QATAR UNIVERSITY

COLLEGE OF EDUCATION

IMPLEMENTING PROJECT BASED LEARNING (PBL) IN QATAR

GOVERNMENTAL SCHOOLS – EFL TEACHERS' DEFINITION AND

PRACTICE

BY

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# ABSTRACT

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Title: Implementing Project Based Learning (PBL) in Qatar Governmental Schools – EFL Teachers' Definition and Practice

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The purpose of this study was to investigate teachers' understatings, practices, and challenges at the initial stages of implementation of a state-wide Project Based Learning (PBL) program being implemented in Qatar's primary government schools. Eleven English foreign language (EFL) teachers from three schools participated in the study. A qualitative research method was used for data generation, including interviews, classroom observations, and lesson plan analysis. Framework of PBL principles and challenges were used for data analysis. The findings of the study showed that the majority of the participants lacked both an appropriate understanding of PBL and prior experiences in its usage. These may be possible reasons that the teachers faced a number of challenges in the practice of initial implementation, such as identifying appropriate problems, providing materials that were needed, and organizing project scope within classroom time and the given conditions. In comparing three schools, the findings suggested that a supportive school environment that encourages collaboration among teachers could motivate teachers to develop suitable coping strategies that help them to maximize their learning through practicing PBL implementation. Finally, the study provides a list of recommendations that could support the long-term success of implementing pedagogical innovations. For example, PBL in Qatar and similar contexts including providing sufficient professional development activities so that teachers may experience PBL as learners, involving teachers in effective

communication on and decisions in the implementation, and collaboration among peer

teachers.

# DEDICATION

*This body of work is dedicated to my mom, for her endless encouragement throughout this process.*

*I also thank my dad, who supported my dreams and always stood beside me*

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CHAPTER 1: INTRODUCTION

1.1 Background

PBL, either in the form of problem-based learning, project-based learning, or a combination of both, has been regarded as a useful approach to teaching and learning in all educational levels worldwide. Taking its theoretical departure from the constructivism paradigm, the PBL approach is based on the belief that people construct their own understanding of the world they live in via reflecting on experiences (Jarvis, Holford, & Griffin, 1998). From this perspective, learning is viewed as a process wherein learners search for meanings through the problem-solving activities in which they are engaged rather than merely memorizing the "right" answers and repeating others' meanings (Dewey, 1938). Learning is also about the construction of interactive understanding through intertwining with others in situated contexts (Vygotsky, 1978). Therefore, the PBL approach focuses on learners' experiences of participating in problem solving and interactive activities, and the process of working collaboratively together with peers (Du, 2012).

Exemplifying an approach to student-centered learning, PBL has been actively implemented for several decades in diverse educational disciplines and levels. In a PBL environment, focus is placed on learning by doing hands-on problem solving, and students are major actors for information processing and meaning generation. Students are encouraged to analyse, interpret, and predict information based on their past experiences, and then propose solutions. The learning activities range from listening to lectures and reading to students managing and planning their own time and activities. In order to solve the identified problems both independently and collaboratively. Throughout the learning process, learners do not only receive the transmitted

knowledge and participate in its reproduction, but more importantly, they are also involved in the process of creating new knowledge.

PBL has been regarded as a useful method to train students with 21st-century skills such as problem-solving, critical thinking, communication, and collaborative learning skills (Bell, 2010; Overby, 2011). The research on PBL has generally yielded positive results on several aspects of student learning and achievement. Although the majority of existing studies addresses benefits and challenges of PBL in higher educational settings (Du & Chaaban, in press), a few studies reported PBL effective in primary education. For example, Drake and Long (2009) revealed considerable growth in content knowledge and test scores for the students in the PBL classroom in comparison to the students in the lecture-based classroom. Gallagher and Gallagher (2013) documented students' enhanced academic achievements in a PBL environment. In addition, there was a positive impact on students' learning attitudes, learning behaviours, and learning skills, such as searching for and organizing information, when implementing a PBL methodology (Dole, Bloom, & Doss, 2017). Students are also reported to improve their social skills, such as those of communication and collaboration, in a PBL environment (Baş & Beyhab, 2017; Bilgin, Karakuyu, & Ay, 2015; Larmer, Mergendoller, & Boss, 2015; Putri, Artini, & Nitiasih, 2017).

In the field of foreign language teaching and learning, previous studies have reported several advantages of integrating project work into the foreign language classrooms (Fragoulis & Tsiplakides, 2009), including improvement in students' four language skills: reading, writing, listening, and speaking. Specifically, speaking and listening skills saw the greatest improvement. The majority of students showed increased willingness to participate in learning activities, some who had low-

performance levels saw their self-esteem increase, students displayed increased motivation overall, and learners gained an in-depth understanding of a certain issue through the project (Fragoulis & Tsiplakides, 2009). Beckeet and Miller (2006) also emphasized the effectiveness of implementing PBL in foreign language contexts by reporting that students who completed projects saw their language skills increased, real-life skills improved, and motivation and self-esteem enhanced. Projects train students to deal with complex real-life concerns by dividing them into smaller steps (Hugerat, 2016).

Despite these positive results in the literature, implementing PBL demands considerable change in several aspects of the institution adopting this innovative methodological approach (Kolmos, 2012). One of the major challenges lies in the fact that PBL implementation requires a change of roles for both teachers and students (Fleming, 2000). In particular, PBL implementation involves a change in the beliefs and practices of teachers, who play an important role in the process of shifting to PBL (Du, Su, & Liu, 2013). Implementing PBL in a previously lecture-based context requires a significant shift in teachers' roles (Kolmos, 2002). Instead of telling students what contents to learn and how to learn them, teachers play a role of facilitating, supporting, and assisting students so they become capable of determining for themselves what they need to know and how to learn (Savin-Baden, 2003). For this purpose, teachers need to have high motivation, positive attitudes, appropriate understanding, and the relevant skills necessary for adapting to change (Lam, Cheng, & Choy, 2010; Moesby, 2004). Nevertheless, in the initial stage of changing to PBL, teachers face significant challenges and struggles in adjusting to

their new roles and helping students to do the same (Du & Chaaban, in press; Rogers, Cross, Gresalfi, Trauth-Nare, & Buck, 2011).

Certain appropriate skills were also identified as being crucial for teachers to be able to successfully implement PBL, which deserved attention and support from their schools (Maurice, Hitchcock & Zoi-Helen, 2000). Relevant professional development (PD) activities before and during the change process are highly recommended (Maurice, Hitchcock & Zoi-Helen, 2000; Savin-Baden, 2003). Previous studies also proposed that teachers' understanding played an important role in guiding their practices of PBL (Tamim & Grant, 2013). A recent study in the context of Qatar proposed that teachers' understanding and skills at an initial stage are essential for their successful implementation in the long term (Du & Chaaban, in press).

In the State of Qatar, its National Vision 2030 (General Secretariat for Development Planning, 2008) emphasizes the importance of implementing creativity and innovation in teaching to enhance 21st-century skills among students, as well as shifts from teacher-centered learning to student-centered learning (Said, 2016). One of the more recent innovation teaching strategies issued by Qatar's Ministry of Education and Higher Education (MOEHE) is PBL, which was applied in several subjects, including English as a Foreign Language (EFL). Although PBL has been well implemented worldwide, it remains a new phenomenon in Qatar. As this was the first time PBL was implemented in Qatari primary government schools, and few experiences can be drawn on given that PBL is generally applied at higher levels of schooling (e.g., secondary education, higher education), greater research attention is called for (Du & Chaaban,in pres). Although a substantial number of

studies have reported the effectiveness of PBL in terms of student learning outcome, studies about teachers' understanding and practices remain limited and deserve more research attention because these are crucial for both the initial and long-term success of implementing PBL (Du & Chaaban, in press).

In the context of the current study, the nation-wide policy of implementing PBL was announced in May 2017. The aim is to implement PBL in Ministry schools in the four main subjects (Arabic, English, Science, and Math), and teachers were expected to start doing the projects with students in the beginning of the 2017-2018 school year. Schools' coordinators attended a two-day workshop which was organized to provide initial information and instruction on PBL implementation. Following this, the EFL coordinators of each school had one week to train the remaining EFL teachers before they were expected to practice PBL. During the fall semester of 2017, all schools were told they should develop their school-based professional development activities to support the teaching practices of PBL teachers. Therefore, it is necessary to conduct research to explore how teachers define and practice PBL at the initial stage of implementation, and what challenges they faced in the process.

1.2 Research Questions

This study aims to investigate how EFL teachers understand and practice PBL at an initial stage of change in primary schools in Qatar. The study addresses the following questions:

1. How do EFL teachers define PBL?

2. How do EFL teachers practice PBL in EFL primary classrooms?

3. What challenges do EFL teachers face in the initial stage of implementing PBL?

1.3 Significance of the Study

This study provided qualitative empirical data on how EFL primary teachers define and practice PBL at its initial stage of implementation in the Qatari context. Results of the study may be useful for educational practitioners (teachers), administrators (school leaders), and decision makers (the Ministry of Education and Higher Education, for example) in Qatar as a reference by which to examine the initial stage of PBL and enhance the long-term success of educational innovations. The results will also provide sources for professional development activities aimed at developing teachers' performance and achievement regarding pedagogical innovation. In addition, the outcome of this study contributes to literature on PBL and educational change with knowledge of the context of Qatar, which may be meaningful for further change initiatives and research in other social and cultural contexts in the Middle East and beyond.

1.4 Terms

PBL: The term PBL refer to project-based learning. In the context of the current study, Project Based Learning is the term used in official documents of Ministry of Education and Higher Education (MOEHE). Therefore, in this report, the abbreviation of PBL is used for Project-based learning.

EFL: Qatar has intricated linguistic circumstances. While Arabic is the official language, English is also widely spoken for numerous reasons, chief among them being that expatriates outnumber Qatari nationals with a ratio of 88% (Forstenlechner & Rutledge, 2012); because of this, English has been growing as a lingua franca between expatriates and nationals. As such, there is an ongoing debate in Qatar as to whether English should be considered as a "second" or as a "foreign" language. However, the

state has recently been issuing laws to strengthen the official status of the Arabic language. To illustrate, the Protection of the Arabic Language law of 2016 was issued to require official bodies, public schools, and universities to use Arabic in all official communications. To this end, for the purpose of this study, English as a foreign language, with the abbreviation of EFL, is used without the intention of distinguishing between these two.

1.5 Organization of the Thesis

This thesis begins by discussing the background of the study, the effectiveness of PBL, PBL in EFL classes, the research questions, the study's significance, and some terms used throughout this study. The second chapter highlights previous literature reviews that reported on the theoretical background of constructivism, provides more details about PBL in general and in EFL settings, and discusses the teachers' role and school support. The third chapter presents the research context and design, participants' information, data generation method, procedures, data analysis, ethical considerations, and the validity and reliability that were present in this study. Chapter four reports the findings of the three research questions. Finally, chapter five discusses the results of the study and its relationship with other literature and studies in the field of PBL implementation. Also presented are participants' challenges and recommendations based on the three cases, as well as a summary of broader recommendations that could potentially support teachers, stakeholders, and school principals.

CHAPTER 2: THEORIES

The purpose of this literature review is to explore the existing scholarly work regarding the importance of professional development (PD) in enhancing teachers' role(s) during educational changes. Second, this chapter also defines project-based learning (PBL) against the backdrop of the existing literature and examines its implementations and origins. Finally, it reviews the ways in which PBL can be implemented in the field of teaching English as a foreign language (EFL). To that end, it discusses the importance of teachers' role and school support.

2.1 Background of PBL

*2.1.1 History and background of constructivism*

PBL originated at the McMaster School of Medicine in Canada in 1965 and started with the introduction of an ill-structured problem, wherein instructors acted as facilitators and learners constructed the knowledge through defining educational goals, searching for information in order to build on previous experiences and participate in collaborative learning groups (Erdogan & Senemoglu, 2017). The *constructivism* theory describes the learning process and suggests there are benefits to the quality of learning through experiences in which the learners will be actors who generate their own ideas and conceptions based on their previous experiences. In these scenarios, the teachers will act as facilitators and provide a collaborative network among students, which will improve students' skills in problem-solving and encourage their engagement in this collaborative setting. In constructivist learning, the teachers' role is limited, meaning the learning will happen via student-centered activities rather than those focusing more on the teachers' role (Putri, Artini & Nitiasih, 2017).

*2.1.2 Definitions and characteristics*

In the field of education, the project-based learning (PBL) approach is significant, and many people have employed multiple perspectives in order to define and explain it (Petersen & Nassaji, 2016). These include, for example, Hasani, Hendrayana, and Senjaya, who state, *"Project-Based Learning can be described as student-centered instruction that occurs over an extended time period, during which students select, plan, investigate and produce a product, presentation or performance that answers a real-world question"* (2017, p.961). Wurdinger, Haar, Hugg, and Bezon (2007) also defined PBL in their *Qualitative Study Using Project-Based Learning in a Mainstream Middle School* as "a teaching method where teachers guide students through a problem-solving process which includes identifying a problem, developing a plan, testing the plan against reality, and reflecting on the plan while in the process of designing and completing a project" (p.151). Another definition for PBL was by Tamim and Grant (2013), who stated, "Project-based learning (PBL) is an instructional model that is based in the constructivist approach to learning, which entails the construction of knowledge with multiple perspectives, within a social activity, and allows for self-awareness of learning and knowing while being context dependent" (p.73). According to Thomas (2006), PBL is "a model that organizes learning around projects" (p.384). Project-based learning is a strategy that is implemented in the classroom to give students a chance to be engaged in a real-world problem (Jumaat, Tasir, Halim, & Ashari, 2017).

In a PBL application, students have the opportunity to come up with alternative answers and arguments to support the solutions that they generate, eliminating the limitations of having a single correct answer (Hmelo-Silver & Barrows,2006). As an instructional model, PBL has numerous advantages to the process of learning;

nevertheless, it also has its challenges for teachers (Tamim & Grant, 2013). Through its application, the quality of education will be more productive than the traditional way of teaching in terms of students' long-term retaining of knowledge, encouragement in everyday performance, and engagement in informal discussions with their teachers and colleagues (Tamim & Grant, 2013).

To shed light on the characteristics of PBL, "PBL projects are focused on questions or problems that 'drive' students to encounter (and struggle with) the central concepts and principles of a discipline" (Thomas, 2000, p.3).

A number of studies have documented the characteristics and principles of PBL. Thomas (2000) presents the most comparative study, reviewing all other works by setting five criteria, including centrality, driving questions, constructive investigation, autonomy, and realism. In the field of foreign language education and in terms of language learning, there are several characteristics of project works, which include students working together in real-world topics, students constructing meanings and outcomes through the project, and students presenting their products and outcomes to the audience (Stoller, 2006).

Previous work on PBL (Boss & Krauss, 2007; Du & Chaaban, in press; Stoller, 2006; Thomas, 2000; Helle, Tynjala, & Olkinuora, 2006; Hugerat, 2016; Putri, Artini & Nitiasih, 2017; van Rooij, 2009) established or suggested a number of PBL principles which were considered important for the current study to have a common understanding of PBL. These principles are as follows:

- A project is not an add-on to the existing curriculum or unit; it is the center of the curriculum.

- A project involves students in problem-solving using driven questions

which must be solved by students.

- Students need to do research and generate the meanings by themselves, which could entail decision-making, problem-solving, design, or discovery.

- Students should engage in authentic topics and activities.

- Students work collaboratively in groups to reach the outcomes of the project.

*2.1.3 Benefits of implementing PBL*

According to the PBL implementation at the school level in, for example, the United States, public schools faced an issue in that students showed their dissatisfaction with school by dropping out, and the reason is not only to be found in their grades; instead, they feel bored with education in general (Wurdinger, Haar, Hugg & Bezon, 2007). However, PBL teaching approaches across the US, spread across almost 2000 schools within the small school movement, have used PBL in one form or another to motivate students and change their attitudes toward schools (Wurdinger, Haar, Hugg & Bezon, 2007).

A study reported by Kaldi, Filippatou, and Govaris (2011) summarized the effectiveness of using PBL in primary schools, presenting a study in which students' learning and attitudes were altered and demonstrating this by conducting knowledge tests on numerous thematic units: behavior scale, classroom observations, and interviews with both students and teachers. After the implementation of PBL units about "sea animals," the result of the quantitative and qualitative data revealed that students enriched their knowledge through field-based activities and practical

learning, and further suggested that students can benefit from PBL in their academic performance, an implication gleaned through the students' scores being dramatically higher on the knowledge test carried out after they completed the project compared to that which they completed before. Also, the outcomes of the same study showed that there was a significant change in students' attitudes after the implementation of PBL, which preferred and valued group work over that of the individual, and they found it more effective in the learning process in terms of increasing their engagement and leading to the building of a positive attitude through working with colleagues. Teachers, on the other hand, expressed the importance and the value of the interaction in the learning process, but they also showed concern in terms of planning and organization (Kaldi, Filippatou & Govaris, 2011).

The positive side of PBL has been discussed by Thomas (2000), whose studies showed students changing their attitudes to the learning process positively and displaying self-confidence in their problem-solving abilities. Green (1998) noted that in learning through PBL, students will be more active and learn more effectively. Although some students will be not satisfied in the early stages of PBL implementation because the concept is new and quite different from the traditional approach, with practice and with time, most students do eventually show/express their willingness and motivation toward PBL courses (Lenschow, 1998).

### 2.1.4 Challenges of implementing PBL

Despite the identified benefits, PBL as a teaching method also has received criticism for consuming teachers' time and teaching materials, and its requirements do depend on the class size (Kaldi, Filippatou & Govaris, 2011). Also, the authors Kaldi et al. argued that another disadvantage could be that less time is spent teaching

knowledge specific to the basic sciences. Besides, PBL method insists students should work cooperatively to achieve the tasks, which may take more time than the traditional teaching method. Because of this, they described PBL as a complementary teaching method rather than an alternative option.

A previous study developed a framework for addressing the challenge in the change in educational culture that comes with using a PBL methodology (Du, Su, & Liu, 2013). The framework of this study begins with analyzing how PBL is implemented within the cultural context, covering three layers: macro, mezzo, and micro. All these domains/layers contain the cultural aspects which define the community values that affect the teaching and learning practice in conjunction with communication, attitudes, and negotiation. First, we have the macro level, which is the social and professional culture, where politics, religion, and economy affect the philosophy of education and its structure even as the professional culture has its effect on the educational system. At the mezzo level, we include the institutional context and curriculum wherein the learning environment is formulated depending on physical facilities, resources, and local values. The micro level is where the individual challenges come into play; this level focuses on learning, meaning one must examine learning and pedagogy methods, positive communication, collaboration, and relationship.

### 2.1.5 PBL in EFL

In the field of language teaching, many advantages of integrating project work into a foreign language setting have been suggested (Fragoulis, & Tsiplakides, 2009). One of these advantages is the improvement of language skills because students must engage in purposeful communications to come up with a product

which requires language use. The works of Beckeet and Miller (2006) also emphasized the effectiveness of implementing PBL in foreign language contexts by reporting that students who completed projects saw their language skills increase, their real-life skills improve, and their motivation and self-esteem become enhanced (Beckeet & Miller, 2006).

As Petersen and Nassaji (2016) have pointed out, numerous published works have been conducted regarding PBL and its advantages in language learning, and these have demonstrated not only its benefits of providing students the opportunity to learn the language via involvement in real-life activities, but also the technique's capacity to encourage the students to enhance new knowledge and different communication skills.

Beckett (1999) examined EFL teachers and students' evaluation of project-based instruction. The data from interviews and observations revealed that teachers prefer PBL because it allows them to use multiple skills to teach language. Examining Taiwan, Hong Kong, and China, Beckett interviewed 73 students after they completed their projects. Regarding PBL, positive feedback was given, arguing that it provided students with the ability to learn English functionally and be aware of their weaknesses and strengths.

In 2015, research on PBL was published examining if Iranian EFL learners who learned vocabulary through the PBL method could recall the words effectively and if they had a better retention of these new vocabularies than learners taught using traditional methods. This research was conducted in pre-test, treatment, and post-test phases for two groups (experimental and control), which consisted of (40) EFL learners (Shafaei & Rahim, 2015). The experimental group was taught using the PBL

approach, while the control group was taught using the traditional method (teacher-centered learning). The results of the descriptive analysis reflected that in the t-test, the experimental group had dramatically higher post-test scores than the control group in modules 1, 2, and 4, and displayed a 99% confidence level even with the words of higher difficulties. This shows that the experimental group enhanced learners' vocabularies and allowed them to perform better in terms of recall and retention rate. Consequently, one can assert that PBL played a significant role in improving Iranian EFL learners' vocabulary recall rates and retention (Shafaei & Rahim, 2015).

2.2 Teachers' Role Change Implementing PBL

Improving educational quality is not only related to the sufficient numbers of teachers in schools, but also relates to teachers' need to be trained, teachers' need for professional development (PD) programs, and teachers' need to be motivated in the continuous improvement of their teaching practice (UIS, 2016). Therefore, the teachers' role is fundamental in the process of any educational reform, as previous studies have emphasized the importance of teachers' beliefs about their role and how it has a great effect on lesson plans and interactions with students (Wang & Du, 2016).

A study by Swanepoel (2008) that focused on the perceptions of teachers and school principals regarding teachers' involvement in educational change suggests it is debatable whether education reform can be implemented successfully without the teachers' involvement, given that teachers are in fact the source of actual change within the classrooms. In this regard, the author emphasized the necessity of the teachers' involvement, and their involvement is not only restricted to being implementers, but instead being part of the decision-making, planning, and management process.

Additionally, research publications reported the same concept of teachers' roles, one of these being that of Fredricks, Blumenfeld, and Paris in their study (2004).

In the process of changing to PBL, the teacher's role shifts in that teachers provide more help and facilitation rather than dominating the presentation and giving lectures (Fleming, 2000). Also, Fleming (2000) argues that compared with the traditional way of teaching, where the teacher administers quizzes and exams as the main rubric/standard for many classrooms, the PBL classroom practice creates an active learning environment wherein students come up with their own questions, design their projects, and express and present their learning, and these features are the heart of the project work.

In PBL classrooms, the new role of teachers is explained as: "…lecturing to passive students is replaced by encouraging motivation, tutoring, providing resources, and helping learners to construct their own knowledge" (Gülbahar & Tinmaz, 2006, p. 310).

After the teachers notice improvements in student learning, their attitudes and beliefs dramatically change, and these improvements result in changing classroom activities, new instructional methods, involvement of new materials or curricula, or some modification in teaching procedures (Borko, 2004).

2.3 School Support for PBL implementation

Based on the literature, two aspects of support are found to be essential in supporting teachers in implementing innovation pedagogy: leadership support and professional development support.

School leaders are the second main factor in the learning process, following the teacher; leader-student relationships are not direct because leaders do not give daily lessons to students. Leaders have the huge responsibility of creating and arranging a structure that is suitable and requires the teachers' constant improvement (knowledge, skills) by assessing the needs of his/her school and teachers' level of experience (Hussey, 2013).

Hussey (2013) discussed the school leaders' role of supporting PD in order to enhance teachers' effectiveness by implementing an embedded structure for professional learning support and indicated that because job-embedded PD is arranged within the school site and connected directly to teachers' and students' needs inside the school context, the organization for this kind of structure will be more flexible and more easily maintained for a long period of time than the traditional PD, meaning teachers will have more opportunities to discuss concepts, raise issues that they face during the workday, share their concerns for their students, and share materials, experiences, and skills (Hussey, 2013)

2.4 Professional Development (PD) for Implementing PBL

According to Postholm (2012), teacher PD means "teachers' learning, how they learn to learn and how they apply their knowledge in practice to support pupil learning" (p. 405-406). It has been argued that through the Postholm study, teachers can learn formally and informally within the school through participating in different courses in which they have the opportunity to reflect on their teaching, conduct observation, and receive reflection from their colleagues and parent-teacher meetings. Additionally, Postholm emphasized that learning can happen in different ways in terms of learning theories. For example, according to the cognitivists, learning happens through

stimulation and learners being active in the learning process; however, constructivism believes that knowledge is constructed from meaning and being understood through the social interaction which develops thinking. Previous researchers suggested that the innovation on both curriculum and teaching practices should align with curriculum content, organization, and professional issues of teachers, these being, for example, teacher efficacy, time management, teachers' reflections, and PD with colleagues in the work environment (Blumenfeld, Soloway, Marx, Krajcik, Guzdial, & Palincsar, 1991).

Professional development plays a fundamental role in addressing the gap between teachers being prepared and standard-based reform. Nevertheless, many PD programs offered to teachers do not meet their needs nor the challenges of the reform movement (Birman, Desimone, Porter & Garet, 2000). In New Zealand, a case study was conducted to examine the introduction of a new national reform. It consisted of examinations of 449 secondary-school teachers who were surveyed and cases from 28 primary schools. The findings of this study present a case arguing that behind any reform, there should be a component focusing on the teachers' PD; activities should be adapted to teachers' and students' needs and they should be provided with expert assistance along the phases of the reform (Postholm, 2012).

In order to implement a new teaching strategy, teachers' development is a necessary component to any successful switch in curriculum, and according to Maurice Maurice, Hitchcock & Zoi-Helen, 2000), "The success of any PBL curricular initiative requires the assistance of faculty skilled in PBL. The development of faculty with such skills must be a primary and ongoing concern of programs or schools launching such efforts" (p.52). The previous argument suggests that teachers should be instructed in and experienced with professional development (PD) programs before any change.

Reviewing the related literature in teachers' PD, researchers identified that teachers' PD needs in teaching EFL for primary school are important to further comprehension and improvement to the practice of PD, which can assist in the development of teachers' instructional practice (Zein, 2017). Recently, PBL has been implemented in EFL classrooms, and studies indicate that PBL aligns with the language learning principle in which the students are given the chance to learn the target language in a meaningful way. Also, other studies which have implemented PBL in ESL classes have displayed results suggesting that there is a positive effect in teachers and learners regarding enthusiasm and content learning (Mohd-Yusof, Arsat, Borhan, de Graaff, Kolmos, & Phang, 2013).

Realting to the current study, the PBL projects were not in the core of the curriculum but an addition to the mainstream textbook based curriculum. This put pressure on both teacher and students in terms of the time. Hence, this is raising the challenges of Qatari contexts.

CHAPTER 3: RESEARCH METHOD

This chapter presents the research context, research design, participants, data generation method, procedure, data analysis, and ethical considerations present in this study.

3.1 Research Context and Design

Qatar's National Vision 2030 (General Secretariat for Development Planning, 2008) states that the country's economy is to move from one dependent on oil and gas to a knowledge-based economy. Following this national strategy, all educational institutions in Qatar were encouraged to adopt educational innovations in order to help students develop 21st century skills (Said, 2016). Several other policies continue to follow at various sectors of government. Particularly, the most recent policy issued by the Ministry of Education and Higher Education (MOEHE) documents the introduction of Project Based Learning (PBL) into the curriculum of several subject areas including that of the English language. In May 2017, the MOEHE announced the plan of implementing PBL beginning in September 2017. Considering it is the first time PBL has been implemented in Qatari governmental schools at a systemic nation-wide level, it is important to examine how teachers define and practice PBL and explore what challenges they may face at the initial stage of implementation (Du & Chaaban, in press).

Du and Chaaban (in press) have pointed out that when implementing an innovative approach at an organizational level, quantitative data is often collected to assess the initial performance with an overview. Nevertheless, it is also essential to explore the teachers' initial experiences, including deep understandings, perceptions, reflections, opinions, and daily practices. Researchers also stressed that context plays

an important role in organizational change (Henriksen, 2004). In particular, an individual recipient's perception of change is situational (Vakola, 2013). Therefore, it is also important to explore the deep opinions and affective reaction to the change. Finally, and specifically relevant to Qatar, there is sensitivity in a case where change is implemented in a top-down approach when the decision was made by management (Kolmos, 2002).

The qualitative approach in research refers to a wide range of possible applications in terms of producing descriptive data on peoples' own thoughts, words whether spoken or written, and observable behavior (Creswell & Miller, 2000; Patton, 1990). In particular, qualitative methods are used in educational settings to provide an in-depth description of a specific program and education practices (Punch & Oancea, 2014). In the case of the current study, the purpose is to understand the teachers' experiences and opinions instead of assessing their performance. Therefore, a qualitative research design was employed in order to provide deep understanding and insights into teachers' lived experiences (Punch & Oancea, 2014) via multiple sources of data, including lesson plan analysis, classroom observations, and interviews.

3.2 Participants

Participants of the study included EFL teachers from three primary governmental schools in Qatar. With the initiative of the PBL implementation, the MOEHE in Qatar organized a 2-day workshop that was conducted at the end of August to train the coordinators of the EFL subject in each school. Upon completion of the workshops, the coordinators were expected to organize school-based activities training teachers in implementing PBL. Therefore, the choice of participants in this study was based on an assumption that teachers' definitions, practices, and challenges they might

face may be related to their school environments and therefore may differ from one school to another.

Upon receiving ethical approvals for the study from MOEHE and Qatar University, an email was sent to leaders of around 20 schools suggested by MOEHE. Five replied within the requested timeline, showing interest in supporting this study. After a few visits to these schools, three schools were chosen for data generation for this study because they shared common features in terms of their visions and population of teachers and students, and each of the three schools had three to five EFL teachers. Following the culture of gender division in governmental schools in Qatar, it was regarded as convenient for female researchers to conduct empirical work involving observations and interviews in female schools. Nevertheless, these three schools are located in different geographical regions of Qatar. Due to the confidentiality agreement with the schools and their teachers, all names were anonymous, and the schools in this report are named School A, B, and C. Teachers were addressed by the codes Teacher 1 through Teacher 11.

The empirical work of the study had a duration of late October to the middle of December, 2017. During this period of time, 11 out of a total of 15 EFL teachers in these three schools participated in the study. Two of the 15 teachers could not participate due to the timing being inconvenient, and two did not volunteer to participate. The participants had teaching experiences ranging from 3 years to 15 years. The age of the participants ranged from late 20s to late 30s. All interviews took place at the participants' schools by arrangement. The 11 participant teachers provided lesson plans, allowed for classroom observations of both PBL session 2 and regular lecture-based classes, and participated in interviews. All participants were native-Arabic

speakers but could speak English fluently.

3.3 Data Generation Methods

Three sources of data were generated for this study, including lesson plan analysis, classroom observation, and interviews.

*Lesson Plan Analysis*

Lesson plans are referred to as "systematic records of a teacher's thoughts about what will be covered during a lesson" (Farell, 2002 p. 30). The process of developing lesson plans includes planning, implementation, and evaluation of the lesson (Farell, 2002), and also includes considerations of the learning environment, including physical materials and facilities (Brittin, 2005). Although it is suggested that primary teachers keep flexibility in terms of applying the lesson plans to actual classroom settings, Brittin (2005) suggested that good planning is linked with good teaching and is considered a high-priority teaching skill for teachers. A typical teaching plan for PBL usually includes teachers' plans of descriptions of objectives, diverse activities that will be conducted, a consideration of interactions and materials to be used, and plans for how assessment and evaluation will be conducted (Du, 2012). Therefore, lesson plans, to a great extent, can be regarded as a way to obtain information on teaching practices (Du, 2012; Farell, 2002).

In this study, a total of 5 lesson plans on PBL were collected from the 11 teachers: among them, one was from school A with Grade 4; two were from School B with Grades 3 and 4; and two were from School C with Grades 3 and 6. Also, from school C, two lesson plans were collected from regular classes.

*Classroom Observations*

Observation serves as a technique by which to generate qualitative data with the purpose of understanding the settings, environments, contexts, and culture where the target participants are located (Punch & Oancea, 2014). Non-participant observation data was generated to supplement data gathered from other techniques (Punch & Oancea, 2014). In this study, it was used as a primary source of data. An initial analysis of observation data also served to design and develop interview questions.

In the fall semester of 2017, two PBL sessions were arranged in each school as defined by MOEHE. Details of the two sessions are provided in chapter 4. In this study, they are named "PBL session 1 – project starts" and "PBL session 2 – project ends." PBL session 1 in all schools took place prior to the start of the current study, while PBL session 2 was expected to take place during November, with each school deciding on the precise time.

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from school A, with Grades 3 and 4, and one regular class from school B, with Grade 4. Two regular classes were also observed from school C, with Grades 4 and 5.

The observations were non-participation based, meaning the role of the observer was only sitting in the classroom, trying not to interrupt or interfere with the class in any way. Field notes were generated, addressing PBL activities, procedures, and teacher-student/student-student interactions, and lesson plans were compared and contrasted in relation to what actually occurred in the classroom.

*Interviews*

Kvale (2006) suggests that qualitative interviews are a useful way to study different human experiences, and in the process of interviews, the participants will be encouraged to provide their opinions and describe what they feel and experience (Creswell, 2012). Interviews were conducted as a major data source for the purpose of answering all three research questions, and for the purpose of triangulating and asking probing questions generated from other data sources.

Among the 11 teachers who volunteered to be interviewed, four were from school A, two from school B, and five from school C. The participants had teaching experience ranging from 3 years to 15 years. The age of the participants ranged from late 20s to late 30s. The interviewing period began in November and ran until early December. All interviews took place in the participants' schools, as they requested.

During the interviews (see Appendix 3 for interview guidelines), participants were first asked general questions about their backgrounds, then asked for prior knowledge about and experiences with PBL. They were also asked to provide their definition of PBL, to describe of their practices of PBL implementation, to reflect on

what challenges they faced, and to suggest what support could have been provided to assist in the implementation.

Each interview lasted 30-60 minutes. All interviews were audio recorded with the permission of the participants.

3.4 Procedure

The procedures for data generation and analysis followed the steps and timeline given here:

- September, 2017, applications were submitted for ethical approval from the Ministry of Education and Higher Education (MOEHE) and from the Institutional Review Board (IRB) from Qatar University's Institutional Review Board (QU-IRB) (See Appendix 2 & 3 MOEHE and IRB approval).

- Early October, received MOEHE and IRB approvals.

- Middle of October, contacted schools.

- Middle to the end of October, conducted the initial lesson plan analysis based on relevant literature, completed informal visits, and gained an initial impression of the school environments and what PBL means for the daily practices of both teachers and students.

- End of October to middle of November, classroom observation of PBL session 2. (PBL session 1 was already conducted in middle of September).

- Mid to late November, the interviews based on an initial analysis of observation data were completed.

- Beginning of December, transcription of interview data and member check for credibility were completed.

- December, further data analysis.

3.5 Data Analysis

Analyzing qualitative data is generally dealing with texts. The interpretation is usually focused on meanings and context, and the report of data analysis is aimed at providing a condensed description of a phenomenon (Elo & Kyngaes, 2008). The overall analysis process in this study involved an integrated approach of engaging in several rounds of comparing and contrasting all sources of data, then combining theory-driven analysis and a thematic analysis (Namey, Guest, Thairu, & Johnson, 2008).

A theory-driven approach to analyzing qualitative data is considered to be useful to generate reliability because it is structured with the purpose of improving precise findings responding to the research questions (Namey, Guest, Thairu, & Johnson, 2008). In this study, a theory-driven approach was used to analyze lesson plans, observation notes, and interview transcripts, following the PBL principles summarized in chapter 2 (Boss & Krauss, 2007; Hugerat, 2016; Stoller, 2006; Thomas, 2000; Helle, Tynjala, & Olkinuora, 2006; Putri, Artini, & Nitiasih, 2017; van Rooij, 2009; Du & Chaaban, in press).

A thematic approach to analyzing qualitative data is considered to gain validity because it allows for discovering previously unconsidered themes that generate new meanings in a bottom-up approach (Namey, Guest, Thairu, & Johnson, 2008). In this study, thematic analysis was conducted for analyzing texts of interview transcripts in the second round of analysis (after the theory-driven approach as the first round) by searching for themes that help to answer the research questions embedded in the collected data. In the process, patterns were recognized within the data (Fereday & Muir-Cochrane, 2006).

Several rounds of data analysis were conducted, comparing three different sources of data along the process of empirical work. The procedures included:

1. Lesson plan analysis: Following the PBL principles summarized in chapter 2 (Boss & Krauss, 2007; Hugerat, 2016; Stoller, 2006; Thomas, 2000; Helle, Tynjala & Olkinuora, 2006; Putri, Artini, & Nitiasih, 2017; van Rooij, 2009; Du & Chaaban, in press), two rounds of a lesson plan analysis were conducted. The first round occurred at the initial stage of the empirical work to provide an overall impression of the PBL teaching design and practices. The second round took place after interviews in order to integrate all three sources of data.

2. Observation notes analysis: Similar techniques were used to analyse observation notes. The first round was conducted right after the observation of each class by comparing and contrasting the PBL principles summarized in chapter 2 (Boss & Krauss, 2007; Hugerat, 2016; Stoller, 2006; Thomas, 2000; Helle, Tynjala & Olkinuora ,2006; Putri, Artini, & Nitiasih, 2017; van Rooij, 2009; Du & Chaaban, in press) to the initial analysis of lesson plans. The second round took place after interviews to integrate all three sources of data.

3. Interview analysis: The recorded interviews were transcribed and manually coded via several rounds of reading the transcripts in order to connect the texts to meanings in relation to the frameworks and research questions. In the first round of analysing interview transcripts, the PBL principles summarized in chapter 2 (Boss & Krauss, 2007; Hugerat, 2016; Stoller, 2006; Thomas, 2000; Helle, Tynjala, & Olkinuora, 2006; Putri, Artini, & Nitiasih, 2017; van Rooij, 2009; Du & Chaaban, in press) and the framework for changing for PBL and challenges (Du, Su, & Liu, 2013) were used as main categories for framing interview analysis. During the second round, the key themes that present the interviewees' perceptions were identified based on categorizing meanings in the data (Kvale & Brinkmann, 2009). In the thematic analysis, patterns were

categorized, and themes and sub-themes were identified in relation to the research questions in order to understand teachers' definitions and practices of PBL and challenges that they faced regarding the initial stage of implementation.

Afterward, all three sources of data were merged and triangulated to outline answers to all research questions. Finally, data from all sources was integrated to relate to the frameworks (PBL principles and challenges in changing to PBL) in the process of writing the report.

Furthermore, experienced qualitative researchers (supervisors of the study) were invited to read through the texts of lesson plans, observation notes, and interview transcripts, and they were then given time to make their own interpretation before comparing their analysis with the analysis reported in this study. Their suggestions were included in revision of the thesis report. Further details of analysis in relation to each research question are provided in chapter 4.

3.6 Consideration of Credibility and Validity

Although validity and reliability are concepts that are more often related to quantitative approaches to research, Patton (1990) suggested that they should be considered by the qualitative researchers in the process of research design, data analysis, and evaluating the research quality. A few techniques were incorporated in this study. First, the triangulation of data generated via multiple sources was utilized in this study. Data triangulation provided possibilities for obtaining data that may have been overlooked by relying on only one source of data collection and for perceiving the same data from various angles, which provided validity (Yin, 2003). Triangulation of multiple sources of data may help improve the validity through the identification of the convergence (Creswell & Miller, 2000). Another effort in improving validity was that

of discussing the complete process of research regularly with experienced researchers (for example, the supervisors of the thesis) to obtain multiple views on research design, data generation, and analysis (Patton, 1990). In addition, member checking (Lincoln & Guba, 1985) was also conducted by providing participants the preliminary data analysis so they could clarify the meanings and confirm the accuracy of the interpretation in order to establish credibility (Lincoln & Guba, 1985).

3.7 Ethical Considerations

Ethical considerations were accounted for throughout the process of the case study. First, ethical approval was sought from the Ministry of Education and Higher Education (MOEHE) and from the Institutional Review Board at Qatar university (QU-IRB). Then, each school and each teacher were contacted with explanations of the purposes and potential consequences of the study. Voluntary participation, freedom to withdraw, and confidentiality were ensured to the participants. All participant schools and teachers were kept anonymous following their suggestions. Research results are also planned to be communicated with all participants in a later stage.

CHAPTER 4: FINDINGS

This chapter reports findings from the qualitative data analysis, including (1) responses of primary school EFL teachers' interviews, (2) teachers' performance/implementations within the classrooms as noted through PBL classroom observations, and (3) the aggregate of teachers' responses in the interviews and classroom observation, as well as the analysis of teachers' lesson plans for PBL.

4.1 The Implementation of PBL in Qatar Governmental Schools

The following narrates the context of implementing PBL at the preparation stage. Data sources were from interview data and the Ministry of Education and Higher Education (MOEHE) documents. In June 2017, according to the documents from the MOEHE and interview data, the decision of implementing PBL was made by the MOEHE minister based on the argument that PBL would be an efficient way to help schools motivate students and develop 21$^{st}$ century skills (Du & Chaaban, in press).

On August 28-29, 2017, a two-day workshop was organized by the MOEHE to provide PBL training facilitated by two speakers invited from outside of Qatar. One teacher selected from each government school attended the required workshop. Upon completion of the workshop, the teacher was expected to train the remaining teachers of the same subject in their home schools. Because of time constraints, the workshop was mainly delivered in the form of lectures, and at its conclusion, the participants were requested to develop a sample of a project-based lesson using the procedures it offered.

Between August 31 and September 7, teachers worked on developing projects, lesson plans, and the completion of forms in relation to PBL implementation as requested by the MOEHE. (see Appendix 3 for samples of the forms).

On September 17, the PBL Implementation began. Teachers presented projects to students in EFL classes as PBL session one. The project continued until the middle of November, ending with PBL session two. According to schools A and B, the second session ended in the beginning of November. For school C, the second session was in late November.

In summary, project-based learning was implemented through a project with two official sessions titled PBL session one and two. Students were expected to work on their projects in teams, with the teachers working as facilitators. The classes between PBL session one and session two were conducted using a traditional method, including lecturing and following textbooks. The actual project work was mainly conducted in students' spare time. This empirical study began during late October and ran through November 2017, when most of the schools were approaching the completion of their projects.

4.2 Research Question 1: How do EFL teachers define PBL?

Interview data analysis showed that participant teachers in this study expressed a variety of PBL definitions, as shown in Table 4.1. The first round of thematic analysis identified the teachers' definitions of PBL from the interview, indicating these definitions can be categorized into the four categories illustrated in Table 4.1 and discussed below.

Category 1: This category includes teachers (1), (9), and (10), who share the understanding that team work is the core of PBL in that students help each other to end up with a product while working under the teacher's guidance.

Category 2: Teachers (2), (7), and (8) defined PBL as a self-learning tool that students should use to rely on themselves in doing the project and searching for information.

Category 3: Teachers (3), (5), and (6) share the general belief that the core of PBL is conducting research. In the process, students learn through searching for information, writing, and making presentations in the forms of posters or PPT. According to these EFL teachers, PBL should be done by choosing a lesson from their English textbooks and developing it into a project. According to the interviewed teachers in this category, most of the teachers in Qatari primary governmental schools share this understanding of PBL because it was described this way in the MOEHE documents. This definition type is related to their understanding of good teaching and learning, as well as the role of teachers. Teachers in this group believe that good learning comes from qualified teachers, a good learning environment, and practical learning. According to them, good teaching and good learning are related to each other. They believed good teaching takes place when the teacher helps students to learn while accounting for individual differences, and they noted the importance of the teacher-student relationship. Also, they said that the role of the teacher is to be a model for the students, deliver information, and be willing to adapt according to the lesson.

T 3 stated: "…I think they are connected to each other. If there is good teaching, there will be good learning."

T 5 stated: "…good learning is when offer your students a positive learning environment…good teaching is when you guide your students…"

Category 4:  In this group, there are two teachers with opinions significantly different from the others, as T 4 and T 11 believed that PBL is a process involving a driven question which leads students to look for information while the teacher observes and guides them constantly, ensuring they choose a topic that matches their level. It seems that they are the only teachers who held this definition and belief. In T 4's case, this is mainly because she had previously experienced PBL as a student and attended the PBL workshops as a teacher. This may explain the way she defined PBL: "It was clear to me with a lot of examples, you need to select what is suitable for your students, and what is a suitable topic according to their level and understanding. And you should plan your own PBL…you need to know how to introduce a driven question…take from them some information…guide them…mentor them…teach them…"

Table 1. Categorized EFL Teachers' Definitions of PBL and Prior Experiences

| Categories of teachers' definitions | Teacher code number | School | Teachers' definitions of PBL | Prior experiences of PBL as a learner | Prior experiences of PBL as a teacher | Attended the PBL workshop August 2018 |
|---|---|---|---|---|---|---|
| Category 1 | T 1 | A | "is to have an idea, project, group work for students...specific topic and they have to search and create outcomes" | No | No | No |
| | T 9 | C | "MOEHE request… the teacher chooses a topic from the English textbook and implements it as group work…" | Yes | No | No |
| | T 10 | C | "PBL is teamwork…the outcomes should be achieved with teachers having the responsibility of following up with their students" | Yes | No | No |
| Category 2 | T 2 | A | "we didn't receive enough training regarding this topic to define it well and give you my point of view, but what I understood from the whole topic is it is one way for learning…" | No | No | No |
| | T 7 | C | "Self-learning, letting students think out of the box" | No | No | No |
| | T 8 | C | "PBL is to let students think, to imagine things, to be creative in | No | No | No |

| Categories of teachers' definitions | Teacher code number | School | Teachers' definitions of PBL | Prior experiences of PBL as a learner | Prior experiences of PBL as a teacher | Attended the PBL workshop August 2018 |
|---|---|---|---|---|---|---|
| | | | making projects and new things" | | | |
| Category 3 | T 3 | A | "students learn through making research by themselves without the interfering of the teachers" | No | No | No |
| | T 5 | B | "PBL is research that students do based on their academic level" | No | No | No |
| | T 6 | B | "PBL is a project in which the teacher displays a sample to their students to design their own research: posters, writing, PPT, ...practiced in groups" | Yes | No | No |
| Category 4 | T 4 | A | "You should select what is suitable for your students and what is a suitable topic…you should plan your own PBL…how to introduce the driven question…how to take some information from students…" | Yes | Yes | Yes |
| | T 11 | C | "PBL is selecting a topic from the book unit…doing research, making modifications according to the students' level" | Yes | Yes | Yes |

4.3 Research Question 2: How do EFL teachers practice PBL in Primary

Classrooms?

*4.3.1 Observation of a PBL Session Two*

The following is a summary of classroom observation notes of PBL session two

in school C:

9:00 – 9:45 Tuesday, November 7th, 2018. English class for Grade 5 in School

C. PBL session two. Students from the class had been working on a project titled

*Tourism.* It was the second session of the PBL class, in which the students were

supposed to present their products.

Two teachers were in the class. One is the EFL teacher who was responsible for

Grade 5 (T 9), who is also the major teacher for this observed class. The other one was

the EFL teacher who was responsible for Grade 3 (T 10). According to the interview

data later, the EFL teachers in this school worked as co-teachers for each other during

PBL sessions, so that they could better facilitate student discussion and classroom

management.

The class was conducted in English, as the teachers explained later during the

interview, they tried to hold PBL sessions only in English so that students could practice

English as much as possible. However, in regular lecture-based classes they usually

read the books in English but provided explanations of grammar and meanings in

Arabic. There were 22 students in total in the class, who were sitting in groups around

three tables.

During the first ten minutes, the major teacher reviewed the aims of the project

and introduced the plan of the PBL session two which was to present, summarize and

reflect the overall projects. The driven questions were written on the board for the

groups. Each group spent five minutes presenting their module/project (group work). Afterwards, each group spent a few minutes to discuss within the group preparing for the presentation and dividing the roles. The students were asked to speak only English, although in some groups Arabic was used by a few students who appeared to feel difficult to speak English. The teachers encouraged students in groups to discuss together; however, in some groups there were one or two students who were controlling the whole project while some others were either unable or too shy to speak and share in English.

The next twenty-five minutes were allocated for each group to present their projects. Ideally all group members should participate in the oral presentation, but with the time limitation, the teacher allowed the groups to choose representative speakers as an option. When each group finished the presentation, the teacher asked the other groups if they had any questions and prompted a discussion about the project. One group chose Germany as destination of the trip and produced a one-week traveling plan in a poster, including schedule, tourism locations, recommended restaurants and suggested souvenirs to take home as gifts. Another group chose France and designed a booklet including mainly interested places to visit and their history such as museums, arts, among others. The first two groups chose two representative speakers from each group. A third group chose Turkey and presented using PowerPoint; in this group, all members shared in the presentation. All groups had to include a budget plan including flight tickets prices, expenses for accommodation, food and other activities.

Questions and discussion were raised for each group. Some students tried to speak English while some seemed to be still shy to speak and looked at the teacher asking whether Arabic was allowed. The teachers encouraged students to use English

as much as they could and help them with vocabularies when needed. Questions mainly included why they choose the specific countries as the destinations in their projects. The answers were mainly recommendation of their family members who had been in these places before. Another major topic for discussion was the budget. The budget plan of the third group (Turkey) was precise within the allowance. While the budget plans by the other two groups (Germany and France) turned out to be nearly twice of the allowed amount. These two groups were questioned by their teachers and peers that why they had to spend a big amount of budget for gifts. This extended the discussion to why it was important to bring gifts to family and friends from a trip. Most of the students attributed this to Arabic culture and a few students seemed to reflect upon this by repeating "yes, a good question, why do we have to do this?". Concerning the question of "what they would/could do if they were out of money during the trip, all students answered that "calling parents for help", and when the teacher asked, "how about working to earn some money", they seemed to be surprised but smiled. The teacher let the students express themselves in English and helped them with the language as needed.

After the presentation and discussions, the teacher distributed to the leaders of each group a sheet to complete in order to collect self-reflections and general assessment on behalf of the rest of the group. This appeared to be a difficult task because all groups encountered difficulty of understanding the reflecting questions posed by MOEHE forms as well as expressing and spelling what they tried to answer. Both teachers walked around the classrooms to help each group, and this task took longer than five minutes as planned. In the last a couple of minutes, the major teacher ended the session by concluding with the outcomes and the benefits of the PBL project.

She also thanked the students for accomplishing their outcomes during this project and highlighted some skills that they learned from this experience.

*4.3.2 PBL Practices*

Classroom observation was included in this study in order to understand more about the settings of the participants and to have more opportunities to examine context (Kvale, 2007). The remainder of this section will report findings regarding research question two (How do EFL teachers practice PBL in Primary Classrooms?), merging data from review of lesson plans, classroom observation, and interviews. An integrated approach for data analysis was employed. First, a theory-driven analysis was taken (Boss & Krauss, 2007; Stoller, 2006; Thomas, 2000), following the PBL principles framework summarized in Chapter Two to relate relevant data from each source to each principle. In the second round, a thematic approach (Kvale & Brinkmann, 2009) was taken to identify patterns and categories. Then, the initial analysis outcomes from both sources were compared and summarized to report findings of this research question.

Following previous scholars' works, Chapter Two has summarized PBL principles into five aspects, which are respectively: 1) the project is the core of a curriculum instead of an add-on activity to the existing curriculum, 2) students are involved in problem solving, 3) students need to do research and construct the meaning themselves, 4) students work on real topics, and 5) students work collaboratively until they reach the outcomes of the product (Boss & Krauss, 2007; Hugerat, 2016; Stoller, 2006; Thomas, 2000; Helle, Tynjala, & Olkinuora, 2006; Putri, Artini, & Nitiasih, 2017; van Rooij, 2009; Du & Chaaban, in press).

First, at the initial stage of implementing PBL in Qatari primary governmental schools, teachers received information from MOEHE in terms of what PBL should look like and what their roles would be. Following this information, they selected certain topics from the textbooks and developed them into project topics. Two PBL sessions were scheduled for the project, the rest of the classes were conducted in regular lecture-based methods. This showed that the project was not in the core of the curriculum but an addition to the mainstream textbook based curriculum. This put pressure on both teacher and students in terms of the time. With the time constraints (as mentioned earlier), teachers did not involve students in the choice of project topics, and both teachers and students had to use their spare time to work on the projects. Interview data showed that two thirds of the participants in this study were not aware of the option that students could/should choose their own project topics., while three of them mentioned that they wish to allow students choose topics then they may find it more interesting. The topic details are displayed in the following table:

Table 2. PBL Projects information by the participants

| Project topic | Driving questions (problem) | Project outcomes | Grade | School |
|---|---|---|---|---|
| Sports | How can we live healthily and save time for practicing sports? | Visual presentation (poster, diorama, play) | 3 | C |
| Safety | How can we be safe? | Make a poster | 3 | B |
| Healthy food | What do you eat? | Visual presentation | 4 | A |
| Four season recycling | How can we enjoy the seasons and stay healthy? | Make any product | 4 | B |
| Popular places in Qatar (Tourism) | How can we reduce external travelling for benefitting the tourism industry in Qatar? | (poster, diorama, play) | 5 | C |

During the interviews, some participants reported that this could be a repetition and made students feel bored addressing the same topic twice. While some other teachers found this may not necessarily be an issue and it could even be an opportunity for students to apply what they have been taught to practice through the project. The observation summary reported in 4.3.1 can be a positive example showing how teachers made the project interesting by applying the same topic of tourism from the textbook to students' real-life experiences.

Second, as a second principle that uses a problem as a driven question, lesson plan analysis showed that all teachers developed a certain topic for a project and phrased the topic in the form of a problem (see Table 4.2). This was also requested in the instruction by MOEHE. The classroom observation notes confirmed that the teachers followed the guidelines of this aspect in practice. During interviews, all teachers mentioned that in PBL session one, they presented the project topic and the problem to be solved in the form of "driving questions." In PBL session 2, they evaluated the project outcomes by examining the answers to the problem (as shown in 4.3.1 observation summary).

The third principle of PBL concerns students' engagement in researching and constructing meanings. Lesson plan analysis showed that there were no major criteria encouraging students to be engaged in constructing meanings. Also, based on the observation notes, the teacher was the main actor in the learning process instead of being a facilitator in the process, which was not in keeping with the PBL method, as shown in 4.3.1 observation summary. The interview data is consistent with the lesson plan analysis and observation notes, as four participants (T1, 5, 8, 11) commented that students faced some difficulty in dealing with this process because it was a new

experience for them and they were not accustomed to doing such projects. This may also be because of the time limitation and teachers were practicing PBL in addition to the stress of fulfilling mainstream curriculum demands.

This principle is not just about classroom discussion; it is more to do with students doing research, as was observed in the Grade 5 class where certain amount of the time was spent in presentation and discussion (as shown in 4.3.1 observation summary). While interview data and other observation note showed that the majority of the PBL sessions may be largely led by the teacher and did not prioritize this principle of PBL. Even in the reported observation summary in 4.3.1, which was the PBL session two allowing for highest amount of discussion time among all observed sessions in this study, the discussion was about limited topics and mainly initiated by the teacher and the students needed help with the language from the teacher. The lesson plans collected in this study did show that the teachers were meant to introduce the steps and the importance of the project by including some technology tools, but there were no follow-up criteria to mentor and guide students through the process of doing the project.

During the class of PBL session two, students reported their research results in the form of a power point presentation (as shown in 4.3.1 observation summary). Each group selected a representative to speak about their project, as mentioned earlier in the classroom observation notes. According to the observation notes, due to the limited classroom time set aside for PBL, discussion among students' groups during PBL session two was restricted to a maximum of 10 minutes. Therefore, students' discussion was limited, and they did not engage in all the activities required (discussions and negotiations with their colleagues) within the classroom. This was also reflected in the interviews. The main reason, according to most teachers, was "time limitation."

The fourth principle of PBL concerns students being engaged in authentic topics and activities. In all three cases, the PBL projects reflected real-life association and challenges. The students' choice of topics, as shown in Table 4.2 were related to real life, but the active parts of the project were differentiated by necessity. For example, in school B, the teacher chose the PBL lesson about seasons, and she explained that she chose this because the students would at least have a background on this topic. There was insufficient time to introduce a totally new topic. Students in Grade Five can do more in relating the topics to real life experiences and what happens in society (as shown in 4.3.1 observation summary), but for Grade Three, even if their topic was about something as simple as "healthy food," they could not do much research. They could only complete the work based on prior knowledge.

The fifth principle is that of collaborative learning. Lesson plan analysis showed that according to the plans, students were engaged in group work in the process of problem-solving project work. This was observed in the current study. All data sources showed that students were expected to work collaboratively and presented their project outcome in teams. This could also be seen in 4.3.1 observation summary. Nevertheless, due to the time limitation, only two team representatives spoke for the group in most observed PBL sessions. In addition, all project work processes were conducted in students' spare time. Therefore, it was difficult to have an impression of all students' participation in the group work. This was also regarded as one of the most challenging aspects for using team work: "We can see the students were excited and motivated, and they came up with good products, but how do we know they all have learned the same thing?" (T 1). In addition, with the time limitation, students had to work in their spare time, which made it difficult to ensure all six to eight students contributed equally and learn sufficiently through the team work. Furthermore, the question of how to assess

individual learning through group work remained one of the most challenging faced by the teachers participating in this study.

In summary, while merging data from three qualitative sources, findings show that the participant teachers in this study share a few commonalities in their initial stage of practicing PBL: 1) they could only use the project as an additional activity for the main curriculum; 2) they followed the MOEHE instructions in implementation, including developing project topics and driving questions from existing textbook contents and encouraging students to search for information, generate meanings, and work out the projects in teams. The overall practices are partially in line with the PBL principles with the exception of the role of the project in relation to the curriculum, which was beyond the teachers' control since they had no part in the decision making. Findings also identify variations of the practice of PBL implementation at its initial stage by schools, particularly in terms of how to develop coping strategies.

Although subject coordinators attended the PBL workshop organized by MOEHE on August 28-29, they provided limited information to the teachers except for the guidelines from the MOEHE. The remaining teachers, with a limited understanding of PBL, worked on project topic choice, project process design, lesson plan development, and project evaluation procedures on their own. Therefore, the teachers felt confused and lacked confidence in their ability to apply the process of doing PBL projects with their students. As one teacher commented: "We need to see somebody implement PBL and see how they explain for their students, how the students cooperate with them…It's not easy to implement a new thing like this, very fast and sudden…"

In school A, teachers felt stressed because they had to live with the confusion without knowing what would happen next. They chose survival strategies, deciding to

just do the projects following guidelines and hoping they themselves would survive the school year of PBL. As one said: "When we were implementing within the class, we were struggling…specifically for us as English teachers."

In school B, teachers shared the same insecurity regarding not knowing what to do, and they experienced even more stress when they sometimes had to fight for the limited teaching materials. As one mentioned: "It wasn't easy for us because we haven't experienced PBL classes… and we need more background and more materials."

In school C, collaboration among teachers was strongly encouraged by the school. According to the EFL teachers, the principal of their school believed it would benefit students if conducted in an appropriate way. Teachers in this school expressed confidence in managing this implementation and transforming the challenge into benefits. They also appreciated the autonomy in the school, where they could develop ideas without fearing failure or negative judgement. As reported in the observation summary in 4.3.1, teachers in this school worked as co-teacher for each other to support the classroom management in PBL sessions, they collaboratively developed strategies to responded to the MOEHE forms which appeared to be challenging for PBL beginner practices, they also helped students to reduce the learners' confusion at the beginning of PBL practices.

The English subject coordinator of this school (Teacher 11) was one of the few participant teachers in this study who had experienced PBL as a learner and had prior teaching experiences using PBL. She also attended the PBL workshop prior to the implementation. She expressed her belief that PBL would be a good way to benefit student learning and the team should work together to develop strategies that benefitted both teachers and students: "Since we have to do it, why don't we find a way to benefit

from this...and do it in a way that will benefit students" (Teacher 11). Teacher 10 stated that with the leadership providing support and teachers working together to design projects, supporting each other in PBL delivery in classroom management, sharing resources, and reflecting together for further improvement, "We will manage it together."

> In our school we like challenges and we take it as a positive challenge...Although I am a new teacher with only two years' experience, I am not afraid of this challenge; in my school, the challenges should be positive things and I believe I will learn a lot from this [implementing PBL] (Teacher 9).

> Mainly all of us...even the other grades, we should work together and we share. Like we had a meeting after we decided on the topics. We shared it together...This grade will do this and this grade will do that... (Teacher 11).

4.4 Research Question 3: What challenges do EFL teachers face in the initial stage of implementing PBL?

Findings related to the third research question:

During interviews, participant teachers were asked what challenges confronted them in the initial process of practicing PBL. Following the three levels of challenges of PBL implementation identified by Du, Su, & Liu (2013) (see chapter 2), findings are reported below.

At the micro level, the challenge in understanding is reflected by most of the teachers. Individual level challenges may include: 1) lack of understanding and

knowledge of PBL, mainly because most of the teachers have no prior knowledge or experiences as learners; 2) lack of needed skills for implementing PBL due to lack of professional development training; and 3) a lack of confidence stemming from the previous points.

As Teacher 4 commented, "…many teachers found themselves lost; they don't know what to choose, which topic, or how long…"

However, there are some school differences. In school (C), the collaborative and encouraging culture made teachers feel more confident, so they were positive towards the challenges.

At the messo level, according to the three schools, the collaboration among teachers can be noticed through their responses in the interviews, performance within the classrooms, and their lesson plans. Schools A and B have almost the same learning environment in terms of collaboration with each other. Most of the EFL teachers in school reflected weaknesses in terms of collaboration with each other, as two interviewed teachers (2 and 3) expressed views stating they did not receive enough workshop time on the implementation of PBL, and when it came to their students, they felt confused and wondered if they were not doing exactly as they should be. As one teacher stated:

> The school coordinator went to the PBL workshop and she came and
> explained it fast and briefly…only through papers…it took only
> around one hour. What she had to learn in 3 days, she came here and
> gave in one hour. (Teacher 2)

Teacher 3 from the same school also noted the lack of collaboration in the English department by stating, "I made like a huge modification to them and I am a little bit out of the PBL track because I was given little information about how to do PBL …. And it's difficult for them."

Teachers from schools A and B claimed that they needed some workshops in order to develop themselves professionally. The relationship between the teachers and the school support was weak, as one of the participants had been working as a teacher since 2015 and had not received any professional workshops aside from the basics of PBL.

This was not the case with school C, as teachers there had more collaboration compared with the other two schools. Although they still encountered many challenges with PBL, they handled them collaboratively, using cooperative support strategies and not being afraid of making mistakes (as shown in 4.3.1 observation summary). Teacher 11 stated:

> We have meetings and I model from them. I show them. We discuss
> the lesson plans and the topics, and then when we have the
> presentation parts, we first have feedback on what went wrong. "I will
> not use this"... "I will use this."

Among those teachers in case C, there were different types of collaboration: team work, sharing ideas, and evaluating each other, with each teacher inviting her colleagues to attend her class in order to assess her ways of teaching and give feedback as a kind of peer support. Also, not only were the teachers willing to help and advise each other, but their school also provided support by arranging meetings and

discussions. As one teacher stated, "We in the English department should work as a team," a notion which reflects the power of teamwork among these teachers.

At the macro level, a list of challenges was reported that could be related to the levels of the school environment and nation-wide policy system. One issue concerned time management (time pressure). As a participant reported:

> About the time, it's very limited and everything goes very fast. Even when we are implementing within the class, we were struggling with the time specifically. For us, as an English subject, they gave us only two classes along the whole term to be done with this project. The first class at the beginning of the semester, in which we explained the topic, was the opening, and the other class was the deadline. Actually, we need more classes to explain for the students…

An interviewee from school B also complained about the time period given to implement PBL:

> At least I have to get them hints, not just tell them this is the topic and I want you to do something by your own… they were shocked at the first session. So, they were between understanding the topic you want them to work on and the teamwork, how to divide them into groups and what kind of products they have …. all of this must be done in one session!

Another participant from School C commented on the same problem:
> We need more classes to implement PBL. Maybe because we are primary school and maybe it is more suitable for preparatory school or

secondary school, but in primary, I think it's hard for them because they

forget between the two classes…they forget what they have to do.

The results of the current study revealed a majority of EFL teachers have some

difficulties in the process of the PBL implementation, specifically with the timing. The

issue of Timeline/Time Pressure is a common theme among all cases.

- The role of the project in relation to the curriculum. Additions to curriculum,

  which make it difficult to establish requirement and evaluation criteria. Most of

  the teachers reflected on the challenges of their limited understanding and stated

  that they were "not fully prepared for the PBL teaching strategy."

In addition, there was a concern about the workload for teachers. They also stated

that they were not very motivated to implement this strategy, arguing that they already

have a "workload" that PBL will only intensify. "We need to have a more organized

schedule to follow the students and to consider the workload that we have already"

(Teacher 2).

Physical Facilities (including classrooms, materials, class sizes) was also a

challenge faced by these teachers. There was a challenge in overcoming the limitations

of the classrooms in which students had to complete their projects. Teachers in school

A and school C shared the same difficulty in trying to ensure the PBL classroom had

enough space and access to computers and the Internet. The majority of participants

were struggling to provide their students with the required materials, as PBL projects

required different resources according to the type of the project. In the interviews,

teachers expressed the problem of some students being unable to bring materials, a

complication that was also noted during the observations. In this case, the teacher is the

one obligated to bring the materials for the whole class. One teacher commented: "The project has to have its own budget because we can't ask the students to bring everything from their houses…. Sometimes the students tell me they don't have anything to bring!" (T4)

Finally, several comments were also noted by participants from schools A and C regarding the challenge of assessment forms and the language used in these forms. They argued that all the grades have the same forms of feedback and the same language, without taking into consideration students' levels or the capacity of the language they required, making them confusing. One teacher revealed that:

> The fourth grade was the same forms … even the same language…it's
> too hard for them to read. Even when I read for them, they couldn't
> understand what I was saying … It should be simplified.

During the interviews, the participants suggested that they should have some PD for some skills they considered necessary for PBL implementation, such as technology skills, research skills, motivation skills, and assessment skills.

*4.4.1 Participants' Suggestions for Overcoming the Challenges of PBL:*

In terms of how to overcome these challenges for further successful implementation in the long run, the participants suggested a list of possible support structures that would be beneficial.

- For PBL classes, teachers need a co-teacher within the classroom to help them with the technology and anything related to software. Also, teachers should be provided with sufficient training related to this teaching method. More classes should be given for PBL implementation, and these classes should be restricted to PBL only. Specifically, Teacher 10 suggested:

> Have more classes… Share ideas about projects with students...
>
> More classes need to have speech and communication.

- Assign one common project to the main subjects instead of each subject doing one separately, as they use the same idea and procedure. This will save time and encourage collaboration skills between teachers and students. Arrange enriching and exchanging experiences through visiting and observing other schools' classes. Teacher 8 suggested:

> We need to attend more workshops, and to observe many
>
> classes, not only those in our schools. We can observe any
>
> class out of our school.

- When the MOEHE decides to change or add to the teaching requirements, discussion of the change should be conducted by a team consisting of not only MOEHE representatives, but a number of teachers from different schools, supervisors, and experienced educators.

  Teacher 3 commented on this:

> MOEHE staff are putting this out, but they don't have feedback
>
> about the students... Teachers know more… they [the
>
> MOEHE] don't teach and work in the teaching sphere and then
>
> they won't know the class environment or about students in
>
> general...

- Keep PBL for the preparatory and secondary schools, not the primary level. By next year, MOEHE should design an extra book only for PBL.

CHAPTER 5: DISCUSSION AND CONCLUSION

The purpose of this study was to investigate how EFL teachers in primary governmental schools in Qatar understand and implement project-based learning (PBL) within the classrooms and the challenges they faced with the initial stages of implementation. A qualitative method was employed to answer the research questions. Following the framework for the analysis, this chapter will discuss the result of the current study with the use of methodological triangulation and with relation to previous literature in the same field. A list of recommendations is provided depending on the discussion and the limitations of the study.

5.1 How EFL Teachers Define PBL

One of the first aims of the study was to explore EFL teachers' understanding of PBL. For this purpose, teachers participating in the study were asked to define PBL and phrase what they perceived as good teaching and good learning. Four categories were summarized in chapter 4, these being a group of teachers who understood PBL as a team work exercise in which students should help each other, a group who understood PBL as a method of independent learning for students as they did their projects, and a group who understood the core of PBL as a system of doing research. However, for the last group, there were two teachers who were unique in their understanding; one defined PBL as a driven question that leads students to look for the information with the teacher's observation and assistance, while the other believed that PBL is selecting a topic from the textbook and achieving its objectives and outcomes.

The study results indicated that teacher participants in this study focused on research and collaboration in creating their definition of PBL, believing that the students' learning process happens through being actively engaged in doing research

that ends up with a product. This result supported the findings from other studies conducted on PBL, in which students learned through doing and gained research methodology skills (Blumenfeld et al., 1991; Green, 1998; Tiwari, Arya, & Bansal, 2017). The study results also found that team work is the core of PBL, and through collaborative work, students learn accountability with PBL when each member of the group contributes to the work equally (Bell, 2010).

The findings show that most of the teacher participants understood PBL merely by following the instruction documents distributed by MOEHE, as their definitions of PBL were partially in line with PBL principles in literature (Boss & Krauss, 2007; Hugerat, 2016; Stoller, 2006; Thomas, 2000; Helle, Tynjala & Olkinuora, 2006). Previous literature defined PBL as a student-centered instruction which happens over a long period of time, during which students select topics, solve problems, and answer authentic questions by producing a product (Hasani, Hendrayana & Senjaya, 2017, p.961).

There were five common PBL principles reported by different scholars and literatures in the field of education, these being: PBL is the core of the curriculum, students should be involved in problem solving, students should do research and construct the meaning themselves, students should work in real topics, and there should be a collaboration among students (Boss & Krauss, 2007; Hugerat, 2016; Stoller, 2006; Helle, Tynjala, & Olkinuora, 2006; Putri, Artini & Nitiasih, 2017; van Rooij, 2009).

Nevertheless, the teachers in the study only mentioned two of these, focusing on choosing authentic topics and collaboration. This limitation in understanding may be because they had no prior learning or teaching experiences, which are important for teachers to understand PBL deeply (Du & Chaaban, in press). Teachers who had

experienced PBL as learners demonstrated a deeper understanding of PBL, as well as a strong belief that PBL would be useful for students learning English. This evidenced how teachers' prior knowledge and experiences impact their understanding and beliefs (Sabah & Du, 2018).

The study results indicated that there is consistency between teachers' beliefs of good teaching, good learning, and their own roles in relation to their perception of PBL. EFL teachers believed that good teaching and learning happen when the teacher takes into consideration students' differences, and further believed that the teachers' role is that of a facilitator. This finding was addressed by previous studies asserting that the teachers' role in PBL is not one of a dominant leader, but that of an advisor, helper, and coordinator (Fragoulis & Tsiplakides, 2009).

5.2 How EFL Teachers Implement PBL in their Classrooms

In the process of changing to PBL, this study found that the reason behind teachers not understanding PBL is their lack of prior experience coupled with their limited knowledge and insufficient professional development (PD) workshops. The majority of teachers expressed their confusion in changing from the regular classes to PBL classes and complained about the short time given for achieving the whole project. Another important finding was that all participants accomplished the second principle of PBL, which is using a problem as a driven question, because this principle was stressed by the MOEHE. The findings also reported that there was some differentiation in students' collaboration levels in the three observed schools.

This study reported that teachers chose a real topic for PBL projects, a decision in line with previous studies that discussed the principles of PBL and suggested students should work on projects that reflected authentic topics (Thomas, 2000; Du & Chaaban,

in press). Simultaneously, this study suggests that there is a gap between what the MOEHE requested and the common principles of PBL, which could be a reason for teachers' misunderstanding and lack of confidence. In typical usage, PBL is not a supplementary activity to support learning but instead it should be the basis of the curriculum (Overby, 2011). However, the findings show that the practice of all the governmental schools is not in line with the theoretical framework of PBL because the method is not a part of the core of the curriculum, and as a top-down change strategy, all schools are using the same system according to MOEHE policy.

Previous studies asserted that teachers in the initial stages of implementing PBL and their thoughts of how this method aligned with their existing teaching is weak (Rogers et al., 2011). Relating to this study, most of the EFL teachers emphasized that their experience in and knowledge about implementing PBL was insufficient and they were not well prepared for such a change, especially for the first-time experience.

This study indicated that although some teachers in case C had some background and experience in PBL as learners, they reported some challenges in the process of implementation. It was clear from the findings that most of the teachers in cases A and B did not have teaching experiences for this approach and therefore they faced difficulty. This could be related to the study by Grant (2002), who reported that implementing PBL within the classroom may be difficult for experienced teachers and even more problematic for novice teachers.

5.3 Challenges the EFL Teachers Confronted

PBL implementation is challenging for teachers, as it requires making changes to all aspects of teaching: learning process, teaching strategies, teachers' role, and students' role (Fleming, 2000). In this study, a list of challenges was identified in the initial process of implementing PBL.

At the micro level, teachers were challenged by lacking an understanding of PBL, and this resulted in them lacking the skills for PBL as well; this lack was due to insufficient PBL workshops and negatively affected their confidence levels. In studies examining the importance of PD (Ravitz, Hixson, English, & Mergendoller, 2012), it was demonstrated that teachers who practice PBL and received extended professional development activities have more skills of $21^{st}$ century teaching and assessment.

At the messo level, teachers were challenged in terms of collaboration in all 3 cases. The findings revealed that most of the teachers in case A and case B worked individually, without colleague sharing and support; for case C, however, teachers were more collaborative, sharing ideas, assessing each other, and commenting on each other's work. A great deal of literature has covered the importance of collegial support and collaboration when implementing PBL, as a previous study of PBL indicated that collaboration is one of its cornerstone components, and in the modern view of learning, there is more attention paid to the learning environment and the notion of collaborative work (McGrath, 2004). This is in line with previous studies arguing that one of the challenges of teachers' implementation of PBL is the incorporation with the partnership community and having sufficient time to work together before the beginning of PBL lessons (Lee, Blackwell, Drake, & Moran, 2014).

At the macro level, teachers reported different challenges in the process of implementing PBL. One of these was facing difficulty in time management in accomplishing PBL projects in only two sessions. Previous scholars defined PBL as a project happening over an extended period of time, wherein students go through the steps of PBL and reach the outcomes (Hasani, Hendrayana & Senjaya, 2017; Wurdinger, 2016). Another challenge identified by the EFL teachers was the lack of materials and classroom computers. This issue has precedent, as it is not the first time that PBL took hold in a scenario with inadequate material resources, insufficient time to create new curricula, and large class sizes (Barron, et al. 1998).

The findings further revealed that teachers were concerned with the workload and increased responsibilities and confused because of the great pressure on them. Previous studies found that increasing workload can result in increasing teachers' stress and lead to low job satisfaction (Timperley & Robinson, 2000). One possible reason for the perceived increase in workload in this study could be that teachers are still in the initial stages and lack the experience and content knowledge needed for PBL.

The findings in this study demonstrate that there are some differences in the 3 cases in terms of collaboration, colleague support, and school support. It found that cases A and B have less teamwork between the teachers. Most of the teachers worked individually without sharing and taking notes or comments for improvement from other teachers. However, in case C, the group of EFL teachers had a very strong relationship and assisted each other in achieving PBL successfully according to their students' levels. The school environment encouraged teachers' negotiation, discussion, and sharing knowledge.

5.4 What Kinds of Support Are Needed for Teachers to Implement PBL Successfully

A list of teachers' suggestions for successful PBL implementation was provided in Chapter 4.

On the micro level, teachers suggested that for better implementation, they need more training programs on PBL, more classes should be given to meet the goal, and co-teachers should be present, so they can help each other. On the mezzo level, teachers believed that sharing one PBL project for different subjects is better in terms of saving time, enhancing collaboration between teachers and sharing experiences from others' work. On the macro level, it was suggested that it is important for teachers to be involved with the MOEHE changes and share their ideas and opinions on the same. Also, it was suggested that PBL should not be implemented at the primary level.

Suggestions from the teacher participants in this study are also in line with the literature. According to a previous study, successful PBL requires 1) professional development (PD) support, 2) classroom support involving technology and curriculum, and 3) collaboration from the school crew (Rogers et al., 2011). Therefore, previous scholars and studies in this area have provided many suggestions for establishing functional PD programs for teachers (Bellibas & Gumus, 2016). Other studies of PD programs also assert that there is a causal relationship between teacher PD programs and student achievement (Taylor, Roth, Wilson, Stuhlsatz, & Tipton, 2017). In this respect, PD activities can familiarize teachers with the newly required changes in their role(s) during educational reforms and acquaint them with methods of implementation. This is crucial, as PD is considered an essential process by which teachers can enhance their content knowledge and instructional practices (Bellibas & Gumus, 2016).

The teachers, as mentioned, also have the need of support in terms of time limitation. Teachers indicated that they had difficulties in managing the time because they were only provided with two PBL sessions in which to finish the whole project with students, meaning they did not have time to follow up with their students during the process and therefore could not conduct the teaching and learning process as intended. This is in line with findings in previous literature and studies on PBL implementation; as Heckendorn (2002) discussed, projects in PBL require much longer time to prepare, and they are complex in implementation. Other scholars also highlighted that the amount of project time should be adjusted so that students can concentrate on all steps of a project (Hugerat, 2016).

Previous studies asserted that a top-down approach would leave the teachers feeling that they are not part of the program, while adopting a bottom-up approach which started from the teachers' view (Gemeda & Tynjälä, 2015). The current study supports the teachers' suggestion that teachers' involvement in the educational process will benefit the process as a whole.

There was no previous literature that considered participants' suggestions of integrating a PBL project with more than one subject and restricting PBL to students at secondary and high levels.

A review of the research literature that deals with teachers' collaboration identified challenges in the process of implementing PBL, such as ensuring colleagues' collaboration, which is considered important for teachers' improvement and school development (Forte & Flores, 2014). When teachers help and share experiences together, this can enhance their teaching methods and create good relationships with other teachers. Other scholars focused on the advantages of

collaboration among teachers by reporting that collaborative learning among teachers leads to changes in their pedagogic perceptions, improvements in their teaching methods, and work relationships among colleagues (Shagrir, 2017)

In this study, schools were asked to do teamwork in PBL classes, but teachers were not doing real collaboration; they were merely putting things together. It begs the question of how they are to teach students to collaborate when they do not do so themselves. While students did do some group work, true collaboration goes beyond this to encompass exploring things, negotiation, compromise, and making accomplishments together. The characteristic of cooperation is work being divided among participants, while collaboration requires solving a problem or constructing shared outcomes at the same time (Helle, Tynjala & Olkinuora, 2006). The study also shows that most of the teachers were impacted by the lack of facilities and resources that are necessary for PBL implementation, such as classroom size and equipment.

In terms of the collaboration culture, there are some differences identified among the schools, with school C displaying stronger relationships and professional cooperation. Although it was their first time undertaking the process of implementing PBL, teachers in this school shared knowledge and experiences, and they had a supportive environment backed by school leaders' encouragement. The teachers in case C did not refuse to employ or complain about the PBL instructional method; instead, they accepted it and tried happily. There was less struggling with the new process than in the other cases.

One important note that emerged in this study is that school culture plays a critical role and helps in supporting PBL implementation. The results from the qualitative analysis clarified that school environment and the sense of collaboration it

can create can increase the quality of any task and help teachers face any challenge. As long as teachers share and exchange their experiences, this will help them in their professional development and performance, as demonstrated by school C.

The former challenges may have come about because PBL implementation is still in the initial stages in schools. On one hand, the preparation of implementation for this approach is different from school to school. For example, school A and school B received an introductory workshop for PBL that was short and theoretical. This is may be a reason for their encountering challenges and confusion during the project. School C, however, had a workshop focused more on practical applications and trying the approach in front of other colleagues. They managed to meet weekly in order to prepare well and choose the most suitable topics, which they modified according to students' ability.

5.5 Recommendations

Based on the current study, to better support the teachers' successful implementation of PBL in Qatar, the following recommendations are provided:

First, in any educational reform or change in instructional method, it is important to prepare the teachers well by providing sufficient workshops and training, because the professional development of teachers is essential to crafting effective schools and improving learners' performance (Steyn & Van Niekerk, 2005). Therefore, teachers need to fully understand the PBL strategy.

Second, Training-of-trainers approach is not suitable for the Qatari context. Participants/ teachers should accomplish an adequate level of expertise in both concepts and techniques involved in the training to have the ability and the confidence to train their colleague effectively (Ray, Wilson, Wandersman, Meyers,

& Katz, 2012). However, with only training within 2 days' workshop this is unachievable, instead all teachers should have the opportunity to be trained to make sure all of them in the same level.

Third, collaboration between teachers encourages effective PBL, and when teachers help each other in both planning and teaching, they are much better prepared to meet the needs of students with different backgrounds (Chu, 2009).

Fourth, teachers' participation in decision-making is very beneficial in order for them to feel encouraged and willing to practice the reforms, as emphasized by previous study that "the quality of an education system cannot exceed the quality of its teachers" (Bellibas & Gumus, 2016, p.2).

Fifth, it has been argued that the professional sector should have the responsibility of the actual practice of the reform, while the government's role should be limited to establishing a reform framework by creating standards (Van Driel, Beijaard, & Verloop, 2001). This can be regarded as a recommendation for the educational system in Qatar.

## 5.6 Conclusion

The current study aimed to investigate EFL teachers' understanding of PBL, their implementation thereof, and the challenges they faced in the initial stages of the educational change strategy. The results of the study showed that most of the EFL teachers in Qatari governmental primary schools lacked an understanding of what PBL means. Throughout the study, there were a number of challenges EFL teachers faced in the implementation of PBL, leading to a list of recommendations being made for maximizing its effectiveness. The limitations of this study relate to

the short time of PBL implementation, as it was in the initial stages, and the data

being generated by a small number of EFL teachers.

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# APPENDICES

## Appendix A: Ministry of Education and Higher Education Approval



تسهيل مهمة القائم بالبحث الميداني في المدارس

السيد : مدير المدرسة        المحترم

السلام عليكم ورحمة الله وبركاته

نود إحاطتكم علما بأن الباحث / الباحثون المذكورة أسماءهم أدناه ، بصدد إجراء دراسة ميدانية في مدرستكم وبياناتهم كالتالي :

اسم الباحث : الطالبة ياسمين محمد و د. سيانغيون دو

جهة البحث : جامعة قطر

عنوان البحث : English Foreigh Language (EFL) Teachers' Perspectives of Professional Development (PD) for Implementation Project Based Learning (PBL) in Qatar Governmental Schools

هدف البحث : مدى استعداد معلمو اللغة الانجليزية في تطبيق منهجية التعلم القائم على المشاريع والتي تم طرحها مؤخرا ضمن المشاريع الجديدة للعام الدراسي 2017-2018 في المدارس الحكومية في دولة قطر.

عينة البحث : معلمو اللغة الانجليزية للمرحلة الابتدائية في المدارس الحكومية.

عليه ، يرجى التكرم بتسهيل مهمة الباحث ، علما بأن البيانات ستكون سرية ولأغراض البحث العلمي..

مع شكرنا لحسن تعاونكم معنا

د. عزيزة أحمد السعدي

مدير إدارة السياسات والأبحاث التربوية

Appendix B: Qatar University Institutional Review Board

**Qatar University Institutional Review Board**
**QU-IRB**

November 8, 2017

Ms. Yasmeen M. S. Almarbrd
Graduate Student
College of Education
Qatar University
Tel.: +974 74740099
Email: ya1000809@qu.edu.qa

Dear Ms. Yasmeen Almabrd,

Sub.: Research Ethics Review Exemption / Graduate Student Project
Ref.: Project titled, "English Foreign Language (EFL) Teachers' Perspectives of Professional Development (PD) for Implementing Project Based Learning (PBL) in Qatar Governmental Schools"

We would like to inform you that your application along with the supporting documents provided for the above proposal, is reviewed and having met all the requirements, has been exempted from the full ethics review.

Please note that any changes/modification or additions to the original submitted protocol should be reported to the committee to seek approval prior to continuation.

Your Research Ethics Approval No. is: **QU-IRB 842-E/17**

Kindly refer to this number in all your future correspondence pertaining to this project.

Best wishes,

Dr. Khalid Al-Ali
Chairperson, QU-IRB

Institutional Review Board
(IRB)
Office Of Academic Research
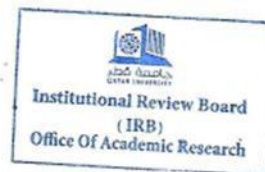
Qatar University-Institutional Review Board (QU-IRB), P.O. Box 2713 Doha, Qatar
Tel +974 4403-5307 (GMT +3hrs) email: QU-IRB@qu.edu.qa

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Appendix C: Samples of Interview Questions:

1) Could you please tell me something about your background? For example, Educational background, past teaching experiences, how many years have you lived in Qatar? How long have been working in Qatari schools and the current schools?

2) Have you experienced PBL as a student? How about teaching using PBL method before?

3) How would you define PBL?

4) How do you perceive the implementation of PBL in terms of leading to good teaching and learning in Qatar?

5) Could you please describe the PBL sessions you have implemented? Including the choice of topics, materials and how it has worked as expected?

6) What are the major challenges you have faced in the process? What could be the potential reasons?

7) What kind of knowledge, skills and competences are needed as a teacher to implement PBL?

8) In your opinion, what kind of professional development support are needed? And what have you received so far?

9) What would be your feedbacks and suggestions for better implementation of PBL approach in primary schools?

10)Anything else you would like to address?

Appendix D: Sample of PBL Lesson Plan:

**7-PBL Overview**

## Sample PBL Overview /for the teacher

| 1. Name of Project: | | 2. Duration: | |
|---|---|---|---|
| 3. Subject/Course: | English | 4. Grade level: | 4 |
| 5. other subject areas to be included: | | | |
| 6. Project Idea<br>Summary of the issue, challenge, investigation, scenario, or problem:<br><br>What do you want the students to KNOW, UNDERSTAND AND DO? Please write these three separate statements. | • I want the students to KNOW the definition of ………………………………………….<br>• I want the students to UNDERSTAND how …………………………….<br>• I want the students to DO a summative project to demonstrate their learning. They will collaborate to create a visual representation of their learning (poster, diorama, play). | | |
| 7. Driving Question | Refer to the sample provided in the PBL document. | | |
| 8. Essential Questions-<br>Sub-questions that derive from the Driving Question | | | |

| 9. Content Standards related to MODULE 5 in the core | | | | |
|---|---|---|---|---|
| 10. Include Educational Technology tools and websites | | | | |
| 11. 21st Century Skills to be taught and assessed: | Collaboration | | Other: | |
| | Communication (Oral Presentation) | | | |
| | Critical Thinking/Problem Solving | | | |
| 12. Major Products & Performances | Group: | Groups will complete a final project such as a play, poster or diorama. They will present this to the class. | 13. Presentation Audience | |
| | | | | Class |
| | | | | School |
| | | | | Community |
| | Individual : | | | Experts |
| | | | | Web |
| | | | | Other: |
| 14. Entry Event to launch inquiry, engage students:<br>(How will you introduce the topic?)<br>students:<br>(How will you introduce the topic?) | Refer back to step 1 'setting the stage' | | | |
| 15. Assessments | Formative Assessment | | Practice Presentations | | Concept Maps | |
| | | | Journal/Learning Log | | Notes | |

| | | Drafts | | Checklists | | |
|---|---|---|---|---|---|---|
| | | Other: | | | | |
| | **Summative Assessments (End of Project)** | Written Product(s), with rubric: | | Other Product(s) or Performance(s), with rubric: | | |
| | | Oral Presentation, with rubric | | Peer Evaluation | | |
| | | Self-Evaluation | | Other: | | |
| **16. Resources Needed** | On-site people, facilities: | Computer lab coordinator, parent volunteers, | | | | |
| | Equipment: | Computers, Smart board, | | | | |
| | Materials: | Library/Lab access, classroom supplies ……………………………………. | | | | |
| | Community resources: | Nutritionist, health centers,……………. | | | | |
| **17. Reflection Methods** | (Individual, Group, and/or Whole Class) | Journal/Learning Log | | Focus Group | | |
| | | Whole-Class Discussion | | Fishbowl Discussion | | |
| | | Survey | | Other: | | |