and discussions would involve. The different formats of the T3 tool were presented to the teachers. It was designed as an enabled Portable Document Format (PDF) to be used electronically on a computer or laptop. However, it could also be printed and completed in paper form. Further, a Microsoft word version of the T3 tool was also prepared as an alternative or a backup and sent to all the teachers involved in peer mentoring. Most of the teachers reported using the printed version of the T3 tool while some used their laptops to
record their observations. In three months of being involved in peer mentoring, each teacher completed at least five observation rounds.

Summary

The purpose of this study was to investigate the development of peer mentoring program to provide school-based professional development opportunities for both beginning and experienced teachers. The current school-level monitoring system in Bhutanese schools followed a hierarchical order of observation without follow up, structure or standards of lesson observation. The peer mentoring program focused on providing opportunities for teachers to interact with each other during lesson observations and post-lesson discussion and enhance teaching practices. The development of the peer mentoring program utilised the integrative pedagogy model, which underpinned the observation rounds during peer mentoring. The specific activities of peers before, during and after the lesson observation were guided by an observation tool called Teacher Tracker Tool (T3). The results of the research are presented in the next chapter.
CHAPTER 5

Results

This chapter presents the results of the research on peer mentoring. The aims of this study were to (a) provide a platform for both experienced and beginning teachers to collaborate, discuss challenges and share new ideas and good practices with each other; (b) support and guide beginning teachers during the initial years of transition from pre-service teacher to regular teacher; and (c) provide ongoing professional and personal development opportunities for experienced teachers involved in peer mentoring. In this study, three teachers (one experienced and two beginning) teaching similar subjects were grouped as peers and engaged in observing each other’s lesson and providing feedback using the Teacher Tracker Tool (T3).

The findings addressed the central research question: In what ways can peer mentoring support the development of a professional learning community of beginning and experienced teachers in Bhutan? And two sub questions: (a) How do teachers experience peer mentoring and in what ways do the experiences of beginning and experienced teachers differ? And (b) In what ways do observation and discussion as a part of peer mentoring support the development of a professional learning community?

A social constructivist perspective was adopted as a theoretical foundation for this study to help teachers transition into peer mentoring from the existing school-based monitoring system. Social constructivism posits the importance of interactions between people and the social and cultural dimensions in which these interactions take place (Lincoln & Guba, 2013). In peer mentoring, teachers (beginning and experienced) observed lessons and provided feedback to each other using an observation tool. This would support teachers to work collaboratively to reflect on their practices and make changes that would improve their teaching and learning practices, and in the process would develop a professional
learning community. A thematic analysis was used to interpret the data from initial surveys, participants’ observation notes, interviews and researcher’s observation notes. As described in Chapter 3, the data were analysed to form themes. Four major themes were revealed that related to the experiences of peer mentoring as described by the participants and observed by the researcher. They were: (a) differences between peer mentoring and school-level monitoring system; (b) impact on teaching and learning practices; (c) developing a professional learning community; and (d) challenges of peer mentoring. These themes were analysed with respect to the following five components of peer mentoring: (a) grouping, (b) lesson preparation, (c) lesson observation, (d) use of the T3 tool and (e) post-lesson discussion.

In the following sections, data from the pre-peer mentoring survey conducted prior to the peer mentoring, lesson observation notes maintained by the participants, semi-structured interviews conducted towards the end of peer mentoring and researcher’s observation notes were used to represent each theme and how they were connected to the research questions.

**Differences Between Peer Mentoring and School-Level Monitoring System**

In this section, the differences between peer mentoring and school-level monitoring system with respect to grouping, lesson preparation, lesson observation, use of T3 tool and post-lesson discussion are reported.

**Grouping**

Comparing peer mentoring to school-level monitoring, the first difference was in the structure of groups. In peer mentoring, the composition of the groups was organised among the teachers and included two beginning teachers and one experienced teacher. In some cases,
the principal/vice principal or head of the departments (HODs) for each subject group were included as peers in peer mentoring. The experienced teacher participant of School 2 and School 3 were also the HODs of science subject department in their respective schools. In the school-level monitoring system there were no such groups.

In peer mentoring there were two observers while the school-level monitoring system had only one, who was normally the principal/vice principal or HOD. This clearly distinguished the approach of peer mentoring to observation and provided a kind of validation or confirmation of the feedback provided by the observers, “That gives a kind of authentication especially on the part of observers” (Norling, BT, In, S4). This was further supported by other teachers as well with the following quotes from their interviews:

There are some observers who just come, sit and look at us then they blindly give feedback to us. But in this case [peer mentoring], I will very well know whether my observers had observed me well or not because the observers have to keep the record and looking at that they have to give feedback. (Puran, BT, In, S3)

When we have two observers and if we compare the data we can check the credibility of the data as well. Then we know whether the feedback given is valid or not. (Jampel, ET, In, S3)

However, teaching in the presence of two observers was overwhelming for some of the teachers, “it makes somebody nervous because we might miss something here and there and that would be actually caught by the two observers” (Seyum, BT, In, S4).

Jampel, an experienced teacher, on the other hand mentioned that having two observers could be a waste of resources and time if they were just sitting there and not in a position to provide feedback. However, he was positive that the T3 tool was making the observations meaningful. He said, “Having the tools with them is making them meaningful.
But if they are going there just like our normal mentoring then it is just a waste of time” (Jampel, ET, In, S3).

Involving three teachers as peers in peer mentoring was a different approach to lesson observation when compared to school-level monitoring system. Peer mentoring provided an opportunity for the teachers to observe lessons and provide feedback among themselves. It was also an opportunity for the beginning teachers to develop their confidence and improve teaching practices by interacting with the experienced teachers. While the school-level monitoring system followed a hierarchical order of lesson observation often focused on monitoring and evaluation purposes. The teachers rarely had opportunities to observe and engage in post-lesson discussions following lesson observations, which provided little opportunity for teachers to interact and discuss their lessons. To maximise teachers’ interaction during peer mentoring, it was recommended that they come together for planning their lessons. Their responses are discussed in the following section.

**Lesson Preparation**

The interview responses of the participants confirmed that the lesson preparation practice wasn’t different between peer mentoring and school-level monitoring system, as all teachers prepared their lessons independently. “We did not have any discussion about the lesson before observation” (Chojay, BT, In, S1), and “I did not sit with them and prepare the lessons for observation” (Lhaden, ET, In, S4). The reason most of the participants mentioned was due to time constraints that they could not come together for lesson preparation.

However, in peer mentoring teachers met after the observation to discuss the lesson and provided feedback. They followed up by planning their next lessons as per the feedback obtained during the post-lesson discussion meetings. Thereby, demonstrating the consistency, continuity and follow up of observations in peer mentoring. The following quotes from the
interview responses indicate beginning teachers’ appreciations of the feedback provided by the experienced teachers of their group.

My senior would give me some feedback and in the next round I had to be extra cautious about not repeating the same mistakes. (Delha, BT, In, S1)

I would always think about the feedback that they gave me for my previous lesson. I would think about that and focus on that. (Puran, BT, In, S3)

In the next observation the observers will check whether we followed up on previous suggestions. (Singye, BT, In, S2)

The culture of lesson preparation did not see any change during the three months of involvement in peer mentoring process as they continued to prepare lessons independently. However, the feedback during the post-lesson discussions informed them about the future lesson preparation which is different from the school-level monitoring system, where feedback sessions are rarely held among the teachers.

**Lesson Observation**

In the peer mentoring, peers had an opportunity to observe each other’s classes and be equally involved in the process whether they were an experienced or beginning teacher. “In peer mentoring we are observing senior teacher’s classes, which I did not do before” (Singye, BT, In, S2). Similarly, Lhaden mentioned, “In peer mentoring it is quite different, we are observing each other’s classes” (Lhaden, ET, In, S4). This was a completely different experience for both beginning and experienced teachers involved in peer mentoring.

However, teachers’ experiences of the current monitoring system in their school were evident in both the pre-peer mentoring survey and interview participants’ responses. In most circumstances, they followed the hierarchical order of observation, where principal/vice
principal observed the HOD classes and HODs in turn observed teachers’ classes. The teachers reported that occasionally principal/vice principal observed their classes. Survey responses demonstrated the existence of a formal hierarchical structure of the classroom observations as a part of school-level monitoring system. Teachers mentioned: “Lessons of teachers are observed twice in a year by the HODs and the HODs’ lessons are observed by the principal in the same frequency” (Lhaden, ET, Survey, S4), “HODs are being observed by academic head and teachers are observed by HODs, at least two times in a year” (Sonam, BT, Survey, S3). Two other beginning teachers shared similar experiences in their interview responses: “In our school what we usually do is, the HOD observes our classes” (Chojay, BT, In, S1); “In our school, the HOD does the monitoring” (Sonam, BT, In, S3).

Further, the survey indicated that a majority (10 out of 12) of the participants never had an opportunity to observe and provide feedback among themselves or to their HOD and principal/vice principal in the school-level monitoring system.

Teachers involved in peer mentoring indicated a change in the culture of lesson observation, where they could observe each other’s lessons irrespective of the their level of experiences in teaching. This was a different experience for both beginning and experienced teachers.

**The Teacher Tracker Tool (T3)**

The other interesting difference commented on by the participants was the use of observation tool. In peer mentoring, the T3 tool guided the observers during the observation. Jampel said in his interview: “Having the T3 tool for observation was the main difference between peer mentoring and their school-level monitoring system” (Jampel, ET, In, S3). The current school-level monitoring system do not have any standard form or tools for observation, “The observers write their observation on a piece of paper or a notepad”
Further, Jampel suggested: “In our context the monitors will come to the class, they will observe the whole lesson, but they don’t have any tools to guide them” (Jampel, ET, In, S3).

However, teachers in one of the participating schools (S2) mentioned that they had adopted an observation form for school-level observation, but the participants of that School mentioned that the T3 tool is more inclusive and comprehensive compared to their observation form. The five elements of T3 tool covered a whole range of activities taking place in the classroom including what the teacher and students are making, saying, doing or writing for the entire duration of the lesson.

In our school’s observation form many things are not included, for example we follow only one strategy. We focus on only one strategy during one observation. But in the T3 tool it is comprehensive and includes all in general. (Singye, BT, In, S2)

In case of T3, it is very comprehensive, we have details starting from introduction and how a teacher is gaining attention. We have to be conscious with teaching strategies and skills and all, that is one advantage. (Pema, ET, In, S2)

Similarly, Norling (BT, S4) argued that T3 is “comprehensive” and also focused on the “delivery” part of the lesson. That way he believed that their teaching could be greatly improved and become more effective where observers get fully involved in the observation and provide critical feedback to the teachers after the observation. Whereas, in the school-level monitoring system their observers looked into areas like assessment records, lesson plans and notebook correction but using the T3 tool in peer mentoring has taken care of many other components of teaching and learning.
**Post-lesson Discussion**

It is evident from the lesson observation notes that lesson observations in peer mentoring were always followed by post-lesson discussion. This provided opportunity and encouragement for teachers to meet frequently and share their experiences with each other. In peer mentoring, teachers were encouraged to observe each other’s classes, irrespective of their position or level of experiences in the school. Teachers also expressed that they had opportunity to sit together after the observation to discuss their lesson, exchange ideas, share challenges and provide feedback about their teaching practices. The participants reported that peer mentoring provided them the opportunity to collaborate among peers and the feedback helped them to improve their teaching. “It brought us together, we became closer which is very important. It made us very comfortable to share what was happening in both positive and negative things” (Norling, BT, In, S4). For Chojay, a beginning teacher, the feedback provided by the observers helped him to focus on his weak areas so that he could improve his teaching practices over time. He said: “Like me the newly joined teachers, it helps to build patience because new teachers have less patience … due to this we can teach better” (Chojay, BT, In, S1).

The feedback sessions after the lesson observation took longer compared to the feedback session during the school-level monitoring system. When asked, “what was the duration of the meeting?” some of the participants responded:

Usually it takes 20-30 minutes for our post-lesson discussion. (Chojay, BT, In, S1)

It used to vary, sometimes around half an hour or sometimes we used to take more than that also because along with the post-lesson discussion we also discussed what we will do in the next class. (Pema, ET, In, S2)
Sometimes it even went for an hour but normally we finished within 30-45 minutes. (Jampel, ET, In, S3)

It would take about 20 minutes or more but depends on the lesson. (Seyum, BT, In, S4)

However, in the current school-level monitoring system in Bhutan, the lesson observations were often conducted as a formality, focused on the monitoring and evaluation aspect set by the school or Ministry of Education. It offered limited opportunities for collaboration and sharing of ideas among the teachers. Therefore, the actual essence of lesson observation, which is to share ideas on teaching to enhance teaching practices were neglected. It lacked the idea of helping each other in recognizing their good practices and difficulties in teaching. It is often conducted without much focus on professional development and learning. It was clear from the interview responses that previously, any feedback session was only focused on administrative aspects: “The HOD observes our class and what they do is write down the comments and they just give us that piece of written copy” (Chojay, BT, In, S1). In addition, Sonam said, “The HOD will do the monitoring and he would give us the feedback in terms of the syllabus” (Sonam, BT, In, S3).

Likewise, Pema described the formality of the lesson observations carried out in his school:

School monitoring system, honestly speaking I find it just for documentation and just to fulfill the criteria, there if you look at the form nothing is mentioned, if you revisit the form all we have is how the teacher has shared his objectives, whether the teacher has used teaching aids, that’s all. (Pema, ET, In, S2)
While in some schools the lesson observations were never followed by post-lesson discussions or feedback sessions by the observers or HOD. Some of the beginning teachers mentioned about their experiences of feedback session in school-level monitoring system:

I am new and till now I have just seen him [HOD] observing other teachers, he just fills up the form and I could hardly see him giving feedback. This discussion part is lacking…for formality he is going. (Puran, BT, In, S3)

I am new to this system and I am not sure how the feedback is to be provided but as of now I haven’t received any feedback from my observers in our normal observation. There are no comments at the end of the lesson. (Delha, BT, In, S1)

In our school observation, the observer came with a form and just put some tick marks against whether we used teaching learning materials or not, whether we were audible or not … So far I had just two observations by my HOD and for the second observation I didn’t have the post-lesson discussion also. (Singye, BT, In, S2)

These responses indicated that in peer mentoring, teachers had opportunities to observe and provide feedback to each other. It provided a platform for teachers to collaborate, discuss and disseminate new ideas and good practices with each other. While in the school-level monitoring system, teachers mentioned that they did not have opportunity to observe and provide feedback to others, whether to their peers, HODs or principal/vice principal and often did not receive any feedback.

**Impact on Teaching and Learning Practices**

In this section, the impact of peer mentoring on participants’ teaching and learning practices are reported. Peer mentoring provided opportunities for teachers to plan, observe and provide feedback to each other using the T3 tool. In doing so they were expected to learn by sharing ideas with each other and improve their teaching practices.
Grouping

In peer mentoring, the mixed group of beginning and experienced teachers provided an opportunity for the teachers to engage in a higher quality dialogue that could help them develop better understanding of the subject content and teaching pedagogies. In his explanation, Puran stated: “The way we were grouped was good, one was experienced, one was new to the field and one had a year experience. That was really interesting and ideal too because we got to learn” (Puran, BT, In, S3).

For Chojay, a beginning teacher, having an experienced senior teacher in a group has benefitted him in understanding some of the school’s culture of giving homework and maintaining continuous assessment (CA) records of the students. He further shared that the senior teacher in his group shared some ideas of teaching: “Our senior teacher gave some ideas of organising activities and how to introduce topics” (Chojay, BT, In, S1). Similarly, Delha stated: “I was so much more curious and genuinely interested to learn from my senior member” (Delha, BT, In, S1). While, for Dechen, an experienced teacher in her group mentioned that the observers (two beginning teachers) helped her with the questioning techniques. She said: “It really helped me, for example with questioning techniques, which I had forgotten. They reminded me of everything and I was able to reflect on these ideas” (Dechen, ET, In, S1).

For some of the participants, having two observers in their class has benefitted them as they had to prepare more to stay focused on their planned lesson and be extra cautious while teaching.

Having observer is helping me to keep focus on the lesson and when there is no observer in the class we land up deviating from our lessons. The observer is really helping us to do our job properly. (Jampel, ET, In, S3)
These comments suggest that having observers in the class compels these teachers to abide by the planned lesson and limit their potential to explore other means of conveying the message to the students. Deviating from a planned lesson maybe necessary sometimes depending on the topic and responses from the students. This would allow teachers to think critically and make instant changes in their teaching. One interpretation of the comments is that for this experienced teacher, the presence of observers evokes a feeling of evaluation.

In addition, as an experienced teacher in the group, Pema mentioned that he would try to avoid negative comments for his teaching and be more careful because he mentioned: “If one misses, the other observer will definitely observe.” That way he made his teaching more focused. However, he also expressed his concerns over the pressure of having two observers in the class, “The one who is teaching may have a hectic task, might feel pressurised” (Pema, ET, In, S2).

Grouping one experienced and two beginning teachers teaching similar subjects as peers has helped them to stay focused while teaching and also in getting more ideas about the contents and teaching strategies such as questioning techniques, classroom management techniques and organising learning activities. This has benefitted both experienced and beginning teachers in improving their teaching practices.

**Lesson Preparation**

According to the interview participants’ responses, being involved in peer mentoring has helped them in planning and preparing their lessons to avoid receiving too many negative comments on their teaching from the observers. Some of the teachers suggested that they were better prepared for their lessons when they knew that someone was going to be there to observe their class. “Because there is an observation I make sure that I prepare my lesson
well” (Dechen, ET, In, S1) and “When someone is observing you make sure that you are thorough with the contents” (Pema, ET, In, S2)

While some teachers mentioned that the T3 tool helped them in the preparation to plan the lesson in detail.

I have gone through the T3 form to be sure about this tool and I planned my lesson according to the tool… I always follow the checklist [in T3 tool] while preparing my lesson. (Singye, BT, In, S2)

But when asked in an interview whether they involved their peers in planning their lessons, most of the participants responded that they could not involve their peers in planning the lessons. One said: “We did not discuss while planning the lesson for observations” (Dechen, ET, In, S1). Other teachers like Jampel (ET, S3) and Seyum (BT, S4) mentioned that they focused on preparing lessons “independently.”

The reasons for not being able to involve their peers, as shared by the participants were time constraint because they had packed classes and it was hard for them to come together for planning. Moreover, for some of the teachers it was not possible to jointly prepare lessons as they were teaching different subjects, “In this peer mentoring group we are from different subject groups, I am from chemistry and two of them are from physics … that way we could not discuss” (Jampel, ET, In, S3). However, for a beginning teacher like Sonam, in his interview response said: “If I prepare only for the purpose of observation, then I don’t think I will learn anything. So intentionally I didn’t discuss with them” (Sonam, BT, In, S3).

Nevertheless, when asked whether planning lessons in consultation with peers would have made any difference, the participants mentioned that involving peers in planning their lessons would have provided them with more ideas about the subject content, different
teaching strategies, ideas on teaching learning materials, and in developing appropriate activities for the lesson.

In relation to discussing the most appropriate teaching strategies for a particular lesson. They said: “Even if we do not know the subject concept we can discuss the strategies that can be used in teaching that particular concept” (Jampel, ET, In, S3); “I think it would have made some difference because they would have said that this strategy may not work so you try that strategy” (Seyum, BT, In, S4); “I think if we had discussed while planning, I could have learned something in terms of strategies” (Puran, BT, In, S3).

Some of the teachers emphasised the importance of discussing and acquiring deeper knowledge about the content of the topic that they were going to teach. They said:

It would have definitely helped and would have made much improvement in delivering the lesson because other members would have more ideas and knowledge about the lesson that I was going to teach, so I feel that it could have helped a lot. (Dechen, ET, In, S1)

Others suggested that

If we had been sitting together and did a thorough discussion on the particular topic for each of our subjects, it would definitely have made a difference. Having three heads planning a lesson would be better than one. (Lhaden, ET, In, S4)

In our group there is another physics teacher and he could have given me more information about the content. (Puran, BT, In, S3)

In addition, some of the teachers (Jampel, ET, S3; Singye, BT, S2; and Tshering, BT, S2) agreed that planning their lessons in consultation with peers would have definitely made their lessons more “meaningful and effective”.

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On the other hand, when peers came together during the post-lesson discussion meeting, they shared their feedback about the lesson, and this helped them in planning their next lessons more effectively. This was described by one of the teachers: “But the feedback we received during out post-lesson discussion was helping us in planning for the next class” (Jampel, ET, In, S3).

Based on the observation notes maintained by the teachers, they indicated that observers provided more feedback regarding the teaching pedagogy than the content of the lesson during the post-lesson discussion. Following are some of the excerpts of the feedback:

The lecture method of delivery where the teacher (Dechen, ET) explained the majority of the things and there was less student participation except in responding to some questions posed by the teacher, could include some student activities in the next lesson. (Delha, BT, Observation notes, S1)

In your (Singye, BT) activity part, instead of individual task you could have asked students to work in group, so they get opportunity to discuss. (Pema, ET, Observation notes, S2)

Some other observers suggested the use of technology in their lesson to supplement their teaching and to provide more information about the topic under study.

The use of chalkboard could be improved and include more student activity. You (Delha, BT) could have used visual aid like PowerPoint for more clarity because all the information was clustered in a chart paper. (Dechen, ET, Observation notes, S1)

Different teaching and learning modes could be practised like using PowerPoint or short video clips in your (Tshering, BT) next lesson. (Singye, BT, Observation notes, S2)
The teachers mentioned that they could not plan their lessons due to time constraints. However, they agreed that the comments and suggestions obtained during the post-lesson discussion meetings had greatly impacted on their future lessons in terms of content, selecting appropriate teaching strategies and teaching learning materials.

**Lesson Observation**

The peer mentoring process involved peers observing others teaching with the aim of improving the quality of their teaching and learning practices. Teachers engaged in observing each other’s lessons irrespective of their experiences and position in the school to enhance their teaching and learning practices by learning new strategies and ideas related to their teaching subjects. “Your (Lhaden, ET) demonstration part of the lesson on sound was very interesting; the children responded very well and it was a very good way to begin a class. I like to do something like that” (Seyum, BT, Observation notes, S4). Some teachers emphasised that it was good to learn from each other because of the different ways of teaching similar concepts by different teachers.

Different teachers have different ways of teaching even the same concept … from there we know which one is more effective. (Jampel, ET, In, S3)

Participants of peer mentoring believed that the whole process of peer mentoring has brought positive changes in their day-to-day teaching and learning practices. It provided an opportunity for them to watch and learn from real time teaching of their peers. Puran mentioned that he liked his peer’s (Jampel’s) way of teaching so he watched him closely and took some of his ideas to be try in his own class.

I really like the way he teaches, the pace and simplicity. I tried to copy that. He knows where to go slowly, where to run fast, where to increase and decrease his tone
and where to focus while teaching. He would go around weaker students and come back, saying nothing but ensuring that they are writing notes. (Puran, BT, In, S3)

In addition, some of the teachers demonstrated greater content knowledge in particular areas and it was an opportunity to learn from another teacher through observation. Pema, an experienced teacher, reported that his experience with peer mentoring helped him in acquiring ideas in teaching a subject he was not too comfortable with.

When we are teaching class seven integrated science, which has biology, physics and chemistry components in it. For me I have no problem with physics and chemistry, but I have a problem with biology, in terms of delivery I used to struggle a lot so while attending any observation on a biology lesson, I grabbed their ideas and used them during my teaching, that was one advantage I found in peer mentoring. (Pema, ET, In, S2)

Peer mentoring provided an opportunity for them to interact with other teachers and share their opinions freely as they understood that lesson observation in peer mentoring was purely non-judgemental. They understood that the purpose was not to make the teacher look bad but to help and prepare them to become better teachers. It was evident during my (researcher) observation on 11 June in one of the post-lesson discussion meetings in School 2. The following is the conversation between an observer (Experienced teacher) and teacher (Beginning teacher). (Researcher’s Observation notes, S2)

Pema (ET): The time allocated for an activity was too long, you could have reduced and saved it for some other purpose.

Singye (BT): Regarding the activity, I felt that the time allocated was not enough because they had to draw the electron dot diagram for Sodium Chloride and Calcium Chloride.
Pema (ET): In that case, instead of giving the task individually you could have asked them to do it in groups or in pairs so that they could discuss and do it more quickly. That is my suggestion.

Singye (BT): Ok, I will try that.

The conversation between an observer and a teacher during post-lesson discussion was very friendly, straight forward and honest. The following are some of the conversation between the observers, Sonam and Puran (BT) and Jampel, the teacher (ET). (Researcher’s Observation notes, S3)

Sonam (BT): The way you link topics is very interesting and good

Puran (BT): You didn’t write the learning objectives on the board, but it was stated very clearly. Your voice intonation and pace of teaching was very good.

Jampel (ET): I hope you are not trying to please me but thank you

Puran (BT): I remember my teacher using YouTube while teaching the concept of gaining and losing of electrons. It shows clear pictures and I think using multimedia in explaining the concept of electron transfer would be better.

Jampel (ET): Thank you, I will incorporate while teaching this topic in another class.

For the beginning teachers, teaching in the presence of experienced teachers helped them in strengthening their self-efficacy by taking up the challenge and being positive about observers who were there to support and help them improve their teaching. They said:
This program [peer mentoring] has helped me in gaining my confidence. Now if anyone comes for observation, I am ready to teach without hesitation. The confidence level has really increased … it helps me to interact with the teachers, share my views. I am getting a platform where I can share my views. (Puran, BT, In, S3)

I have gained lots of confidence because having observers and presenting was not an easy task but as we went on doing it, it became normal, which meant we have gained some confidence. (Chojay, BT, In, S1)

I learned a lot by being observed because they were experienced teachers and their feedback taught me a lot. (Singye, BT, In, S2)

For some of the experienced teachers, having observers in the class helped them in many ways. For instance, Jampel said: “Observers at times were helping me to keep focused on the lesson … helped us to be careful even in the choice of words and language that we used and the interaction that we had with our students” (Jampel, ET, In, S3). For Lhaden, her attitude towards observers had changed from fault finder to someone who was there to improve her teaching practices in terms of skills and strategies, which she was going to incorporate throughout her teaching career. She said: “From the feeling of dread we became a little friendly towards the presence of that person observing us” (Lhaden, ET, In, S4). These experiences by the experienced teachers demonstrated the transition of the culture of lesson observation and its road towards the development of a culture of a professional learning community.

Similarly, for the beginning teachers, they were always positive towards a lesson observation because it motivated them to prepare well, stay focused and deliver the lesson effectively. Tshering said, in the beginning she used to be nervous about having observers in
her class, but she comforted herself by thinking: “we are in a group to share and learn from each other” (Tshering, BT, In, S2).

On the other hand, Pema (ET, S2) shared an interesting observation about having an observer in a class and it was related to the students. He mentioned that some of the students who were not very active got involved because they knew that someone was observing and if they did not do well then the observer might give comments based on that to their teacher. Here they tried and defended their teacher. He said: “Even those who were not very active became very supportive during that time” (Pema, ET, In, S2). Likewise, some of the students volunteered and responded to the questions asked by the teachers and also volunteered to come to the front for presentations. During the discussion, the teacher affirmed that these were some of the students who would not normally come to the front during their normal class. (Researcher’s Observation note, S2)

**The Teacher Tracker Tool (T3)**

In the peer mentoring, the T3 tool was used to collect evidence during classroom observations and used to inform the teacher in the form of feedback during the post-lesson discussion meetings. The lesson observation and providing feedback was made convenient with the use of the T3 tool. It enabled beginning teachers to critique experienced teachers. The observers had to fill in the T3 form or take notes of their observation and use it during the feedback session, “this tool actually helped us to discuss on a particular area/skill, for example questioning skills” (Chojay, BT, In, S1). For example, in the Questioning section of the checklist, some of the observers noted a few comments when providing feedback: “hints were provided to students while answering”, “questions were simplified so that the students got some ideas to answer” (Chojay, BT, Observation notes, S1). Similarly, in the Whole Class Teaching section of the checklist of the T3 tool, some of the observers noted: “used
different ways to explain the stability of an atom; some students were not discussing” (Puran, BT, Observation notes, S3).

Some of the teachers mentioned that the T3 tool included every aspect of their lesson and using this tool frequently would certainly improve their teaching. They said: “If we use this tool frequently then definitely it will keep us on track. It helped and guided me throughout” (Delha, BT, In, S1). “As a new teacher, new to the profession this tool has helped me in improving organising group activities and dealing with classroom management better” (Seyum, BT, Observation notes, S4).

The teachers involved in peer mentoring acknowledged that the T3 tool had guided them throughout the peer mentoring process and had a significant impact in terms of lesson preparation, lesson observation and in providing a framework for feedback during post-lesson discussion.

Post-lesson Discussion

Peer mentoring provided a forum for teachers’ collective reflection of their teaching, encouraging them to come together, providing feedback, discussing and solving some of the authentic problems they encountered in their day-to-day teaching and learning experiences. The post-lesson discussions provided a platform for teachers to engage in a meaningful dialogue with their peers. During these discussions, they exchanged professional conversations and enhanced their capacity to critically reflect on their teaching and learning practices.

Both beginning and experienced teachers shared numerous examples of their learning of useful ideas as a result of receiving and providing feedback with peers. Jampel and Lhaden have been teaching for more than a decade and they mentioned that they would normally enter the class and as a routine, recap the previous lesson and begin their lesson.
The feedback from beginning teachers during peer mentoring, reminded them to incorporate one of the important activities of their lesson, stating the objectives of the lesson.

Quite often we forget to state our objectives of our lesson to our students, we simply get on with the lesson. I think it is very important to tell our students the intended objectives, what we are trying to achieve from our lessons. (Jampel, ET, In, S3) Earlier I was not aware of the objective to be given to the students. Now through this process and the T3 tool I really learned that students also needed to know the objectives of the lesson. They needed to know what they were supposed to achieve by the end of their lesson. (Lhaden, ET, In, S4)

Pema, another experienced teacher, said that he was reminded by his peers (beginning teachers) to include more activities in his lesson as he was going more with the lecture method in his science lessons and also to improve his movement in the classroom as he was often found ignoring one side of the classroom. Following this feedback, he mentioned that he had “improved on it” (Pema, ET, In, S2).

Similarly, Tshering, a biology teacher mentioned that she would normally stay at the front of the class and use the lecture method and it became teacher centered teaching. Involvement in peer mentoring had encouraged her to change her teaching strategies. She said:

In this grouping I learned to break down the topic and instead of lecturing the whole lesson I try to assign group activities and all. I try more of student-centered teachings now. It is due to the feedback I got from my group. (Tshering, BT, In, S2)

Dechen, an experienced teacher, shared that in one of the incidences, her peers suggested that she use different teaching strategies in her history lesson. She said: “In one of
my lessons when I was teaching about world war, one of my observers suggested to me to use PowerPoint with a few video clips” (Dechen, ET, In, S1).

On the other hand, some of the beginning teachers were reminded by the observers to work on different aspects like body language, voice and questioning skills. Puran said, after his first round of observation he was reminded by his peers that his eye contact was not very effective as he was focusing only on one side of the classroom and his voice was not audible at the back. He said: “He pointed out my audibility, my eye contact with the students while delivering the lesson” (Puran, BT, In, S3). Similarly, his peer reminded Sonam, another beginning teacher, that the tone of his speech was not appropriate in order to gain the attention of students and he was repeating some words that were not useful again and again. “My friend (another beginning teacher) has mentioned from the beginning itself about the tone of my speech and he always mentioned that I was repeating my words that were useless” (Sonam, BT, In, S3).

Sonam also mentioned that after receiving feedback on several occasions from his peers, he improved a lot. He said: “I might not have reached to their expectation but referring to myself and comparing myself from the beginning till now I have improved a lot. I should say that I have improved a lot” (Sonam, BT, In, S3).

Delha, a beginning teacher, was reminded by her peers about her questioning skills. She mentioned:

Initially I used to first point out the roll numbers of the students before asking any question because I really wanted to push some of the students. In the beginning I thought that this was important as any roll number could be called and all will be prepared but in my first peer observation only I got the feedback that it was better to ask questions to the whole class and then ask individual student to answer. That’s how I am doing it now. (Delha, BT, In, S1)
Her improvement in using questioning skills was evident from the observation notes maintained in the post-lesson discussion sections in her first and final observation in peer mentoring. The comments from the observer in her first observation were:

The overall flow of the lesson seems to be smooth and effective, but the way of questioning appears to be inappropriate because according to the skills of questioning, the question must be asked to the whole class before we pinpoint the student for a response. This will allow students to think about the answer. (Chojay, BT & Dechen, ET, Observation notes, S1)

However, the comments from the observer towards the end of peer mentoring were:

“Question distribution was good, addressed students by name was good, simplified questions and many open-ended questions were thrown to the whole class” (Chojay, BT & Dechen, ET, Observation notes, School1).

Over the three months of involvement in peer mentoring and after numerous observations and discussion sessions, most of the participants shared a great satisfaction and learning from their peers. For beginning teachers like Puran and Seyum, peer mentoring enhanced their confidence levels and they were ready to teach before any observer. Another beginning teacher, Chojay, mentioned that peer mentoring helped him to prepare his lessons well and the T3 tool had helped him greatly in his lesson preparation. For experienced teachers like Dechen and Pema, peer mentoring had provided an opportunity for them to rethink their teaching and learning practices. For Norling, peer mentoring was not just about teachers, but it even took care of the learners, it helped him to include the learners’ points of view while planning his lesson. Being involved in the peer mentoring process, teachers believed that the culture of lesson observation and post-lesson discussion was developing. This is further explained in the next section.
Developing a Professional Learning Community

In this section, I discuss the ways in which peer mentoring helped in developing a professional learning community during the three months of engagement in the peer mentoring in their respective schools. The aim was to help the transition towards the development of peer mentoring from the existing school-based monitoring system by enhancing a culture of lesson observation and providing feedback to each other. As a part of peer mentoring, peers observed classes and provided feedback during the post-lesson discussion using the T3 tool and in doing so, the beginning and experienced teachers interacted and supported each other. The intended areas for development were socio-cultural knowledge partly through grouping beginning and experienced teachers according to their subject areas, conceptual/theoretical knowledge through lesson preparation, practical/experiential knowledge through lesson observation, professionalism supported by using the T3 tool and self-regulative knowledge through feedback during post-lesson discussions.

Grouping to Develop Socio-Cultural Knowledge

Peer mentoring provided a platform for teachers, irrespective of their experiences and positions to come together for lesson observation and share feedback, share experiences and develop positive relationships among themselves. Peer mentoring anticipated a shift in the culture of lesson observation by involving teachers in peer mentoring and providing the necessary support for beginning teachers during their initial years in teaching.

Peer mentoring involved two observers during lesson observations using the T3 tool. This experience was overwhelming for both beginning and experienced teachers in the start of the project. Some of the teachers revealed their experiences of having two observers in the beginning as: “In the first few rounds I was a little nervous” (Delha, BT, In, S1), “When I
have one observer, I am confident, but when there are two observers, I was little bit nervous” (Dechen, ET, In, S1).

Similarly, Chojay mentioned:

At first it was difficult for me to enter the class itself. I was getting nervous to enter the class itself and on top of that when there were two observers along with the students in the class it was very difficult for me to even face the crowd. (Chojay, BT, In, S1)

However, teachers revealed that it became more normal after several rounds of observations and discussions and towards the end of peer mentoring.

As we went on observing as well as teaching we got familiar with the students and the observers, it helped us, and it became normal. (Chojay, BT, In, S1)

As the time passed it was normal and I became habituated because I didn’t feel that pressure like the first round. (Delha, BT, In, S1)

As the observations went on for several rounds we were very much more confident, and we felt normal. (Dechen, ET, In, S1)

Coming together often for observations and discussions has helped all the participants develop their relationships with each other, either personally or professionally. This has particularly helped the beginning teachers in getting to know other teachers well and in being able to engage in group discussions more freely. This was evident during my (researcher) observation. In all the participating schools, the beginning teachers were sharing their observation and feedback freely with the group, thereby actively contributing during the post-lesson discussions (Researcher’s observation notes). For example, Puran stated:
Whenever it comes to atom, my teacher would use YouTube videos, in which it shows the clear structure of atom and how the electrons get transferred from one atom to another. It clearly shows the loss and gain of electrons and formation of positive and negative ions. If you could do something like this than students could remember for a long time. (Puran, BT, In, S3)

Similarly, Chojay revealed that he didn’t have any contact with the experienced teacher of his group but coming together as peers in peer mentoring had helped in developing a very good relationship with the experienced teacher and he was able to share his thoughts easily during the group discussions. He said:

After having this one, we had a very good relationship between the three of us. We being junior teachers had no hesitation in asking her anything, so this has helped. In addition, he also said, this peer mentoring has helped us in familiarising or socialising with other people. (Chojay, BT, In, S1)

Similarly, after several rounds of observations and post-lesson discussion meetings as a part of peer mentoring, they developed close friendships among themselves. This has helped them in sharing their observations openly with each other. They said: “We have become good friends and our relationship is very good. We can talk freely” (Singye, BT, In, S2), “We already had a good relationship among us, but it made us best of best friends” (Lhaden, ET, In, S4).

Delha had just joined that school after completing Post Graduate Diploma in Education (PGDE) and she explained about her relationship with the experienced teacher (Dechen) of her group and how it changed after their involvement in peer mentoring. She said:
After some time, I and my senior teacher became kind of a friend, just because of that peer mentoring we are so much more connected and that’s why we always stay together most of the time, that is how we are bonded. (Delha, BT, In, S1)

Due to this she was able to share her thoughts unreservedly with the experienced teacher of her group regarding her work load in the school as a beginning teacher.

This was evident when Dechen (ET, S1) in her interview, shared about her relationship with Delha (BT, S1). She mentioned that they became good friends and would talk about school work issues besides teaching.

Apart from teaching, Chojay and Delha would share about their workload in the school, especially Delha, because she had lots of responsibilities like health in-charge of the school, syllabus coverage and teaching class 10 in her first year of teaching. She would share some of her frustrations that she had no idea of how much portion of the syllabus needed to be covered in the first term and all. (Dechen, ET, In, S1)

To this, Dechen mentioned that she shared some of her experiences and tips to manage her time and syllabus. She suggested to her to try and complete the major part of the syllabus before mid-term as the school would be busy with sports activities and trial examinations after mid-term.

Peer mentoring was intended to guide and support the beginning teachers during their transition from pre-service to regular teachers, when they were confronted with lots of professional and personal challenges. This was clearly expressed by Puran. He said:

This one is something that needs to be done especially for the teachers who are newly recruited. They lose their path as they don’t know what to do in the beginning; they don’t know where to begin, they don’t know where to stop … in
certain cases we feel somewhat lost and this kind of program can help a lot and it also develops good relationships between the teachers. (Puran, BT, In, S3)

The motive of grouping beginning and experienced teachers as peers was to develop a relationship that could help and support each other in their professional and personal development. Interview responses suggested that for the beginning teachers, interacting with experienced teachers had helped them in understanding the system and culture of the school. More importantly, constant interaction during the peer mentoring process helped them to understand each other better and that provided confidence to actively engage in lesson observation rounds and share their thoughts freely.

Lesson Preparation to Develop Conceptual/Theoretical Knowledge

Feiman-Nemser (2001b) mentioned, “If teachers are responsible for helping students learn worthwhile content, they must know and understand the subject they teach” (p. 1017). For some participants, the development of conceptual knowledge about their teaching subject was gained through observation of peers teaching similar concepts. Pema explained that he didn’t have any problems in teaching the physics and chemistry parts of the year seven integrated science but struggled in teaching biology. Observing his peers teaching biology helped him understand the content well enough and he was able to teach his own students. He said: “While attending any observation on a biology lesson, I grabbed their idea and use them during my teaching, that was one advantage I found in peer mentoring” (Pema, ET, In, S2).

However, some teachers developed their conceptual/theoretical knowledge of their teaching subjects through extensive preparation. As mentioned in Section 2, teachers prepared very well both in terms of content and strategies when they knew that there would be observers in their classes. For teachers, through the preparation of lessons for observation
they developed content knowledge, which helped in delivering their lessons confidently but it is unclear the extent to which they developed conceptual knowledge. “To have observers like that would enhance the whole process of teaching and learning … we become more cautious, comfortable and confident.” (Norling, BT, In, S4)

For some of the teachers, they became extra cautious in teaching some of the subjects that they were not very comfortable with. They put extra effort into gaining that familiarity with the content so that they were able to teach comfortably.

I wake up early to prepare well for chemistry, I leave my text book at home but I have another copy in my office. I go through it again in the office and then I go to the class. I actually prepare a lot to teach chemistry. (Singye, BT, In, S2)

Lhaden had been teaching physics for more than a decade and she explained that having an observer in her class who also came with the same subject background made her to be conscious about what she was teaching. This encouraged her to prepare well with the content.

Actually, as teachers we should know what we are teaching. It not only helped me develop my strategies but even enhanced the preparation of my content. If there is an observer I always become aware like if I go wrong in the content then my observers might point that out. (Lhadæn, ET, In, S4)

These comments from the participants indicated that having an observer in a class encouraged them to prepare more on their content and in doing so, they improved their content knowledge of the topic or subject and in turn benefitted the learners. However, their development of conceptual knowledge at this point is not clear. For some of the participants,
engaging in peer mentoring had helped them in developing their practical knowledge, which is explored in the following section.

**Lesson Observation to Develop Practical/Experiential Knowledge.**

Peer mentoring supported peers to experience observing and learning from each other and develop practical/experiential knowledge. Moreover, observers received an opportunity to learn from the real time teaching of their peers and put into practice in their own classrooms. Some of the experienced teachers shared that being involved in peer mentoring had benefitted them and by observing others’ lessons had helped them to develop their practical knowledge.

They have different ways of teaching and I have my own way of teaching and sometimes my way of teaching is effective and sometimes their way of teaching is effective. From this point, we learn from each other. Sometimes I have to adopt their way of teaching and sometimes if they appreciate my way of teaching they can learn from my teaching. (Jampel, ET, In, S3)

If I feel that the teaching strategy that another teacher uses in teaching a topic might be better than what I am using then I use their idea in my teaching. (Pema, ET, In, S2)

For some beginning teachers, engaging in peer mentoring was beneficial because they learned new strategies for teaching by observing their peers using them effectively. For Puran, observing his senior colleague’s way of teaching and classroom management skills was a huge learning experience for him. His experience with peer mentoring was that it allowed him to watch and learn about classroom management and managing student behaviour. He mentioned that he really liked the way his senior teacher maintained the pace
and simplicity in his teaching and also moved around the weaker students to ensure that they were paying attention. Puran said: “Unknowingly I took that from him.”

Another beginning teacher, Singye, learned about organising group activities properly while observing the lesson of an experienced teacher of his group.

He had all the instructions written on a chart paper including timing for preparation, discussion and presentation. It was posted on the board and he made sure that students were following the instructions. The activity went very well. I followed his idea in organising an activity in my class and it went well. (Singye, BT, In, S2)

Pema has been teaching for more than a decade and he mentioned that it is important for teachers to impart the information effectively and consciously to their students. Therefore, implementing appropriate strategy for the delivery of lesson was deemed important and for that he said: “If we are following this [Peer mentoring] and if it is implemented seriously in the schools then the effectiveness of lesson delivery could be improved” (Pema, ET, In, S2). In addition, he mentioned that the government spends a huge amount of money for teachers to attend professional development programs during summer holidays, some of them are of limited use in their day to day teaching and some of them cannot be implemented in schools. To this he mentioned: “If this [peer mentoring] is done thoroughly, then the government could save a huge amount of money and spend it for some other purpose” (Pema, ET, In, S2).

In Bhutan, teachers often choose the lecture method of teaching in a rush to complete the prescribed syllabus and when it happens frequently the lesson becomes teacher-centered and monotonous for the students. Working in isolation does not provide an avenue for teachers to learn and acquire other interesting teaching methods that could be applicable to their lesson. However, participating in peer mentoring enabled teachers to observe other teachers using various teaching strategies so that they experienced the strategies in a real
setting. Teachers were able to select and implement appropriate teaching strategies in their own lessons.

**The Teacher Tracker Tool (T3) to Develop Professionalism**

The T3 tool enabled observers to collect descriptive evidence during the classroom observation and helped them to provide feedback to the observed teachers during the post-lesson discussion meetings. The five elements of the T3 tool were used to inform the teacher about all aspects of their teaching without being judgemental. They provided feedback on lesson presentation, classroom activities, interaction with students and movement in the class. Following which, the observer emailed or printed a copy and gave it to the teacher for future reference. This not only helped the teacher in their future lesson preparation but also in reflecting on their own teaching. Teachers revealed that they understood the benefit of the T3 tool and prepared lessons based on it. The observers observed and commented on their lessons during the post-lesson discussions using the T3 tool.

I feel that this T3 tool is very important because in general it includes all the teaching skills that we learned in our college. Firstly, it includes/records an overview of the whole lesson, then it includes/records the area for improvement in the future. At the same time, it includes the positive aspects of the lesson and future commitments. What is the focus in our next lesson? Therefore, I would say that this is very important. (Chojay, BT, In, S1)

Moreover, the T3 tool also focused the attention of observers to follow the lesson and keep a record, so they were in a position to provide authentic and critical feedback to the teacher. It is evident from the observation notes maintained by the teachers that they made notes of their observations in the T3 tool during the observation and made reference to it during the post-lesson discussion meetings. Thereby they provided authentic feedback about
the teaching. For instance, during my (researcher) visit to one of the schools (S3), one of the observers focused on verbal flow and proximity analysis (elements of the T3 tool) of the teacher. During the post-lesson discussion, the observer showed the T3 form where he had drawn the teacher’s movement during the entire lesson and explained that his movement was concentrated at the front of the classroom and he needed to move into other parts of the classroom as well (Researcher’s observation notes, S3).

In another instance, in S1, one of the observers mentioned that the teacher asked questions during the lesson to some of the students sitting at the front of teacher’s desk and ignored those sitting at the back. To this the observer suggested that she spread her attention so that nobody in the class could feel left out (Researcher’s observation notes, S1). The observer said: “You have asked most of the questions to the students near your desk (showed the Verbal Flow chart), you could have distributed some across the class.” (Dechen, ET, S1)

Participants believed that the T3 tool was comprehensive, interesting and helpful in enhancing their professionalism. They believed that the T3 tool helped them in developing lesson plans, using different teaching strategies, different classroom management techniques, learning to provide and receive feedback without being judgemental and incorporating that feedback in their next lesson.

**Post-lesson Discussion to Develop Self-Regulative Knowledge**

In the peer mentoring, peers gathered together after the lesson observation and discussed what they observed during the lesson. For that purpose, observers made notes of their observation using the T3 tool and discussed it during the post-lesson discussion meetings. This was intended to help them reflect and develop their teaching and learning practices. Sonam had been teaching for a year and he explained that he was not very comfortable in the beginning with the experienced teacher of his group, but he was open with
another beginning teacher as they knew each other from college. So, they were more comfortable with each other and were able to exchange honest feedback with each other. He said: “After observation I used to point out his mistakes openly like your eye contact was not very effective, you are focusing only on one side and such things.” (Sonam, BT, In, S3)

Nevertheless, with the development of friendly relationships, the participants were able to share their experiences and feedback freely with the experienced teacher. Sonam’s comfortability changed after going through the observations and discussions for several rounds. He said: “For the first time I was very nervous but after doing it for several times I was very much more confident with them” (Sonam, BT, In, S3).

Similarly, Delha, another beginning teacher, explained that she benefitted and improved a lot by being a part of this peer mentoring. She mentioned that in the beginning she was reminded by her peers about the various aspects of her teaching that she needed to improve. Some of the feedback she received was to include appropriate activities in her lessons, reduce the length of her content, improve eye contact with the students, spread question throughout the class and reinforce students properly when they provided answers to questions. For example, some of the feedback provided by her observer were; “Keep proper eye contact with the students while teaching” (Dechen, ET, Observation notes, S1). She has taken this feedback positively towards improving her teaching. She said: “We support each other through our honest feedback and try to follow up in the next observation” (Delha, BT, In, S1).

For Pema, being an experienced member of his group and HOD of science department in the school, his observers were always hesitant to share his areas of improvement for his lesson although he always expected more comments.

In my case when they were observing me, they were reluctant to share any areas of improvement. I might be having a lot of areas of improvement which I am not aware
of, but they were not sharing. They would always give me positive feedbacks only. There may be many areas where I need to work on and improve. (Pema, ET, In, S2)

In the case of Jampel, another experienced teacher, he did not receive much feedback on the content part as they were teaching different subjects, but he was often reminded by his peers about using audio-visual as teaching aids in his lessons.

I did not think about teaching the atomic structure, loss of electrons, gain of electrons using the projector. I thought that teaching these by using a diagram on the board would be effective but after having the post-lesson discussion I understood that it would be better if I could take advantage of such things to make students understand better. (Jampel, ET, In, S3)

Even as an experienced member of the group, it was a gentle reminder by his observers and was taken positively: “Sometimes we think that what we are doing is always good but when we receive such feedback we feel that there is another better way of teaching” (Jampel, ET, In, S3).

Therefore, teachers believed that the feedback provided to each other were always considered seriously and followed up in the next lesson.

They were implementing whatever suggestions we used to give in their next class and all and they were compelled to use different strategies and use teaching aids. Sometimes they tended to forget, and I used to remind them at least during the observation. (Pema, ET, In, S2)

On the other hand, Pema mentioned that being involved in this peer mentoring has given him an opportunity to rethink his teaching and learning process and build self-regulatory knowledge.
I feel myself more refined … with the introduction of the T3 form, we are re-oriented about the program and again I made sure that I used those teaching skills and strategies, maybe not every time but I made sure to make use of them at least once or twice in a week in different classes. (Pema, ET, In, S2)

Providing and receiving feedback allowed teachers to promote their self-regulative knowledge where they were able to examine their own strengths and weaknesses and enhance teaching and learning practices. It helped teachers make better lessons and execute confidently in the classroom. It addressed their strengths and areas of improvement and maintained quality teaching to enhance student learning. Initially they appeared to change because they thought they have to but over the time, engaging in feedback sessions and evaluating their own learning promoted self-reflection and developed professional capability.

Challenges of Peer Mentoring

In various ways, peer mentoring provided opportunities for teachers to come together for observation and discussion in which they shared their experiences and provided feedback to each other. This led to the development of positive relationship among the peers. Based on the interview data and my own observation, feedback regarding peer mentoring was overwhelmingly positive. Having both beginning and experienced teachers as peers helped them in providing different perspectives and experiences about teaching and learning. The participants also shared the benefits of having the T3 tool for observation and discussion. The teachers found this experience as beneficial and expressed that it helped them to rethink their teaching and learning practices. However beneficial this may have been for the teachers, peer mentoring had its own challenges and limitations.
In this section, some of the challenges experienced by the teachers related to (a) grouping, (b) lesson preparation, (c) lesson observation, (d) using the T3 tool and (e) post-lesson discussion are reported.

**Grouping**

To achieve higher quality dialogue among the teachers, in the peer mentoring process, three teachers with mix teaching experiences were grouped together as peers, within similar subjects (e.g., Science, Maths, English, Arts) in the same school. However, some of the teachers expressed that even within science subjects if the grouping could be done specifically as Biology, Chemistry and Physics and for Arts if the grouping could be done specifically as History, Geography, Economics, they could provide more beneficial feedback on the content of the subject. This experience was shared by Jampel:

Two of my peers were comfortable in commenting on the content part as they were teaching the same subject but when it came to my subject they were not in a position to comment on the content part. This was another challenge we faced. (Jampel, ET, In, S3)

On the other hand, Jampel also explained that having a group of teachers from different subjects would also have advantages because a physics teacher can take the strategies used by an English teacher and an English teacher can use the strategies which were appropriately used in teaching science subjects. In this, he intended to convey that a group comprised of teachers teaching similar subjects can be beneficial in commenting on content while a group of teachers teaching different subjects can be beneficial in commenting and learning different teaching strategies.

For Tshering and her group, they focused on the benefits of grouping teachers teaching the same subject in a group as they could comment not just on the content but also
on the teaching pedagogies, which can help in teaching a particular content in a different or a better way. This could lead to a holistic development of a teacher.

When teachers teaching similar subjects are grouped together, the teacher prepares well so that we get fewer comments on our content, but the advantage is the observer can also comment on our teaching strategies, so we get help on all round development. (Tshering, BT, In, S2)

However, Dechen, an experienced teacher, explained that grouping teachers teaching the same subject may not be possible in some schools because some schools may have only one history teacher or one geography teacher depending on the size of the school and the number of students. It would purely depend on the situation, but she agreed that wherever possible such grouping would be best.

Grouping teachers with varied teaching experiences provided opportunities to work and learn together that motivated self-reflection and professional development. A group of teachers comprised of different subjects could learn various teaching styles and experiences. However, teachers revealed that grouping teachers teaching same subject could be advantageous so that they could provide and obtain feedback on both content and teaching pedagogies.

**Lesson Preparation**

In peer mentoring, teachers were expected to come together and plan their lessons in consultation with each other to develop rich conceptual knowledge. This was also to help them teach their lessons confidently before the students and observers. However, teachers mentioned that they were not able to sit together in planning their lessons. They said: “We did not discuss while planning the lesson for observations” (Dechen, ET, In, S1), “I have done the preparation by myself, not in a discussion with them” (Sonam, BT, In, S3).
On the other hand, they mentioned that coming together in planning their lessons would have greatly helped them in making their lessons effective by acquiring ideas about both content and teaching strategies from their peers. However, due to too many classes and other responsibilities in the school, they had very limited time. For instance, during my (researcher) casual conversation with Delha, a beginning teacher, she mentioned her responsibilities as school health in charge; (she had to distribute iron tablets to the girls every week, organise the school bus to take sick students to the nearest hospital and when the school bus is not around she had to find private cars). She mentioned that these duties consumed a lot of her time which could be dedicated to academic purposes (Researcher’s observation notes, S1).

As beginning teachers, they were enthusiastic, energetic and ready to shoulder any kind of opportunities or responsibilities presented to them. The schools on a positive note provided more responsibilities to beginning teachers so that they experience and learn new practices. On the other hand, beginning teachers feared that refusal to carry any responsibilities offered to them could question their competency and offend the school management. They said, “I couldn’t say no” (Delha, BT, In, S1), “our HOD asked me for participation but ignored once because I am teaching for the first time and I don’t have any experience” (Singye, BT, In, S2). This led to over burdening and leaving very little time for academic purposes. This was the case with Delha. She explained:

I would be busy after eighth period, the last period of the day as I have so many things to do like I am non-academic committee member in which I have to make the time table for so many assessments. I am in charge of health, and I have to look after sick students, due to this I have no time and they have to wait for me for post-lesson discussion. (Delha, BT, In, S1)

Similarly, Singye, another beginning teacher shared his thoughts:
I have 31 periods, highest among all the teachers. I am teaching six different sections of biology and chemistry and being a scout leader, school health coordinator, then I have to look after the school mess, I have to look after the school surroundings. I have a heavy work load here. (Singye, BT, In, S2)

Time is one of the major constraints among the teachers and due to which, they are not able to plan their lessons in consultation with peers, although, they agree that planning their lessons in consultation with peers would have so many benefits. Interview responses indicated that teachers shoulder many other responsibilities in the school besides academic, especially the beginning teachers, which makes it more difficult for them to manage time.

Lesson Observation

The beginning teachers involved in this peer mentoring overwhelmingly highlighted observing experienced teachers as one of the most influential and distinctive professional developments that they have had. They said:

Mr. Jampel (ET, S3), I really like the way he teaches … I try to copy that. (Puran, BT, In, S3)

Most of the time we all forget to outline the lesson and to share our lesson objectives with the students. Our senior teacher would usually use a chart and on this she would mention the objectives. We followed her example. (Delha, BT, In, S1)

However, being involved in peer mentoring required time and effort for lesson preparation, observation, discussion and implementing the T3 tool. Some of the participants mentioned that the three months of involvement in peer mentoring was quite hectic, though temporary. The participants revealed the challenges of managing “time” while participating
in peer mentoring. Pema said: “The challenges I think would be getting time … time would be the biggest challenge.” (Pema, ET, In, S2).

For some of the participants, “Getting classes was the problem” (Puran, BT, In, S3). The main difficulty we faced was arranging periods for observation and discussion because all of us have packed classes” (Jampel, ET, In, S3). Since peer mentoring was not a part of their regular school activities, teachers had to implement the observation for peer mentoring into their schedule along with the rest of their daily teaching and learning responsibilities. Due to which they couldn’t avoid certain clashes in their daily teaching timetable and that lead to postponing some of the observations and discussion sometimes up to two days. However, they ensured that they completed the observation cycle.

In addition, they faced difficulties in arranging classes for observation as they had to do a lot of adjustments in their timetable for three of them to go to one class. Due to this they had to manage their observations for peer mentoring during their free period, which could otherwise be used as downtime for refreshing and relaxing themselves from a busy schedule. This made their day more hectic and tiring. Seyum mentioned: “Sometimes when we have just one free period we had to include that in doing observation, so it became a bit heavy for the day.” (Seyum, BT, In, S4)

For others, they faced difficulties in maintaining the peer mentoring as they were the only ones involved at that stage and had to miss some of their own classes in order to go do observation for peer mentoring. They said: “When I am free, they are not free and when they are free, I am not, so we used to compromise some of our classes” (Pema, ET, In, S2). “It will be mainly to do with time, our free periods don’t match” (Seyum, BT, In, S4). While doing this they had to postpone their regular planned lesson to another time or another day. Pema said: “In one way we are benefitted but in another way we compromised our time and syllabus” (Pema, ET, In, S2).
In other situation, teachers had to postpone the observation for peer mentoring as some of the observers refused to come for observation because they had already planned a lesson for another class. “When they come and say let’s do the observation I use to say, let’s not do it today because I am planning to go to another class. I want to take another class” (Puran, BT, In, S3).

Finding a free period for lesson observations was a challenge for the participants as only three teachers were involved in implementing the peer mentoring in the participating schools. Moreover, it was not a part of the school’s regular activities, so participants had to use their own free periods for lesson observations, which made their day more hectic. In addition, sometimes they had to miss their own class to go for observation.

**The Teacher Tracker Tool (T3)**

The T3 tool assisted the participants with observation and discussion. It is a version adapted for the Bhutanese teachers in English and was introduced to the participants during the initial meeting using the PDF enabled version, which allows the user to read, write and save using PDF in their computer/laptop. However, some of the participants, both beginning and experienced teachers had certain difficulties in using the PDF version of the tool during the initial phase of observation and discussion. They shared their challenges in using the T3 tool: “In the beginning each and every one of us struggled a lot in filling out the form” (Pema, ET, In, S2), “In the beginning we faced some difficulties with the PDF version” (Jampel, ET, In, S3).

Instructions on how to use the tool were included in the initial meeting and they were also informed that the tool could be printed and completed in paper form, but it was also pointed out that the richness of the data is best when it is done electronically. Due to difficulties of using the PDF format of the tool, it was converted to Microsoft word format by adjusting some boxes and figures and sent it back to all the participants. This made it quite
comfortable for the teachers with the observation, “Later you sent the word version and with that we were comfortable” (Jampel, ET, In, S3).

After the first round of observations some of the teachers were confronted with some difficulties in understanding and filling out some of the elements of the T3 tool. Pema, an experienced teacher contacted me (researcher) via phone explaining some of the difficulties he faced and also sent some of the observation sheets via email. Pema said: “I had a tough time figuring out the form, so I used to call you time and again.” In response, I (researcher) sent more information and tips about the five elements of the T3 tool via email to all the teachers.

This seemed to have been a common issue for Pema and his group because he said that the same thing happened with his peers for the first time and they asked him to provide more information and ideas. Therefore, they sat together and discussed the T3 tool. This provided an opportunity for them to come together and deliberate on the issue of the T3 tool using some of the tips that I sent via email. He stated: “We discussed the problem and came to a common consensus and then the following observations went without any problem” (Pema, ET, In, S2).

In addition, when the teachers began their observation using the T3 tool, most of the teachers decided to incorporate all the five elements of the tool for observation. They said: “In the beginning we were not sure about which elements to use so we used the whole thing” (Jampel, ET, In, S3), “In our first lesson observation what we did was, we went for observation and used the whole tool for observation” (Norling, BT, In, S4). But they found it overwhelming and difficult to catch up with the teaching and writing down the comments at the same time. To this, some of the teachers shared: “One person to cover all the elements is quite impossible” (Chojay, BT, In, S1), “To observe and fill up the tool, we were not able to even catch up” (Norling, BT, In, S4), and “I found some of the difficulties while filling out
the form, we had to be very fast to catch up and sometimes we missed some points” (Pema, ET, In, S2). It is evident from the observation records that for the first month, the observers focused on all the five components of T3 tool during the observation.

However, after they expressed these concerns, it was suggested that they could focus on just one or two elements of the T3 tool by each observer during the observation. This was clearly indicated by the observation records maintained by the teachers that they focused on at least two elements of the tool for the rest of their observations in peer mentoring. This resolved the issue of not being able to catch up with writing comments and teaching at the same time. They were able to concentrate on one or two elements in detail and provide feedback to their peers.

I remember asking you whether we needed to use all the elements in one observation or not and you suggested me to focus on one element in one observation. That’s how we did it later. (Jampel, ET, In, S3)

I think that’s good because they can focus on one thing. When we were writing what the teacher said, did or write, we missed out on some other things the teacher did in other part … That way we miss out so many things happening in the class but if it was done separately, they could focus on one thing at a time. I think this way was better. (Puran, BT, In, S3)

I could see lots of difference … in this way we could cover all the points, we could focus on each point of an elements. Whereas when we were using all the elements it was difficult for us to cover all of the points. (Chojay, BT, In, S1)

The teachers had some difficulty in coping with the initial PDF version of the T3 tool, but it was solved when the Microsoft word version was sent to them. The other issue related to filling out the form while observing a lesson. This was mainly because each observer was trying to complete all five elements of the T3 tool during one observation.
However, it was suggested that each observer could focus on one or two elements of the tool during an observation.

*Post-lesson Discussion*

Some of the beginning teachers found it challenging to provide feedback and comments to experienced teachers in their group as they were used to their school monitoring system and were still considering the hierarchal order of observation. They were still transitioning from a culture where beginning teachers do not have many opportunities to observe and provide comments to the more experienced teachers. Puran said: “Sharing feedback with my friend was not a problem but sharing with senior teacher was a little bit uncomfortable” (Puran, BT, In, S3). Similarly, Tshering said: “For me receiving feedback was ok but providing feedback was difficult” (Tshering, BT, In, S2).

This situation was raised by some of the experienced teachers as well. They found that the beginning teachers were not opening up in providing feedback about their teaching during the post-lesson discussion sessions. Pema, an experienced teacher shared that the beginning teachers of his group were hesitant to share his areas of development.

However, during the three months of engagement in peer mentoring, the challenges of providing feedback and comments to experienced teachers lessened for these beginning teachers. When asked whether they are comfortable now, they replied:

Yea, now I am comfortable because he also accepts our suggestions and feedback. (Puran, BT, In, S3)

Yes, because this is the essence of such groupings that we are free to share our experiences. I think such professionalism is needed in our school system. If such grouping is not made, probably I may not be observing my senior colleagues and
also not providing feedback too. So, involvement in this group has brought some changes. (Tshering, BT, In, S2)

But for some of the beginning teachers, providing feedback to the experienced teacher in their group wasn’t an issue from the beginning of the peer discussions. For instance, Delha, in her first observation, mentioned that the experienced teacher of her group used the lecture method for the majority of her lesson and there wasn’t any student activity. So, she recommended to her to incorporate some student activities in her future lessons. Similarly, Seyum mentioned that she was quite comfortable in providing feedback to the experienced teacher of her group. She said:

In my case I accepted whatever they said but if I felt that it was not correct I tried to justify it and till now I did not find any difficulties in providing feedback to them. They were really cooperative. (Seyum, BT, In, S4)

Some teachers used observation notes written in the T3 tool to provide feedback during the post-lesson discussion meeting because the T3 tool enables observers to collect evidences during classroom observation and use it as discussion points during the post-lesson discussion meetings.

In receiving feedback, there was not much difficulty, it depended on the two observers. To provide feedback, I had to be the observer and there is not much difficulty in providing feedback also because it was reflected clearly in the T3 tools. Just by filling out the T3 tools we could use it to provide feedback. (Sonam, BT, In, S3)

Besides, most of the time they had to postpone their post-lesson discussion towards the end of the day or in some instances to another day or two due to non-availability of free
time. “For discussion we have to fix our timing, as soon as our observation finishes, we cannot do the discussion because we have to go to another class” (Puran, BT, In, S3). However, teachers mentioned that they completed the observation rounds with a feedback session.

With less experience in teaching and not knowing the experienced teachers well, it was challenging for some of the beginning teachers to provide feedback to the experienced teachers. However, participating actively in peer mentoring and using T3 tool helped them develop their confidence and provide feedback freely.

Summary

Peer mentoring is different from the school-level monitoring system in terms of grouping as peers, the number of observers, using the T3 tool to guide the observers during observation and providing feedback. The participants’ experiences of peer mentoring were positive and highlighted the developing culture of lesson observation, providing feedback, sharing experiences and the growing personal/professional relationships among peers. This has made an impact on both the experienced and beginning teachers in developing their teaching and learning practices. It has also helped in orienting the beginning teachers about the school system like the syllabus, homework culture, and maintaining continuous assessment. They shared and learned new ideas by participating in observation rounds during peer mentoring. Moreover, teachers were able to share their experiences and feedback freely among their peers as their collegial relationships developed due to coming together for lesson observations and post-lesson discussions. This particularly helped the beginning teachers in developing their confidence in providing feedback to the experienced teachers. On the other hand, the experienced teachers took the feedback provided by the beginning teachers positively and constructively to enhance their own teaching practices. This brought positive
changes to the culture of professional learning among the teachers in the four participating schools.
CHAPTER 6

Discussion and Conclusion

This research set out to investigate the ways in which peer mentoring as a school-based professional development program supported the development of a professional learning community among teachers in Bhutan. The peer mentoring program was based on constructivist-oriented mentoring (Richter et al., 2013), where learners construct knowledge by connecting new information to their previous knowledge through social interaction (Kemmis et al., 2014). A model of integrative pedagogy underpinned the development of the peer mentoring program. Observation rounds during peer mentoring supported building relationships among beginning and experienced teachers to develop a professional learning community.

As a part of the implementation of the peer mentoring, an observation tool called Teacher Tracker Tool (T3) was used to guide and encourage the peers to engage in lesson observations and post-lesson discussions. The descriptive evidence collected by teachers during the observation helped them to collaboratively engage in dialogue during post-lesson discussions. Through the interaction, they exchanged knowledge and strategies that enhanced their teaching and learning practices. Peer mentoring was expected to provide professional learning opportunities for both beginning and experienced teachers. Beginning teachers face challenges related to teaching, understanding the school culture, self-esteem and confidence and they require support and guidance (Hudson, 2012). The peer mentoring process was expected to provide beginning teachers with support and companionship, which could reduce professional stress and increase confidence. Additionally, it was expected to provide ongoing personal and professional development opportunities for the experienced teachers to update and develop their teaching practices. Peer mentoring could also encourage teachers to develop realistic understanding of the processes involved in effective teaching and look
critically at the teaching procedures they have established and reflect on their effectiveness through lesson observations and post-lesson discussions.

This study adopted a qualitative approach with multiple sources of data collection (survey, observation notes maintained by the participants, semi-structured interviews of beginning and experienced teachers and researcher’s observation notes) to gain a rich understanding of teachers’ experiences of peer mentoring as an alternative school-based professional development program. In particular to answer the central research question:

In what ways can peer mentoring program support the development of a professional learning community of beginning and experienced teachers in Bhutan?

The first part of this chapter begins with a summary of the key findings in relation to the two sub research questions of the study, followed by the discussion of the findings in the context of the aim of the study with reference to the literature review in Chapter 2. The next part of the chapter highlights the contributions this study makes to the field and the implications for the profession in Bhutan. Finally, the remainder of the chapter presents the limitations of the study and future research.

**Summary and Discussion of the Sub Research Question 1 Key Findings**

*How do teachers experience peer mentoring and in what ways do the experiences of beginning and experienced teachers differ?*

A key finding was that teachers related the experiences of peer mentoring to their previous experiences of school-level monitoring because both involved lesson observation. The teachers experienced peer mentoring differently from the school-level monitoring system. Evidence from the pre-peer mentoring survey suggested that the school-level
monitoring system reinforced a hierarchical relationship while teachers’ explanation of their experiences of peer mentoring was non-hierarchical and involved two-way conversation between teachers. Although the peer mentoring in this study was based on mutual respect, collegiality and trust between mentor and mentee as emphasised in the literature by Kemmis et al. (2014) and Wilkinson et al. (2014), there was evidence that some of the teachers retained an evaluative understanding of lesson observation.

In peer mentoring, grouping three teachers (two beginning and one experienced) teaching similar subject area as peers was a different experience for the teachers when compared to school-level monitoring system, which had no group as such. This not only offered opportunities for teachers to engage in higher quality dialogue (Kriewaldt et al., 2018) among peers but it also provided a sense of confidence for beginning teachers to open a conversation in the presence of another beginning teacher in the same group. At the same time having an experienced teacher in a group helped the beginning teachers to understand the school’s culture of teaching and learning (e.g., giving homework and maintaining continuous assessment [CA] records of the students).

The results from the interviews with teachers indicated that the teachers did not plan their lessons together due to lack of time and teaching different subjects. However, the feedback provided by the teacher observers during the post-lesson discussion helped them in their future lesson preparations. The feedback was related to both content and pedagogy. As a result, they were confident and better prepared to present their lessons not just in front of the students and observers from peer mentoring program but other audiences as well. Some of the beginning teachers mentioned that they intentionally did not involve peers during lesson preparation to obtain as much feedback as possible from the observers and develop the quality of their teaching. But in general, teachers believed that involving peers during lesson
preparation could have provided more ideas about the content, teaching learning materials and selecting appropriate teaching strategies for particular topics or subjects.

Peer mentoring differed from the hierarchical order of observation used in school-level monitoring system and offered opportunities for teachers to observe and provide feedback to each other. For some of the beginning teachers like Puran and Singye, by observing their senior teacher’s lesson, they learned about organising classroom activities more effectively and developing better classroom management techniques. For experienced teachers like Jampel and Pema, observing beginning teachers’ classes provided them an opportunity to adopt different or innovative teaching strategies in their lesson. This perception is consistent with those of Hobson et al. (2009) and Maor and MaConney (2015) who explained that mentoring had positive impact on the personal and professional development of experienced teachers who took part in a mentoring process. They learned alternative teaching methods, which also facilitated better communication with their students.

In peer mentoring, peers provided emotional support by sharing their ups and downs because their relationship was based on an equal relationship with another teacher with whom they could discuss any issues and concerns. Dechen affirmed that peer mentoring made the group “best of best friends” and quite often they engaged in conversations besides teaching. When mentoring is focused only on professional matters, non-academic agendas can be ignored (McGuire & Reger, 2003). This wasn’t the case in the peer mentoring as teachers provided personal support and encouragement.

Peer mentoring is based on a constructivist view of learning (Richter et al., 2013) and the program provided an opportunity for teachers to meet each other regularly to share their experiences, resources and ideas, and develop new teaching practices. They shared equal responsibilities and acted as partners often sharing each other’s experiences, knowledge and skills (Geeraerts et al., 2015; Kemmis et al., 2014; Pennanen et al., 2016; Terri, 2014).
Coming together frequently in peer mentoring for observation and discussion helped them in developing their relationships, which further helped them to be able to suggest and provide honest feedback to each other. Teachers become aware of their strength and weaknesses and consequently make changes to their teaching (Parr & Hawe, 2017). Some of the teachers demonstrated greater content knowledge and some excelled in teaching pedagogy. Therefore, lesson observation was a great opportunity for teachers to watch and learn from real time teaching of their peers. The peer mentoring program enables teachers to reflect upon their teaching by observing others and receiving specific feedback from observers (Dos Santos, 2016; O’Leary, 2012).

Having two observers in the class was a completely new experience for the teachers and it received mixed opinions from both beginning and experienced teachers. Results indicated that initially teachers had an overwhelming experience of having two teachers observing their class. However, after several rounds of observations and discussions their relationship developed and it became more normal for all the teachers. The relationship developed during peer mentoring assisted the beginning teachers to gain sufficient confidence to be able to provide feedback to the experienced teachers during the post-lesson discussion meetings. Moreover, in the peer mentoring, teachers found that having two observers enabled feedback to be validated ruling out the difficulty of being the sole provider of feedback and source of knowledge (Parr & Hawe, 2017).

The other interesting experience of peer mentoring was the use of an observation tool (T3), which was new to most of the teachers involved in this study. However, School 2 had adopted an observation form in their school, but the teachers mentioned that the T3 tool used in the peer mentoring was more inclusive and comprehensive. The teachers believed that the T3 tool made it easier to record their observations and used it to validate and strengthen their conversation during post-lesson discussion meetings. This was consistent
with Kriewaldt’s et al. (2018) and Windsor’s et al. (2020) motive for developing the T3 tool, which was to capture important aspects of the lesson and to ground their discussion during feedback sessions.

In peer mentoring, the idea of grouping three teachers teaching similar subjects as peers helped them in getting more ideas about the content as well as the teaching pedagogy. A study by Ingersoll and Smith (2004) highlighted that beginning teachers who were provided with mentors from the same subject area were more likely to learn and less likely to leave the teaching profession after their first year of teaching. Even though this might be the ideal situation, it might be difficult to find a mentor who perfectly matches the subject and interests of all the beginning teachers in all the schools. In such a situation, the provision of peer mentoring could possibly solve the issue, where both beginning and experienced teachers act as mentors and mentees. Moreover, in peer mentoring the implementation of the T3 tool helped the teachers observe any teaching subjects so that all participants could assume the role of a mentor as well as mentee. This differed from traditional mentoring of beginning teachers (Richter et al., 2013).

In addition, experienced teachers like Pema shared that the peer mentoring experience was different from experiences of the usual PD programs. Whereas peer mentoring was practical, realistic and applicable to most schools, sometime PD programs organised by the Ministry of Education wasn’t able to be implemented in schools. This is consistent with Hamilton (2013), affirming that peer mentoring is focused on localised professional learning, where teachers provide individual or collective support to each other through lesson observations and social interaction, and can be incorporated into teachers’ daily work and be teacher driven (Hamilton, 2013; Kensington-Miller, 2012). It is also consistent with Hudson’s (2013) view that peer mentoring is cost effective as schools can make use of their teachers as an available resource.
Findings from this study suggested that although peer mentoring was beneficial to both beginning and experienced teachers in developing positive relationships and in enhancing their teaching practices, they also experienced some logistic challenges. One of the major challenges faced by the teachers while implementing peer mentoring was finding time for lesson observation and discussion due to too many teaching periods and other non-academic responsibilities in the school. Moreover, the classes were already pre-booked for other subjects and teachers found it challenging to implement lesson observations and post-lesson discussions for peer mentoring into their school days. Due to which, some of the teachers revealed that they had to compromise their own classes for lesson observation. In addition, teachers reported challenges in adjusting free time for all three teachers to go to the same class for observations and post-lesson discussions. This led to postponing the feedback sessions up to two days. These challenges were incurred mainly because peer mentoring was not a part of their regular school activities and only three teachers were involved in it. However, teachers believed that involving a majority of the teachers in a peer mentoring program and incorporating it in the school timetable could justify and provide solution to the time management challenges. This could be solved if the Ministry of Education endorsed the program. Other minor challenges included teachers incorporating all the five elements of the T3 tool during the observation and most of them found it overwhelming and difficult to catch up with teaching and write down their observations at the same time. Focusing on any one or two elements of the tool during observation solved this issue.

Although there were common experiences of the participating teachers, there were some different experiences encountered by the beginning and experienced teachers involved in the peer mentoring program. According to the literature, it was widely accepted that beginning teachers face challenges related to teaching, self-esteem, belonging to place and profession in the first years of their career and they require support and guidance (Hobson et
al., 2009; Ingersoll & Kralik, 2004). Being involved in peer mentoring was an opportunity for beginning teachers to develop a relationship and build confidence to face teaching challenges in a new environment. Beginning teachers like Delha and Chojay, in this study, mentioned that initially it was difficult for them to enter the class and on top of that with two observers they were nervous to face the class. Similarly, beginning teachers like Puran and Singye also mentioned that teaching in the presence of two observers was overwhelming in the beginning. However, they remained positive and that motivated them to prepare well, stay focused and to present the lessons effectively in the presence of observers. After engaging in lesson observation rounds during peer mentoring several times, they came to know each other better and this helped them in gaining confidence.

Most of the beginning teachers mentioned that they hadn’t had any contact with the experienced teachers of their group but coming together as peers during the peer mentoring program had helped them in developing very good relationships. This had enabled them to share their difficulties freely with the experienced teachers. Beginning teachers like Chojay and Delha mentioned that they had no hesitation in asking anything from the experienced teacher of their group because they developed a very good relationship. Delha mentioned that she shared her frustrations regarding her workload in the school with the experienced teacher of her group. Beside sharing their challenges related to teaching, classroom management, understanding curriculum and organising teaching learning materials they also mentioned sharing their difficulties in managing time due to heavy teaching loads and other non-academic responsibilities in the school. The experienced teachers in turn shared their experiences and provided suggestions for managing time efficiently. This has helped the beginning teachers to balance their personal and professional life. Providing emotional support during the initial years of teaching is important to motivate and improve the self-

On the other hand, for experienced teachers involved in peer mentoring, it was an opportunity for them to rethink and improve their teaching practices. Studies have indicated that it is necessary to provide ongoing professional development opportunities for teachers to learn and enhance their content and pedagogical knowledge (Borko, 2004; Day & Gu, 2007; Richter et al., 2011; Zimmerman et al., 2017). Mentoring has shown to have a positive impact on personal and professional development for experienced teachers who took part in a mentoring process (Hobson et al., 2009; Hudson, 2016; Zuckerman, 2001). Experienced teachers like Dechen mentioned that the beginning teachers in her group helped her reflect and refresh the questioning skills that she had learned in her college and had almost forgotten. Pema, another experienced teacher shared that one of the beginning teachers in his group had greater content knowledge in biology and observing his lesson was an opportunity to learn more ideas for teaching biology. In sum, the experienced teachers mentioned that they gained new ideas, learned new and improved teaching strategies, enhanced content knowledge and improved their self-reflective skills. Therefore, the idea of peer mentoring is consistent with Niemi (2015) who stated that teachers need professional development to keep up-to-date with their teaching practices and avoid being less effective in the later part of their profession Day and Gu (2007).

In peer mentoring, teachers observed each other’s lessons and provided feedback that helped them enhance their teaching and learning practices. For beginning teachers, observing classes and providing feedback to the experienced teachers was a new experience. Some of the beginning teachers found it challenging to provide feedback and comments to the experienced teachers in their group but after few rounds of observations and feedback sessions the process became normal for the beginning teachers. This was possible due to the
efforts of experienced teachers who listened to the beginning teachers’ comments or feedback while developing positive relationships. Lesson observation and providing feedback was made convenient with the use of the T3 tool. Beginning teachers mentioned that they filled up the T3 tool during observation and later used it to communicate their feedback to the experienced teachers during the post-lesson discussion meetings. In addition, beginning teachers stated that learning through observation was a great experience. Beginning teachers like Puran, Sonam and Seyum argued that they observed the experienced teachers of their group and learned some of their teaching styles and classroom management techniques and later used them in their own lesson. This was consistent with the view of Hamilton (2013), who stressed that lesson observation provides choice, on-site learning opportunities and increased collegial respect.

For experienced teachers, being observed by beginning teachers and receiving feedback related to teaching was a new experience because they were accustomed to the hierarchical order of observation and feedback which often focused only on administrative purposes. However, they admitted taking the feedback professionally for developing their teaching practices. Results indicated that for some of the experienced teachers like Lhaden, her attitude towards observers has changed from fault finder to someone who was there to help improve her teaching and learning practices. This is consistent with Forbes (2004) who mentioned that the observation by peers has the motive to help and support each other by providing constructive feedback for future development.
Summary and Discussion of the Sub Research Question 2 Key Findings

In ways do observation and discussion as a part of peer mentoring supported the development of a professional learning community?

The results indicated that lesson observations and post-lesson discussions created an opportunity for a professional learning community to develop among peers during the three months of engagement in peer mentoring in their schools. Previously teachers did not have this opportunity. Peer mentoring aimed to enhance the culture of lesson preparation, observation and post-lesson discussion in order to nurture a collegial exchange of ideas and promote trust among teachers with an objective of improving teaching and learning practices.

In the integrative pedagogy model, as shown in Figure 4.1, peer mentoring is a mediating process that supports the development of a professional learning community. The tools of observing, writing and discussing are integral to the process as participating teachers explicate and reflect on their knowledge and practices. Results showed that coming together often for lesson observations and post-lesson discussions helped teachers to know each other well and develop their relationships, assisting the teachers to develop confidence in engaging in group discussions.

Further, findings from this study showed that peer mentoring supported peers to experience observing each other’s lesson and develop their pedagogical and practical knowledge. Each teacher was able to explain instances where they reconsidered their practices as a result of observing other teachers’ lessons and receiving feedback on their own lessons through the peer mentoring. This was consistent with the view of Gore et al. (2017) and Hendry and Oliver (2012) that peer observation encouraged observing other’s teaching with an overall aim of improving their teaching and learning practices. There was less evidence of the development of conceptual knowledge as part of the process, although
teachers claimed that preparing lessons to be observed motivated them to read widely and prepare more thoroughly. They also used the feedback from observations for their future lesson preparations. Because of the relationships developed through peer mentoring, the teachers (especially beginning teachers) gained a greater sociocultural knowledge and understanding of the context in which they worked.

The elements of the T3 tool were used to provide feedback on lesson presentation, classroom activities, interaction with students and movement in the class. In peer mentoring, teachers collected authentic evidence by writing their observations in the T3 tool and later used this information to discuss their observations with other teachers in their group. Moreover, when the feedback was provided based on the observation notes it promoted professionalism. They learned to provide and receive feedback without being judgemental and incorporate the feedback in their future lessons.

The teachers became aware of their strengths and weaknesses and accordingly made desirable changes to their teaching, suggesting growing self-regulatory knowledge. This was consistent with the findings of Darling-Hammond and McLaughlin (1999) that feedback enabled teachers to reflect critically on their own teaching and come to a conclusion on what changes they might like to adopt in future lessons.

Thus, in this study the process of peer mentoring, using the tools of observing, writing and discussing, supported professional conversations and the beginnings of a professional learning community at each school site. Perhaps, over a longer period of time, the relationships formed through peer mentoring would support more reflective conversations and further professional development.
Conceptual Contribution

One of the key conceptual contributions of this study was adapting Integrative Pedagogy Model (Heikkinen et al., 2012; Tynjälä, 2008) to develop a peer mentoring program for beginning and experienced teachers in Bhutan. The integrative pedagogy model highlights the integration of four basic elements (theoretical, practical, self-regulative and socio-cultural knowledge) of professional expertise during peer mentoring to support the development of a professional learning community.

During the peer mentoring in this study there is evidence of practical, self-regulative, conceptual and socio-cultural knowledge being integrated during lesson preparation, lesson observations and post-lesson discussion meetings. Thus, this model is applicable to teach in Bhutan and provided an avenue to promote collaboration among beginning and experienced teachers, which wasn’t possible in the existing school-level monitoring system. The frequent interaction among beginning and experienced teachers during the peer mentoring provided opportunities to understand each other better and this allowed them to exchange their experiences and observations freely. Teacher collaboration strengthens the intellectual and professional aspects of teaching (Gore et al., 2017).

Another conceptual contribution of this study was adapting the Teacher Tracker Tool (T3), which the teachers used to gather classroom evidence of teaching and promoted opportunities to discuss and enhance their teaching practices. The T3 tool supported the mediating process of peer mentoring and highly benefitted the teachers though they did not have previous experience of the T3 tool. Some of the advantages of using the T3 tool highlighted by the teachers are: it guided the teachers in planning lesson, it helped them develop theoretical and pedagogical knowledge, it made easier for the observers to write down their observations and it was convenient way of sharing their observations with each other without judging.
Moreover, teachers revealed that they were more accustomed to the hierarchical culture but consistent to the report by MacDougall et al. (2013), having multiple participants in observation and feedback flattened hierarchical perceptions and provided the conditions for the development of collegial conversations. Therefore, the integrative pedagogy model supported by the T3 tool provided opportunities to reflect and rethink their teaching practices, enhanced professional conversations and more importantly offered ways to develop a professional learning community among the beginning and experienced teachers in Bhutan.

**Methodological Contribution**

This study used various methods to investigate the experiences of peer mentoring by beginning and experienced teachers in four schools in Bhutan. The qualitative data collection methods used in this study enabled an in-depth understanding of teachers’ experiences of peer mentoring and how the peer mentoring helped in developing a professional learning community. The open- and closed-ended questions in the pre-peer mentoring survey provided an insight into the current trends of a lesson observation system in the schools and the expectations of peer mentoring by the teachers.

The T3 tool was used to make records during classroom observations and helped mediate the conversation between the teacher and observers of the lesson (Kriewaldt et. al., 2018; Windsor et al., 2020). This study adapted the T3 tool for lesson observations and as a means to support the professional conversations between beginning and experienced teachers during the post-lesson discussion meetings. The teachers maintained the observation notes using the T3 tool, which included descriptive evidence of their observations and feedback. The several observation notes maintained by the teachers enabled the researcher to have access to what was observed and a record of their post-lesson discussions.
The semi-structured interview conducted towards the end of peer mentoring program helped the researcher to understand the teachers’ perceptions and experiences of peer mentoring. It enabled the researcher to comprehend the advantages and challenges of peer mentoring that helped or constrained their professional development. The researcher’s onsite observation helped in understanding the teachers’ engagement in lesson observations and post-lesson discussions. Their conversations and interaction provided a guide to their involvement in this program and evidence of a developing professional community.

**Professional Contribution**

The concept of peer mentoring and involving a mix of beginning and experienced teachers as peers for lesson observation and provision of feedback was new to the teachers in Bhutan. They are more familiar with lesson observation that involved hierarchical order and feedback more centered towards administrative purposes. However, the results indicate that involvement of teachers with varied experiences helped in establishing a less hierarchical relationship among themselves. The results also show that during the three months of peer mentoring, teachers adjusted their timetable to engage in observation rounds, where one of them took the lesson and the other two observed using the T3 tool. This was a new form of observation but over the period of three months of involvement in peer mentoring, teachers could adapt to the new form of observation.

This study focused on school-based professional development, which is structured, sustainable, cost-effective and made use of their experiences for professional and personal development. The teachers engaged in lesson observations and provided feedback to each other with an understanding and commitment to professional learning. A social constructivist perspective was adopted as a theoretical foundation, underpinning a program in which both beginning and experienced teachers were encouraged to engage in social interaction and
reflect on their own teaching experiences. The findings indicate that peer mentoring was an effective continuing professional development program that had an impact on both the beginning and experienced teachers involved. The beginning teachers in these groups enhanced their confidence and were able to voice their opinion and challenges during the interactions. Moreover, the presence of an experienced teacher in a group assured the beginning teachers the support and someone to look to for help and guidance. For experienced teachers, engaging in peer mentoring helped them to rethink and improve their teaching practices.

The results suggested that teachers involved in the peer mentoring process began to develop a professional learning community and with preparation and support from the Ministry of Education over the time, the development of peer mentoring program in a country like Bhutan could be applicable, cost effective and successful as a professional development strategy.

**Implications of the Study**

This study has implications for a range of stakeholders, including policy makers (in Bhutan, the Ministry of Education), school leaders, beginning and experienced teachers.

**Ministry of Education**

The results showed that peer mentoring would help in developing a professional learning community and allow teachers to improve their teaching and learning practices through structured lesson observations and discussion sessions. The Ministry of Education, Bhutan has mandated every teacher to receive 80 hours of PD in a year (Ministry of Education, 2014b). However, due to the difficulty of attaining 80 hrs of PD a year, schools conduct SBIPs. Peer mentoring as a PD program is relevant to teaching and could be counted
towards achieving 80 hours of PD in a year. The findings of this study in chapter five and the issues raised about the current school-level monitoring system indicate that there is a need for a change in terms of the structure and the implementation of the lesson observation in Bhutanese schools.

The findings of this study suggest that peer mentoring would provide an appropriate opportunity for teachers to come together for observations and discussions, where they can share experiences and provide feedback to each other on teaching and learning. Frequent meetings as professionals could lead to the development of more positive relationships among the teachers and enhance their confidence. Moreover, peer mentoring would be cost effective, because it could take place within the school settings, using school resources to help teachers develop the quality of their teaching. The teachers in isolated schools could draw on peer mentoring by making use of the available resources and enhance their teaching practices. In addition, to help and guide teachers during lesson observations and post-lesson discussions, the T3 tool could be implemented.

In order for peer mentoring to be implemented in schools, teachers need adjustments to time tabling and a reduction in their non-academic responsibilities. This would allow teachers to come together for lesson preparation, observation and feedback sessions more often and help them to strengthen the quality of their teaching. It is inevitable that teachers would require additional support and preparation to facilitate the implementation and adoption of peer mentoring in schools. A structured training and support program from the Ministry of Education would facilitate the application of peer mentoring in Bhutanese schools. A one page guide showing overall aim and objectives of the peer mentoring program, selection criteria, the roles and responsibilities of beginning and experienced teachers and the peer mentoring process are developed (See Appendix L).
School Leaders

It is also important to note that school leadership is key to teachers’ growth professionally and personally. Teachers participating in peer mentoring need the support from their school leaders as they have a role in assisting teachers in their integration within the school. Firstly, as instructional leaders they can voluntarily become a part of a peer mentoring group in their teaching subject and experience the impact firsthand. Secondly, by adjusting the timetable to be suitable for teachers to come together for lesson observations and discussions, they can help advance the peer mentoring process. Thirdly, by creating a friendly collegial atmosphere for teachers and assisting teachers in forming groups of peers, school leaders could facilitate the flattering of the hierarchal order and a less evaluative approach during peer mentoring. This would encourage teachers to participate and benefit from a successful implementation of peer mentoring in the school. Finally, they could update themselves on how peer mentoring can support on teachers in developing their teaching and learning practices.

Beginning and Experienced Teachers

Peer mentoring has implications for all the teachers as it provides a school-based means for professional development and the opportunity to be a part of a professional learning community. In order for teachers to embrace peer mentoring they need to understand its benefits and challenges, embrace it collegially and have access to training to understand the process so they can implement it professionally.

A particular objective of peer mentoring program was supporting the successful transition of beginning teachers from preservice teachers to regular teachers during the initial years of their career. An experienced teacher in a group can initially take the role of guide, or facilitator, to support the group in organising lesson observations and discussion sessions. In
the process experienced teachers can help beginning teachers understand the school culture, assessment policy, syllabus and curriculum. Peer mentoring can facilitate connecting beginning teachers with other staff in the school and improve collegial relationships amongst teachers. In addition, peer mentoring provides an opportunity for all teachers to rethink and enhance their teaching and learning practices.

**Limitations of the Study**

As with most studies, this study had several limitations. Firstly, due to non-availability of enough beginning teachers in some of the proposed schools that fulfilled the criteria, the data for this research were gathered from a small number of participants (twelve teachers) in four secondary schools in the same district. Therefore, generalisability from the findings is limited in terms of all teachers in Bhutan.

Secondly, teachers were provided with information about peer mentoring and its process in about four hours. Moreover, due to a limited time for the study, peer mentoring was conducted for a period of three months. This meant there was insufficient time for the development of a professional learning community in all schools. This was mainly because not all groups of teachers were able to engage in a sufficient number of observations rounds in their schools for the learning community to develop fully. Thirdly, with regard to the researcher’s physical presence in schools during the study, an average of three observation rounds in each school was conducted. This did not allow for more observations for the researcher to fully comprehend the relationships among the beginning and experienced teachers within and outside the classroom. This study would have largely benefitted from spending an extended period of time at each site with extensive fieldwork.
Recommendation for Further Research

Professional development programs are initiated and organised to enhance professional development of teachers who in turn improve student learning and outcomes. Peer mentoring was focused on teacher professional development rather than student achievement. Although both beginning and experienced teachers of this research reported learning from each other and enhancing their teaching and learning practices, we do not know whether it had any impact on student achievement. Therefore, future research is necessary to determine if there is any connection between peer mentoring and student achievement.

Studies have revealed that support and assistance for beginning teachers had a positive impact on their commitment and retention. Teachers who were mentored during the initial years of teaching are reported to be less likely to leave the teaching profession (Ingersoll & Kralik, 2004; Ingersoll & Smith, 2004; Ingersoll & Strong, 2011). However, to ascertain the long-term impact of peer mentoring, a longitudinal study needs to be conducted to determine the impact of peer mentoring on teacher retention.

The peer mentoring was focused on the interaction and collaboration among beginning and experienced teachers but all schools do not have the number of beginning teachers to fulfill the criteria set in this research. Therefore, it would be interesting to implement peer mentoring among experienced teachers only in Bhutan and see its impact on their teaching and learning practices as opportunities for observation and discussion has shown positive impact on the personal and professional development of the experienced teachers in Australia (Gore et al., 2017).
Conclusion

This study on peer mentoring was small and purposive, aimed at providing a school-based professional development opportunity to teachers in Bhutan by assisting them to collaborate among themselves as mentor and mentee regardless of their level of work experience. The T3 tool was used to guide teachers during lesson observations and post-lesson discussions during peer mentoring. The findings suggest that the T3 tool mediated the interaction and made it easy for teachers to observe their peers as well as to provide feedback. It also helped them reflect on their own teaching practices and make changes to their future lessons.

Further, the peer mentoring program as developed in this study, contributed to the professional development of teachers. The research indicates that beginning and experienced teachers involved in peer mentoring had the opportunity to come together more often and engage themselves in a professional dialogue about content and pedagogy during lesson observations and discussions. Peer mentoring has not only benefitted the beginning teachers in enhancing their teaching practices and strengthening their self-confidence, it has provided opportunities for experienced teachers to rethink their teaching skills and strategies. This has helped both beginning and experienced teachers to grow professionally.

The research demonstrated the peer mentoring program provided a platform that created an opportunity to develop a professional learning community. Although there was evidence of growing culture of lesson observation, feedback and collegial discussion, it is less clear to the extent to which a professional learning community developed for each group. As discussed earlier in the limitations section of this chapter, peer mentoring was conducted for a period of three months only due to limited time. It is possible that if a long-term opportunity to participate in peer mentoring could be provided in which teachers study their own work as well as that of their peers, with the purpose of peer interaction and
collaboration, a professional learning community might develop in these schools. Therefore, it would be very beneficial to implement peer mentoring as a school-based professional development for the teachers in Bhutan to promote teachers’ professional learning and enhance professionalism.
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Appendices

Appendix A  Letter to Director General, Ministry of Education, Bhutan

09/01/2018

The Director General
Department of School Education
Ministry of Education
Thimphu, Bhutan

Subject: Seeking Approval for the conduct of research on Peer Mentoring as a Professional Development (PD) tool for the Teachers of Bhutan

Dear Sir,

My name is Tshewang Rinzin and I am a Doctoral student in the School of Education at Murdoch University, Western Australia. My supervisors are A/Profs. Judith MacCallum and Dorit Maor, who are experienced Academics in Murdoch University. My proposed study is entitled, “Peer Mentoring as a Professional Development Tool for the Teachers of Bhutan”.

The proposed study aims to support the professional development of teachers by assisting them to collaborate among themselves within school and encourage them to participate both as mentor and mentee during lesson observation and post-lesson discussion, regardless of their level of experience. This peer mentoring PD would be school-based, collaborative, teacher driven, ongoing, sustainable and integrated into teachers’ daily work. Previous research indicates that peer mentoring facilitates the development of professional learning communities.

The proposed study aims to make a substantial and original contribution to the knowledge about peer mentoring in the Bhutanese education system in the following ways:

1. Add contextual local knowledge and ideas to the various literatures and documents developed around the world on peer mentoring;
2. It will enhance the theoretical and practical knowledge of beginning and experienced teachers through regular interaction in a first ever peer mentoring experience in Bhutan;
3. Enhance the support system for the beginning teachers during their initial years of their teaching career; and
4. Help all teachers, including those new to the profession, to develop strategies to focus on the needs of students by identifying problems, developing solutions and applying those solutions to address students’ needs.
In this regard, we seek your kind approval for carrying out the study and to visit and meet teachers of four secondary schools (two urban and two rural) in the country. Moreover, your kind approval is one of the requirements for obtaining the university’s ethics clearance. The conditional ethics approval from Murdoch University is attached for your kind reference.

We look forward to your continuous support.

Thanking you

Yours sincerely

Tshewang Rinzin
(Doctoral candidate)
Murdoch University
Western Australia
Appendix B  Approval Letter from the Director General, Ministry of Education, Bhutan

Chief Dzongkhag Education Officer,
Dzongkhag Administration
Chukha, Thimphu and Wangdue.

Subject: An approval to conduct research study

Sir,

As requested by Mr. Tshewang Rinzin, (PhD, student) of Murdoch University, Western Australia through his application dated 09/01/2018 and based on the letter dated 08/01/2018 from Dr. Erich Von Dietze, Manager, Research Ethics and Integrity, Murdoch University, the Department of School Education, Ministry of Education is pleased to accord approval to carry out the research for his PhD study on the title “Peer mentoring as a professional development tool for the teachers of Bhutan” as proposed.

Therefore, you are requested to kindly facilitate him to carry out the research study in any higher secondary schools that he apprises you on his visit.

Please ensure that the schools he is visiting are to be provided prior information so that their normal routines are not disturbed.

Thanking you,

Sincerely yours,

(Karma Tshering)
Director General
Department of School Education
Ministry of Education
Thimphu

CC:
1. Mr. Tshewang Rinzin, Camp Thimphu.
2. Office File
Appendix C  Letter to the School Principal

Date: 24/01/2018

To,
The Principal

Subject: Permission to conduct research in your school

Dear Principal,

My name is Tshewang Rinzin and I am a Doctoral student in the School of Education at Murdoch University, Western Australia. My supervisors are A/Profs. Judith MacCallum and Dorit Maor, who are experienced academics in Murdoch University. I seek your permission to allow me to conduct research in your school. My proposed study is entitled “Peer mentoring as a professional development tools for the teachers of Bhutan”.

The proposed study aims to support the professional development of teachers by assisting them to collaborate among themselves within school and encourage them to participate both as mentor and mentee during lesson observation and post-lesson discussion, regardless of their level of work experience. This would help all teachers, including teachers new to the profession, to develop strategies to focus on the needs of students by identifying problems, developing solutions and applying those solutions to address students’ needs. Previous research indicates that peer mentoring facilitates the development of professional learning communities. Ideally peer mentoring would be in groups of three teachers with similar subject area.

Prior to the commencement of the study, I would conduct an information session at the school site, outlining the aims and objectives of the research and use of Teaching Tracker Tool (T3). The proposed study is expected to begin in March and end in June 2018 (four months). Participants would be asked to complete a short survey for about 8-10 minutes prior to the start of peer mentoring. I would form groups of three teachers comprising of one more experienced and two beginning/early career teachers teaching similar subjects. The peer mentoring program would involve teachers observing at least 4 complete lessons of their peers and providing feedback during the post-lesson discussion. To help them with their observations and providing feedback, an observation tool called Teaching Tracker Tool (T3) would be provided. Towards the end of four months, each participant would be invited for an interview of about 45-60 minutes at the school site at a time suitable to them.

If you agree for teachers at your school to participate in this study, I would request you to kindly identify suitable participants with varied experiences in teaching so that I can form
groups of three teachers as discussed earlier. I would also like to request you to provide me with their email addresses so that I can personally send them an invitation letter along with my research information letter, explaining more about it and their roles as participants. The identities of the school and participants will be kept confidential and not be disclosed in any reporting or publications resulting from the research. Data will be kept in a secure location and destroyed as required by the law.

I am happy to provide further details and to discuss any questions you might have about the study. Your approval to conduct this study would be greatly appreciated. Thank you in advance for your interest and assistance with this research.

Yours sincerely

Tshewang Rinzin

Email: Tshewang.Rinzin@murdoch.edu.au
Phone: +61 0449 977 856

A/Prof: Dorit Maor

Email: D.Maor@murdoch.edu.au
Phone: +61893607257

A/Prof: Judith MacCallum

Email: J.MacCallum@murdoch.edu.au
Phone: +61893607847
Appendix D  Survey

Peer Mentoring as a Professional Development Tool for the Teachers of Bhutan

Participant consent

I have read the Information letter about the nature and scope of this survey. Any questions I have about the research process have been answered to my satisfaction. I agree that by submitting the survey I give my consent for the results to be used in the research. I am aware that this survey is anonymous and no personal details are being collected or used. I know that I may change my mind, withdraw my consent, and stop participating at any time; and I acknowledge that once my survey has been submitted it may not be possible to withdraw my data.

I understand that all information provided is treated as confidential by the researchers and will not be released to a third party unless required to do so by law.

I understand that the findings of this study may be published and that no information which can specifically identify me will be published.

Indicative Survey Questions [Pre-peer mentoring program]

A. Background information

1. What is your gender?
   Female □  Male □  Other □

2. What is your age group?

3. What is your highest level of formal education that you have completed?
   □ Bachelor degree
   □ Post Graduate Diploma in Education
   □ Master degree
   □ PhD
4. How long have you been a teacher?
   This is my first year 1-3 years 4-6 years 7-9 years More than 10 years
   □ □ □ □ □

5. How long have you been working as a teacher in this school?
   This is my first year 1-3 years 4-6 years 7-9 years More than 10 years
   □ □ □ □ □

6. What is your area of teaching?
   Math Science English Arts Commerce
   □ □ □ □ □

7. In a typical school week, estimate the number of (60 minute) hours you spend on the following in this school. Please write a number in each row and round it to the nearest half hour. Write 0 (zero) if none.
   o ______ Teaching of students in school (either whole class, in groups or individually)
   o ______ Planning or preparation of lessons either in school or out of school (including marking of student work)
   o ______ Administrative duties either in school or out of school (including school administrative duties, paper work and other clerical duties you undertake in your job as a teacher)
   o ______ Other (please specify):
       __________________________________________________________

   B. Professional development

8. What do you understand by the term “professional development (PD),” as it relates to secondary teachers and education?
9. During the last 12 months, did you participate in any National Based In-service Programs? Yes ☐ No ☐

If Yes, did it relate to any of the following kinds of professional development activities?

- Courses/workshops (e.g. on subject matter or methods) ☐ ☐
- Education conferences or seminars ☐ ☐
- Qualification program (e.g. a degree program) ☐ ☐
- Observation visits to other schools ☐ ☐
- Mentoring/observation/coaching as part of formal school arrangement ☐ ☐
- Individual or collaborative research on a topic of your interest to you professionally. ☐ ☐

10. During the last 12 months, did you participate in any School Based In-service Programs? Yes ☐ No ☐

If Yes, please indicate which activities have you been involved.
11. In all, how many hours of professional development did you attend during the last 12 months? Consider one day as equivalent to 6 hours. Please round to whole hours. Write 0 (zero) if none.

_________ Hours

C. School level monitoring system

12. How is lesson observation conducted in your school? Please explain briefly.
13. How often do you do the following in this school? Please mark one in each row.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Everyday</th>
<th>Weekly</th>
<th>Fortnightly</th>
<th>Monthly</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Lesson planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Observe other teachers’ classes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Provide feedback to other teachers</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Teach jointly as a team in the same class</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Engage in joint lesson planning with other teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Exchange teaching materials with colleagues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. How often are your lessons being observed?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>h. Writing reflections based on feedback from the observers</td>
<td></td>
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</tr>
</tbody>
</table>

14. How often do/did you engage in lesson observation and receive feedback from the following?

<table>
<thead>
<tr>
<th>Feedback Source</th>
<th>Everyday</th>
<th>Weekly</th>
<th>Fortnightly</th>
<th>Monthly</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Peer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Colleague from same subject area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Head of department</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. School leader</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Associate teacher</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
15. How often do/did you engage in lesson observation and provided feedback to the following?

<table>
<thead>
<tr>
<th></th>
<th>Everyday</th>
<th>Weekly</th>
<th>Fortnightly</th>
<th>Monthly</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Peer</td>
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<td></td>
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<tr>
<td>b. Colleague from same subject area</td>
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<tr>
<td>c. Head of department</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>d. School leader</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. What do you understand by the term “peer mentoring”? Please explain briefly.

17. Do you think it might be similar/different from the current observation system of your school?
   If yes, please explain
   If no, please explain

18. What are your expectations of peer mentoring program?

Thank you for taking the time to complete this survey, regarding your experiences of current lesson observation system in your school and your expectations of peer mentoring program. As stated before, your responses will remain confidential and anonymous and the use of pseudonyms will be used to identify all research participants, the school and district, as well as its location. Thank you!
Appendix E  Survey Analysis Report

Survey

From the 12 respondents that participated, the results and findings are as shown below:

Question 1: What is your gender?

Male: 7 (58.33%) Female: 5 (41.67%)

As the question was asked to 12 respondents, the responses showed a slightly higher percentage of male participants (58%) than female participants (42%). This was not a worrying difference in participation as the ratio between male and female participants was only 1.4:1. This could be mainly due to higher number of male teachers in most of the Bhutanese schools.

Question 2: What is your age group?

As the question was asked to 12 respondents, the responses showed a slightly higher percentage of male participants (58%) than female participants (42%). This was not a worrying difference in participation as the ratio between male and female participants was only 1.4:1. This could be mainly due to higher number of male teachers in most of the Bhutanese schools.
The survey showed that 75% of the respondents are in age group 24-28 years while only 8% of the respondents are in age group 34-39 years. This indicated that most of the participants are young professionals and fairly new to the profession. This could be due to the nature of grouping for the peer mentoring program, where it required one experienced teacher and two beginning teachers in a group of three.

**Question 3: What is your highest level of formal education that you have completed?**

Bachelor Degree (BD): 3 (25.00%), Post Graduate Diploma in Education (PGDE): 7 (58.33%), Master Degree (MD): 2 (16.67%), PhD: 0

![Figure 3 Highest level of formal education](image)

Based on the graph shown above, it is clear that most of the respondents completed Post Graduate Diploma in Education (58%), 25% completed Bachelor degree while only 17% completed Master degree. There are only 2 teachers who completed Master degree and this is mainly because most of the participants are beginning teachers who have been in the profession less than 5 years. The civil service rules and education policy of Bhutan demands them to be in the field for at least 3 years (1 year probation and 2 years of active service) before they opt for further studies.
Question 4: How long have you been a teacher?

The above graph indicated that there are 4 (33.3%) respondents, who are in the first year of their teaching and 4 (33.3%) teachers who have 1-5 years of teaching experience. There is 1 (8.3%) teacher who has more than 5-10 years of teaching experience. While the rest (25%) of the respondents have more than 10 years of teaching experience.

Question 5: How long have you been working as teacher in this school?

The graph above informed us that there are 4 teachers who are very new to the current school of teaching and these are probably the teachers who have recently joined the teaching profession after completing their formal teaching degree. Contrary to that there is one teacher who have been teaching in the current school for 7-9 years.
Question 6: What is your area of teaching?

Math: 2 (16.67%), Science: 8 (66.67%), English: 0, Arts: 2 (16.67%), Commerce: 0

Out of 12 respondents, 8 of them responded that they are teaching Science, although as a secondary school teacher some of them also teach Math as secondary subjects. While 2 each responded that their area of teaching is Arts and Math.

Question 7: In a typical school week, estimate the number of (60 minute) hours you spend on the following in this school. Please write a number in each row and round it to the nearest half hour. Write 0 (zero) if none.

The above graph represented the number of hours the respondents spent on teaching, planning, administrative and other works in the school during a typical school week (Mon-Friday: 8am-4pm, Saturday: 8am-1pm). The graph showed that 6 out of 12 teachers spent 11-20 hours in teaching and another 6 out of 12 teachers spend 20-30 hours in teaching students.
On the other hand most of the teachers spent very less amount of time (0-10 hours) for administrative and other works in the school. The graph also showed that 6 out of 12 (50%) teachers devoted only 0-10 hours in planning and preparing their lessons either in or out of school. This is not a very good indication of quality teaching as preparation and planning also has to be given equal amount of time. However, 3 out of 12 (25%) teachers indicated that they devoted fair amount of time (21-30 hours) in planning their lessons.

**Question 8: What do you understand by the term “professional development (PD)”, as it relates to secondary teachers in education?**

![Meaning of Professional Development](image)

*Figure 8 Respondents understanding of Professional Development.*

Over half of those surveyed reported that professional development is developing professional skills that relates to secondary school teachers, which could be achieved by involving in educational workshops, trainings and seminars. While minority of participants (13%) indicated that professional development is either related to sharing knowledge and experiences or learning different teaching skills and strategies.
Question 9: During the last 12 months, did you participate in any National Based In-service programs (NBIP)? If yes, did it relate to any of the following professional development activities?

![Figure 9 Participation in NBIP in the last 12 months](image)

Table 1

<table>
<thead>
<tr>
<th>NBIP</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject matter</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Conferences and seminar</td>
<td>17%</td>
<td>83%</td>
</tr>
<tr>
<td>Qualification program</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Observation visits</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Mentoring or coaching</td>
<td>17%</td>
<td>83%</td>
</tr>
<tr>
<td>Research works</td>
<td>17%</td>
<td>83%</td>
</tr>
</tbody>
</table>

The above chart clearly displayed that most of the respondents have not attended any NBIPs related to conferences or seminars, qualification programs (degree programs), observation visits to other schools, mentoring or coaching and research works. This could be because this survey was conducted in February, which is the beginning of academic year and majority of the respondents are beginning teachers who have just completed their formal teaching degree from the colleges of education. They would not have gained any opportunities to attend any NBIPs. However, 50% of the respondents said that they have attended some NBIPs related to subject matter.
Question 10: During the last 12 months, did you participate in any School Based In Service Programs (SBIP)? If Yes, please indicate which activities have you been involved.

Figure 10 Participation in SBIP in the last 12 months

The above pie chart clearly confirmed that 67% of the respondents have not participated in any SBIP in the last 12 months. This could be due to the similar reason mentioned in response to question 9. However, 33% of them indicated that they attended some SBIP like; scouting, life skills education, assessment tool and techniques, guiding students to carry out research based projects and mathematics PD.

Question 11: In all, how many hours of professional development (PD) did you attend during the last 12 months? Consider one day as equivalent to 6 hours. Please round to whole hours. Write 0 (zero) if none.

Figure 11 Hours of PD in the last 12 months
As per the professional development policy of Ministry of Education, Bhutan to provide 80 hours of professional development in a year to each teacher, two PD programs called Transformative Pedagogy and English for communication was conducted during the school holidays for all teachers across the country. Due to that, 50% of the respondents indicated that they attended 61-80 hours of professional development (PD) in the last 12 months. However, the survey respondents who are very new to the profession could not have availed those opportunities.

**Question 13: How often do you do the following in the school?**

![Figure 12 Frequency of activities](image)

<table>
<thead>
<tr>
<th>Activities</th>
<th>Everyday</th>
<th>Weekly</th>
<th>Fortnightly</th>
<th>Monthly</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson planning</td>
<td>83%</td>
<td>8%</td>
<td>33%</td>
<td>58%</td>
<td></td>
</tr>
<tr>
<td>Observe other</td>
<td>8%</td>
<td>33%</td>
<td>42%</td>
<td>58%</td>
<td>8%</td>
</tr>
<tr>
<td>Provide feedback</td>
<td>42%</td>
<td>8%</td>
<td>8%</td>
<td>83%</td>
<td></td>
</tr>
<tr>
<td>Team teaching</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>83%</td>
<td></td>
</tr>
<tr>
<td>Joint planning</td>
<td>17%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>58%</td>
</tr>
<tr>
<td>Exchange materials</td>
<td>25%</td>
<td>25%</td>
<td>8%</td>
<td>42%</td>
<td></td>
</tr>
<tr>
<td>Being observed</td>
<td></td>
<td>33%</td>
<td>67%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing reflections</td>
<td>17%</td>
<td>83%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above graph (figure 12) and table 1 indicated that 83% of the respondent planned their lesson every day, which is very positive. However, the figures are not very encouraging in case of observation, providing feedback, team teaching and writing reflections. The respondents have indicated Not Applicable (NA) for most of the activities.
Question 14: How often do/did you engage in lesson observation and receive feedback from the following?

![Figure 13 Observation by other](image)

The above graph demonstrated that most of the respondents do/did not engage in observation and receive feedback more often from other teachers, school leader or associate teacher as they indicated Not Applicable (NA) to most of the options. However, 33% of the respondents indicated that they are observed by their HOD in a monthly basis.

Question 15: How often do/did you engage in lesson observation and provided feedback to the following?

![Figure 14 Observing other](image)

As mentioned in response to Question 14, (83%) of the respondents indicated that they did not observe head of department or school leader, while only 8% of them observed their colleague and provided feedback. This indicated that professional discussion among peers, colleagues and between teacher and school leaders are very limited. Such culture does not promote embedded professional development experiences, which offer opportunities for teachers to apply what they learn on-site within their own school contexts.
Question 16: What do you understand by the term “peer mentoring”? Please explain briefly.

*Figure 15* Respondents’ understanding of Peer mentoring

In response to question 16, equal proportion of respondents indicated that peer mentoring to them is helping each other, observing each other and sharing knowledge and ideas with each other. While 14% of the respondents reported that peer mentoring to them is exchanging feedback in their professional life. All the responses are geared towards positivity and enhancing professional skills so that they become competent teachers.

Question 17: Do you think it might be similar/different from the current observation system of your school?

*Figure 16* Respondents’ comparison of peer mentoring and current observation system in schools.
The majority of those who responded to the survey felt that peer mentoring might not be similar to the current observation system in their schools. There are various reasons mentioned in it like, peers do not observe lessons (it is observed by the Head of Departments (HOD), academic heads, principals), they rarely involve in post observation meetings for discussion and feedback. While the idea of peer mentoring is to involve both beginning and experienced teachers to observe each other’s class, come together for discussion and feedback after the observation.

**Question 18: What are your expectation of peer mentoring program?**

![Bar chart showing expectations of peer mentoring program](image)

*Figure 17 Respondents’ expectations of peer mentoring program*

A majority of those who responded to the survey (36%) indicated that they expect to enhance their professional skills by involving in peer mentoring program. They expect to enhance observational skills, reflective learning, preparing lessons, build confidence and have open conversation with peers. While 24% of respondents expect to gain best teaching strategies by interacting with peers.
Appendix F  Interview Questions

Peer Mentoring as a Professional Development Tool for the Teachers of Bhutan

Indicative interview questions [Towards the end of peer mentoring program]

A. Could you please tell me about your participation in the peer mentoring program?

Probes:
Tell me about your decision to participate in the peer mentoring program at your school.
How did you come to participate?
What were some of the goals or objectives you had as a part of your participation in the peer mentoring program?
What were your initial thoughts and impressions about peer mentoring? What were you expecting?

B. Could you please tell me about how you prepared for lesson observations?

Probes:
What did you do to prepare? Were your peers involved in planning the lesson of observation?
(selecting topic, setting objectives, selecting teaching methods)
How did you decide on which elements of the teaching tracker tool to use in lesson observation? Did your observers use the same ones for each lesson observation? or different ones?

C. Could you tell me about your experiences during lesson observation by your peers?

Probes:
How did you feel about having two observers in your class?
How comfortable were you during the lesson observations?
What did you learn?

D. Could you please tell me about your experiences about the post-lesson discussion?

Probes:
Where did your group meet most of the time and how often?
Who would initiate the meetings and what was the duration of your meetings?
What were some of the common topics discussed during the peer meetings?
How did the teaching tracker tool support the post-lesson discussion?
What was the nature of the feedback provided by the peers after the lesson observation? Was the feedback subjected to the element of teaching tracker tool used in lesson observation or did they include some general comments/suggestions?

E. Could you please tell me about your experiences of peer mentoring process?

Probes:
- How did you support each other during the peer mentoring process?
- Can you share some of the difficulties faced during peer mentoring process?
- How is it different from current monitoring system used in your school?
- How did your group work?
- What enhanced/constrained meaningful work in your group?
- In what ways has the experience of peer mentoring affected your teaching and learning?

F. Based on your experiences, do you consider peer mentoring “professional development”?

Could you explain a little further?

G. What feedback would you give to your principal regarding peer mentoring and your experiences with it?

Probes:
- Do you think this is a useful strategy?

H. Is there anything you would like to share regarding peer mentoring? If so, please explain.

Thank you for taking the time to complete this interview, regarding your experiences and your expectations of peer mentoring program. As stated before, your responses will remain confidential and anonymous and the use of pseudonyms will be used when reporting findings. Thank you!
Appendix G  Ethics Approval

Tuesday, 06 February 2018

A/Prof Judith MacCallum
School of Education
Murdoch University

Dear Judith,

Project No. 2018/001
Project Title Peer mentoring as a professional development tool for the teachers of Bhutan

Thank you for addressing the conditions placed on the above application to the Murdoch University Human Research Ethics Committee. On behalf of the Committee, I am pleased to advise the application now has:

OUTRIGHT APPROVAL

Approval is granted on the understanding that research will be conducted according the standards of the National Statement on Ethical Conduct in Human Research (2007), the Australian Code for the Responsible Conduct of Research (2007) and Murdoch University policies at all times. You must also abide by the Human Research Ethics Committee’s standard conditions of approval (see attached). All reporting forms are available on the Research Ethics and Integrity web-site.

I wish you every success for your research.

Please quote your ethics project number in all correspondence.

Kind Regards,

Dr. Yvonne Haigh
Chair
HREC Committee

Dr. Erich von Dietze
Manager
Research Ethics and Integrity

cc:   A/Prof Dorit Maor; Mr Tshewang Rinzin
Human Research Ethics Committee: Standard Conditions of Approval

a. The project must be conducted in accordance with the approved application, including any approved conditions and amendments, and any subsequent conditions that the HREC may require.

b. Anything which might affect the ethical acceptance of your project must be reported promptly, including:
   - Adverse effects on participants
   - Significant unforeseen events
   - Other matters that may impact the ethical acceptability of the project.

c. Proposed changes or amendments to the research must be applied for, using an Amendment Application form, and approved by the HREC before these may be implemented.

d. An Annual Report must be provided by the due date specified each year (usually the anniversary of approval).

e. A Closure Report must be provided at the conclusion of the project (once all contact with participants has been completed).

f. If, for any reason, the project does not proceed or is discontinued, you must advise the committee in writing, using a Closure Report form.

g. If an extension is required beyond the end date of the approved project, an Extension Application should be made allowing sufficient time for its consideration by the committee. Extensions of approval cannot be granted retrospectively.

h. The HREC must be advised promptly, in writing, if any complaint is made about the conduct of the project.

i. Other Murdoch approvals (e.g., fieldwork approval) or approval from other institutions may also be necessary before the research can commence.

j. Any equipment used must meet current safety standards. Purpose-built or modified equipment must be tested and certified by independent experts for compliance with safety standards.

k. Research Ethics & Integrity must be notified of any changes to contact details including address, phone number and email.

l. Graduate research degree candidates should also have Program of Study approval prior to commencing the research. Exceptions must be approved by the HREC.

m. The HREC may conduct random audits and / or require additional reports concerning a research project.

Failure to comply with the National Statement on Ethical Conduct in Human Research (2007) (updated May 2015) and with the conditions of approval may result in the suspension or withdrawal of approval for the project.

The HREC seeks to support researchers in achieving strong results and positive outcomes. The HREC promotes a research culture in which ethics is considered and discussed at all stages of the research.

If you have any issues you wish to raise, please contact the Research Ethics & Integrity in the first instance.
Appendix H  Information Letter

Peer Mentoring as a Professional Development Tool for the Teachers of Bhutan

Investigator (s)  A/Prof. Judith MacCallum, A/Prof. Dorit Maor, Tshewang Rinzin
Contact Person Tshewang Rinzin
Address Room 2.105, Building 450, Murdoch University, South St, WA
Telephone 0449977856
Email Tshewang.Rinzin@murdoch.edu.au

You are invited to participate in this study.

Background
A survey of Bhutanese teachers found that 95% believed professional development (PD) to be the most important factor contributing in enhancing the quality of teaching (Ministry of Education, 2014). Also, research has shown that peer mentoring as professional development has positively impacted beginning teachers in other countries in the areas of commitment, retention, teaching and student achievement. Peer mentoring has also helped experienced teachers gain new ideas, learn new and improved teaching methods, enhance their knowledge and use of ICT, improve self-reflective skills, become more confident about self and understand more about mentoring and needs of beginning teachers. It provides teachers with on-site learning opportunities and promotes as active learning atmosphere.

We are interested to learn whether peer mentoring, as an alternative professional development tool for the teachers of Bhutan, will assist teachers to collaborate among themselves within school and encourage them to work towards building a professional community. So, we are inviting you to participate in the proposed study during the first half of the 2018 academic session.

A/Prof Judith MacCallum and A/Prof Dorit Maor of Murdoch University are supervising Mr. Tshewang Rinzin in undertaking a Doctor of Education at Murdoch University, Perth, WA. Mr. Tshewang Rinzin will be conducting the research in schools.

Aim of the Study
The purpose of this study is to investigate the development of a peer mentoring program as an alternative professional development model for teachers of Bhutan. This peer mentoring PD would be school-based, collaborative, teacher driven, ongoing, sustainable and integrated into teachers’ daily work.

The peer mentoring program aims to:
- Provide ongoing and regular opportunities for beginning and experienced teachers to learn from each other
- Strengthen professional development opportunities in the school setting
- Use a web-based Teaching tracker tool for lesson observation and discussion
**What Does Your Participation Involve?**

**Pre-peer mentoring:**
If you agree to participate in the project, you would be invited to complete a short survey before participating in a peer mentoring program. The survey will take about 8-10 minutes to complete.

During their first group meeting, Mr. Tshewang Rinzin will conduct an information session, outlining the research aims and objectives and the use of the Teaching Tracker Tool (T3), a digital way of capturing non-judgmental evidenced-based feedback of a teacher teaching a class (Thornton, 2015). The researcher will also help the participants in devising their plan of action and each participant to complete an observation plan form indicating their teaching goals, observation dates, time, class period and the topic of the lessons.

**During peer mentoring:**
As a participant, you would observe lessons of your peers teaching a similar subject group and be involved in post-lesson discussion. To assist you with the observation and discussion, you will make use of the teaching tracker tool (T3). It has five separate tools that support the peer mentoring process.

1. Make, say, do, write (teacher and student activities during the lesson)
2. Checklist of observed behaviours
3. Verbal flow (teacher’s interaction with the students)
4. Proximity chart (physical movement of teacher during the lesson)
5. Post-lesson discussion questions

You will be asked to maintain a reflective journal, where you can include personal or professional information, post-lesson discussion points, important incidents happening during the peer mentoring program.

During the process of peer mentoring, the researcher will regularly communicate with the participants via email or skype and ensure that continuous help and support is being provided.

**Towards the end of peer mentoring program:**
After about four months of the peer mentoring program, Mr. Tshewang Rinzin will observe the discussion among the peers during the post-lesson meeting. Notes will be taken and audio recorded during the discussion with the permission from the participants. You will be invited for an interview in a place suitable to you for about 45-60 minutes. Permission will be sought to audio record the interview. You can choose not to answer questions if you don’t want to. The interview will be an opportunity to explore your experiences of the peer mentoring process.

**Voluntary Participation and Withdrawal from the Study**
It is important that you understand that your involvement in this study is voluntary. While we would be pleased to have your participation, we respect your right to decline. There will be no consequences to you if you decide not to participate. If you decide to discontinue participation at any time, you may do so without providing an explanation. If you withdraw, all information you have provided will be destroyed.
Your privacy
Your privacy is very important to us. Your participation in this study and any information will be treated in a confidential manner. Your name and identifying details will not be used in any publication arising out of the research. We will not share any information you contribute during the research to anyone and all data will be kept anonymous. Following the study, the data will be kept in a de-identified format, in a locked cupboard in Room 2.105, Building no 450, Murdoch University.

Possible Benefits
You will have the opportunity to observe each other’s lessons, provide critical feedback, share and reflect on your personal experiences. This will help you to critically reflect on your own strengths and weaknesses and improve teaching. If the findings of our study show that the development of these attributes are important for the development of a professional community in our school system, we will be able to recommend to the Ministry of Education, the inclusion of such changes to be more widely implemented throughout the schools across the country. In this way, you will be contributing to improvement of the quality of teachers and to the quality of education.

Possible Risks
There are no specific risks anticipated with participation in this study. However, if you find that you are becoming distressed or anxious, an arrangement will be made with the school counselor to be available for discussion or debrief.

Questions
If you would like to discuss any aspect of this study, please feel free to call Tshewang Rinzin on +610449977856 or email at Tshewang.Rinzin@murdoch.edu.au. My supervisors and I are happy to discuss with you any concerns you may have about this study.

Once we have analysed the information from this study we will email a summary of our findings.

We would like to thank you in advance for your assistance with this research project. We look forward to hearing from you soon.

Yours sincerely

A/Prof. Judith MacCallum,
Email: J.MacCallum@murdoch.edu.au
Phone: +61893607847

A/Prof. Dorit Maor,
Email: D.Maor@murdoch.edu.au
Phone: +61893607257
This study has been approved by the Murdoch University Human Research Ethics Committee (Approval xxxx/xxx). If you have any reservation or complaint about the ethical conduct of this research, and wish to talk with an independent person, you may contact Murdoch University’s Research Ethics Office (Tel. 08 9360 6677 (for overseas studies, +61 8 9360 6677) or e-mail ethics@murdoch.edu.au). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix I  Consent Form

Peer Mentoring as a Professional Development Tool for the Teachers of Bhutan

Participant Consent

☐ I confirm that I have read and understood the information sheet, which explains the nature of the research and the possible risks. I have been given a copy of the information sheet to keep.

☐ I confirm that the information has been explained very clearly and all my questions have been satisfactorily answered.

☐ I voluntarily agree to participate in the research.

☐ I understand that I am free to withdraw at any time without needing to give a reason and without any consequences to myself.

☐ I understand that I can request the researcher not to use any data related to me once I withdraw from the study.

☐ I understand that all information provided by me is treated as confidential and will not be released by the researcher to a third party unless required to do so by law.

☐ I agree that research data from the results of the study may be published provided my name or any identifying data is not used. I have also been informed that I may not receive any direct benefits from participating in this study.

☐ I am happy to be interviewed and for the interview to be audio recorded as a part of the research, I also understand that I do not have to answer questions if I do not want to.

I understand that in ticking a consent box, I am indicating my agreement to that statement.

Participant’s name: _________________________

Signature of Participant: _________________________ Date: ……/……/……

I confirm that I have provided the Information Letter concerning this study to the above participant; I have explained the study and have answered all questions asked of me.

Signature of researcher: _________________________ Date: ……/……/……
## Appendix J  Short Segment of Data

### Data Transcription

<table>
<thead>
<tr>
<th>Questions</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researcher: Did you involve your peers in planning the lesson in terms of selecting the topic, learning objectives, teaching skills and strategies or methods. Did you seek any support or help regarding this? Did you all have any discussion while planning the lesson before the observation?</td>
<td>Participant: We did not have any discussion about that before observation, we didn’t discuss about the teaching skills or methods as well as what to teach in the next lesson. So, we just prepared the lesson which was to be continued normally in the next session whether there is an observation or not.</td>
</tr>
<tr>
<td>Researcher: Do you think it would have helped you prepare lesson in a better way if you had consulted with your peer or do you think it would have remained same?</td>
<td>Participant: I feel that it would have been better if I had discussed with them because we have one senior teacher who is experienced as well my friend who is also good in teaching. So, it would have been better, but I couldn’t do it because of the time constraint as well as the location of where I am living right now. I am five kilometres away from the school and as soon as the school is over, I have to start towards home and in the morning also I have to start quite early from home. Without personal car or bike, I have to walk, and public transportation is also not there. Due to this I could not do it very often. And in school I have teach, correct homework, class works and no time at all sir.</td>
</tr>
<tr>
<td>Researcher: Could you tell me some of the things that you learned over the past three months by being in this peer mentoring program or having observations and discussions with your peers.</td>
<td>Participant: The first one is definitely the confidence level, I have gained lots of confidence because having observers and presenting is not an easy task but as we go on doing it we have become normal, which means we have gained some confidence and as well as it has helped me in preparing the lessons well because in the beginning I prepared brief lesson plan, just outline the lesson but when there are observers I had to prepare in detail, and it has helped me in learning how to plan my lesson in detail. This in turn helps students to understand more.</td>
</tr>
</tbody>
</table>
Researcher: What was the nature of the feedback provided by peers after lesson observation. Was it subjected to the elements of the T3 tools or did they include some general comments or suggestions, did they also include something different which is not in the tool?

Participant: Something like confidence, audibility, board management and all, this thing I have not seen in the tool and these were some of the general comments that they provided us. Other comments like student activities as well as use of questioning skills, writing difficult concepts were included.
Appendix K   The Teacher Tracker Tool (T3)

TEACHER TRACKER TOOL (T3)

<table>
<thead>
<tr>
<th>Name of Teacher</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observer</td>
<td>Subject</td>
</tr>
<tr>
<td>Period</td>
<td>Class</td>
</tr>
<tr>
<td>Topic</td>
<td></td>
</tr>
</tbody>
</table>

Descriptive Notes

Checklist

Discussion

Rows

Groups of 4

Groups of 6

Horseshoe

Open Space

195
### Descriptive Notes

<table>
<thead>
<tr>
<th>What is the <strong>teacher (T)</strong> Making/saying/doing/writing?</th>
<th>What are the <strong>students (S)</strong> Making/saying/doing/writing?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

### Checklist

<table>
<thead>
<tr>
<th><strong>CLASSROOM ENTRY</strong></th>
<th>Observed</th>
<th>Not observed</th>
<th>Not Applicable</th>
<th>Examples, comments for future planning, reflection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole class attention</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom rules are reinforced</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entry task</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roll marked</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning objective/intention</strong></td>
<td><strong>Success criteria</strong></td>
<td><strong>WHOLE CLASS TEACHING (WCT)</strong></td>
<td><strong>Observed</strong></td>
<td><strong>Not observed</strong></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------------</td>
<td>--------------------------------</td>
<td>--------------</td>
<td>------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Addresses students by name</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Information linked to previous lessons</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Repetition of difficult concepts</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Explains concepts in more than one way</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Students co-construct their knowledge (Students discuss the work)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Visual demonstration accompanies verbal instructions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Information presented in a Visual format (Writes key terms on board or PowerPoint)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Suggests reminder aids</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Lesson outline or procedural cues on board</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Multimodal delivery</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Relates topic to the real world</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Questioning</strong></td>
<td><strong>Observed</strong></td>
<td></td>
<td><strong>Not observed</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Use of cues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Builds on previous knowledge</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Elicits evidence of student’s understanding</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers provoke further questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mistakes are viewed as an opportunity to learn more</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Questioning is anchored in the context and content of the lesson</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses open ended questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Questions directed to the whole class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pause before taking answers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Verbal Flow (Rows)

TIME START: __________ TIME END: __________

GREENBOARD/WHITE BOARD

Teacher’s desk

T
Proximity Analysis (Rows)

TIME START: ___________  TIME END: ___________

__________________________
GREENBOARD/WHITE BOARD

Teacher’s desk

T
Verbal Flow (Horseshoe)

TIME START: ___________   TIME END: ___________  

GREENBOARD/WHITE BOARD
Proximity Analysis (Horseshoe)

TIME START: _______________  TIME END: __________

GREENBOARD/WHITE BOARD

Teacher’s desk

T
Verbal Flow (Groups of 4)

TIME START: ___________       TIME END: ___________

GREENBOARD/WHITE BOARD

Teacher’s desk
Proximity Analysis (Groups of 4)

TIME START: ___________  TIME END: ___________

GREENBOARD/WHITE BOARD

Teacher’s desk
Verbal Flow (Groups of 6)

TIME START: ____________  TIME END: ____________

GREENBOARD/WHITE BOARD

Teacher’s desk
Proximity Analysis (Groups of 6)

TIME START: ____________  TIME END: ____________

GREENBOARD/WHITE BOARD

[Diagram of classroom layout with Teacher’s desk and student groups]

206
Verbal Flow (Open Space)

TIME START: ___________     TIME END: ___________

GREENBOARD/WHITE BOARD

T
Proximity Analysis (Open Space)

TIME START:_________     TIME END:_________
### Post-lesson Discussion Guide Questions

<table>
<thead>
<tr>
<th>Questions to the Teacher being observed</th>
<th>Response to Questions</th>
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</thead>
<tbody>
<tr>
<td>What did you notice after reviewing the data collected in the T3 observation record?</td>
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<tr>
<td>What is interesting?</td>
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<tr>
<td>Do you see any patterns in the data?</td>
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<tr>
<td>What evidence did you collect? What conclusions can you draw from this evidence?</td>
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<tr>
<td>Did your students learn the objectives /LI based on the success criteria?</td>
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<tr>
<td>How useful is this T3 feedback tool. How did it support your learning?</td>
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<tr>
<td>What strategies could you use? Does research and theory have anything to offer here?</td>
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<tr>
<td>How did the lesson go? Which elements of the lessons worked?</td>
<td></td>
</tr>
<tr>
<td>How do you know?</td>
<td></td>
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<tr>
<td>What is the focus for the next lesson? Where to from here?</td>
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Appendix L  Peer Mentoring Resource

PEER MENTORING: A PROFESSIONAL DEVELOPMENT TOOL FOR TEACHERS IN BHUTAN

Aim
The general aim of the peer mentoring program is to provide school-based PD for teachers, with opportunities to interact with each other during lesson observations and post-lesson discussion.

Objectives
- Provide comprehensive workplace experience for beginning teachers
- Improve the quality of teaching and learning practices of beginning and experienced teachers.

Selection of Experienced Teachers
- Teaching for more than five years
- Knowledge of education policy and procedures
- A accredited teacher with permanent status in the Ministry of Education
- Demonstrated exemplary teaching ability as indicated by effective communication skills, subject-matter knowledge, and mastery of a range of teaching strategies.
- Commitment to the peer mentoring program for at least a year
- Ability to relate positively in a supportive, non-judgmental manner.
- Willingness to encourage peers to take responsibility for their decisions

Selection of Beginning Teachers
- Teaching for less than five years

Roles and responsibilities

Experienced Teacher:
- Support and maintain healthy relationship with beginning teachers
- Promote mutual learning with peers
- Encourage peers to voice their opinions and concerns
- Promote positive school culture and problem-solving approaches
- Organize meeting with peers at a regularly scheduled time
- Maintain a log of meetings and topics discussed
- Reduce isolation of new teachers by making them feel valued as a member of the school community
- Identify opportunities and supports provided by the school, district and Ministry of Education for peers
- Share experiences with peers to contribute to developing a professional learning community.

Peer Mentoring Process
- Recruit experienced and beginning teachers
- Group three teachers (two beginning and one experienced) teaching similar subject area
- Formulate a plan for observation round (include before, during and after the observation activities)
- Discuss and use the Teacher Tracker Tool (T3) for observations
- Make note of the feedback during post-lesson discussions

Beginning Teachers:
- Play an active role in the mentoring relationship by offering critical reflections on his/her own practice and identifying areas in which assistance is needed.
- Seek support from peers related to professional and personal issues
- Remain open to feedback in order to develop professionally.
- Maintain a record of meetings and topics discussed
- Develop own teaching understandings and methods based on reflective practices
- Share experiences with peers to contribute to developing a professional learning community.

School Leaders:
- Introduce peer mentoring as a valuable program in the school
- Provide regular time in the schedule for peer mentoring groups
- Respect the relationship of members of peer mentoring program
- Ensure reasonable teaching load and non-academic duties for the beginning teachers
- Communicate regularly with mentoring groups and collect feedback on the program.
- Offer additional support as required