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The Effectiveness of Project-Based Learning on Students Achievement and Motivation

Towards English in an EFL Environment

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Dedication

To my beloved parents, who raised me to believe that anything is possible, to my dearest husband, who encouraged me to go on every adventure, especially this one, to my adorable daughter and sons, whose love gave me the strength to achieve my goal, to my amazing brother and sisters, who supported me until the completion of this research, and to my friends, colleagues, relatives and students,

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Abstract

This study aims to detect the effects of Project-Based Learning (PBL) on students' academic achievement and motivation towards English in an English as a Foreign Language (EFL) environment. The Ministry of Education in Palestine has asked teachers to implement this new method of teaching and learning in their classrooms. Moreover, supervisors claim that PBL has the power to improve students' achievement, attitude, motivation, critical thinking, self-confidence, and active learning as students investigate real-world issues in a collaborative environment. This is a mixed research study utilizing both qualitative and quantitative instruments to collect the research data. Totally 69 students in two different classes in the ninth grade of Ibrahim Abu-Dabat Secondary Girls School participated in the study. In the quantitative phase, a pre-and post-test control group experimental design was used to find the effect of PBL on the students' achievement. In the qualitative phase, two semi-structured interviews were used to assess students' motivation towards English lessons and to investigate the challenges that teachers and students face while implementing PBL. Surprisingly, the results showed that there is no statistically significant difference between the achievement scores of the experimental group and the control group. However, the results indicated that the experimental group students outperformed the control group students in reading and writing skills. In addition, the interview results revealed that the use of PBL affects students' engagement in a positive way and improves their motivation towards learning English. Furthermore, few challenges were also reported to provide sufficient information about the difficulties that teachers and students may encounter while using PBL. The study concluded that PBL could be an effective means of teaching English as a foreign language.

Abstract in Arabic

ملخّص الدّراسة

تأثير التّعلم بالمشاريع على مستوى التّحصيل و الدّافعية لدى الطّلبة

في البلاد غير النّاطقة باللّغة الإنجليزيّة

يعدّ التّعلّم عن طريق المشاريع طريقة جديدة ومبتكرة للتّعلّم والتّعليم، وقد أصدرت وزارة التّربية والتّعليم الفلسطينيّة قرارًا بإلزام المعلمين جميعهم تطبيق هذه النَّظريَّة التَّعليميَّة الجديدة في الصَّفوف التي يدرَّسونها، ويزعم المشرفون التّربويّون أن التّعلّم عن طريق المشاريع يرفع المستوى الأكاديميّ للطّلّاب، ويحسّن دافعيّتهم تجاه العمليّة التّعليميّة، كما يعزّز التّفكير النّاقد، والثّقة بالنّفس، والتّعلّم الفاعل؛ عن طريق دمج الطّلبة في مواقف واقعيّة أقرب للحقيقة في جوّ تعاونيّ ضمن مجموعات؛ لذلك هدفت هذه الدّراسة إلى قياس تأثير التّعلّم بالمشاريع على المستوى الأكاديميّ للطّلبة، ومدى دافعيّتهم لتعلّم اللّغة الإنجليزيّة في البلاد غير النّاطقة بها. تكوّنت عيّنة الدّراسة من تسع وستّين طالبة من الصّفّ التاسع المكوّن من شعبتي "أ" و "ب" في مدرسة إبراهيم أبو الضّبعات الثّانويّة للبنات، وقد استُخدِم أسلوبان مختلفان لجمع المعلومات: الأسلوب الكمّي، والأسلوب النّوعيّ؛ ففي مرحلة الدّرس الكمّيّ تمّ تطبيق امتحان قبليّ و آخر بعديّ على المجموعتين التّجريبيّة والضّابطة؛ لقياس مدى تأثير استخدام التّعلّم بالمشاريع على مستوى التّحصيل الأكاديميّ للطّلاب، أمًا في مرحلة الدّرس النّوعيّ، فقد أُجرِيت مقابلات مع عدد من المعلمين ومعظم طلّاب المجموعة التجريبيّة لقياس مدى تأثير التعلّم بالمشاريع على مستوى الدّافعيّة لدى الطّلبة لتعلّم اللّغة الإنجليزيّة، ولتحديد التّحدّيات الّتي تواجه المعلّمين والطُّلبة خلال استخدام التَّعلُّم بالمشاريع، وعلى عكس التَّوقُّعات لم تثبت نتائج هذه الدّراسة وجود تحسّن واضح على المستوى الأكاديميّ العام للطّلبة من النّاحية الإحصائيّة، لكنّها أكّدت على وجود تحسّن ملحوظ على مستواهم الأكاديمّي في مهارتي القراءة والكتابة و زيادة الدافعية لديهم نحو التعلم. من ناحية أخرى عرضت الدّراسة عددًا من التّحدّيات والصّعوبات الّتي تواجه معلّمي اللّغة الإنجليزيّة والطّلّاب خلال تطبيق تعلّم الإنجليزيّة بالمشاريع، وقد خلصت الدّراسة إلى أنّ التّعلم بالمشاريع يعدّ طريقة فعّالة و ناجحة في تعليم اللّغة الإنجليزيّة في البلاد غير النّاطقة بها

Chapter one

Introduction

1.1 Introduction

Foreign language teaching methodology has been changing over the years; however, there is no single best method to use. The best language teaching method depends on several factors such as: learner styles, contexts, learning processes, teacher competencies and the goals of learning (Brown, 2000). Unfortunately, the previous English curriculum at Palestinian government schools used to be teacher-centered where students are treated as passive learners. Students used to depend on their teachers who teach passages, direct activities, and prepare tests. As a result, students develop a low level of proficiency. They lack critical thinking skills, motivation, self-confidence, and the ability to speak in English. To overcome these obstacles and improve the students' level of proficiency, it is essential to make a well planned curriculum that answers the following these key questions successfully: What to teach? Why to teach it? when to teach it? And how? Moreover, knowing how to teach the course, which is known traditionally as "methodology", is fundamental to reach the desired goals.

Using the suitable curriculum and methodology is essential to improve the educational process. "With the development of communicative approaches in language teaching, the traditional distinction between syllabus design and methodology has become difficult to sustain" (Nunan, 1991, p. 2). Therefore, The Ministry of Education in Palestine has taken many significant steps to reform both syllabus and methodology at the same time. It has started by making a totally new curriculum based on the communicative approach which focuses on the significance of moving beyond the teaching of grammatical rules and vocabulary to the point that students are being taught to use the language in a meaningful way (Brown, 2000). The Ministry of Education has also emphasized the importance of using new

methods which enhance student-centered learning, critical thinking, problem solving and selfconfidence.

Project-Based Learning (PBL) is viewed by many researchers as the suitable solution for most of the learning obstacles. It is seen as " a method which is based on scientific principles, encourages students to discovery learning and enhances metacognitive strategies about the quality of life, results in realistic products following the authentic questions and topics" (Ilter, 2014, p. 488). Educators look at PBL as a teaching method that can be used with almost all students despite their levels of proficiency, classes and abilities (Stoller, 1997). Several previous studies (Gultekin, 2005; Simpson, 2011; and Bas, 2011) presented the important role of PBL in improving students' academic achievement and motivation. For example, Gultekin (2005) investigated the effects of PBL on fifth grade students' learning outcomes. In addition to students' happiness during the learning process, he found that PBL also improves their academic success. Similarity, Bas (2011) investigated the effects of PBL on students' academic achievement and attitudes towards English lessons. It was found out that the use of PBL has a positive effect on students' academic achievement and attitudes. Furthermore, Simpson (2011) examined whether PBL can enhance Thai university students' English language proficiency, their learning skills and self-confidence. The study showed that PBL can be an effective means of teaching English as a foreign language.

Therefore, at the beginning of the first semester (2014-2015), the Ministry of Education in Palestine has started implementing Project-Based Learning at schools with the assumption that it is an effective way to teach and learn English as a foreign language. Supervisors claim that PBL has the power to improve students' achievement, attitude, motivation, critical thinking, and self-confidence. It may also enhance active learning as students investigate real-world issues in a collaborative environment. However, there has

been no real experiment to prove the efficiency of using PBL in Palestinian schools. "Theory remains abstract and relatively powerless without its application to the practical concerns of pedagogy in the classroom" (Brown, 2000, p. 14). Therefore, this experimental study investigates whether PBL affects the Palestinian students' achievement and motivation positively or not. It also aims at finding out the challenges that teachers and students encounter while implementing PBL.

In order to achieve these goals, both qualitative and quantitative research methods were used. In the quantitative aspect of the study, the pre-and post-test control group design were used to find out the effect of PBL on the students' achievement level. The empirical part of the study lasted for nearly four months. Sixty nine students participated in this study. Students in the experimental group were divided into six groups. Each group did 9 projects with a total number of sixty-three projects that were presented. In the qualitative part of the study, ten EFL experienced teachers from different Hebron schools were interviewed to collect information about the challenges that face teachers while using PBL and to express their point of view about its effectiveness. Moreover, most of the students in the experimental group, 25 students, were interviewed to find out the effect of PBL on students' motivation level and to collect more information about the affective dimension of implementing it. Furthermore, sufficient information about the challenges that encounter students while using PBL was collected from their responses to the interview questions.

This thesis is organized into five chapters which are briefly described below. In Chapter One the researcher gives a brief introduction about the educational setting in Palestine, PBL and the research methodology. After that the researcher introduces the statement of the problem, significance of the study, objectives of the study, the research questions, the hypotheses, the limitations of the study and definition of key terms. Chapter

Two is devoted to review the literature of research related to the use of PBL in education. It provides information about the theoretical background of PBL and its history, definitions, types, features, steps, benefits, and challenges. Chapter Three describes the research design and the methodology employed for carrying out the study. It provides detailed information about the participants, the instruments used for collecting the data, and finally data analysis techniques. Chapter Four presents the findings and the discussion of the post-test and interview results. Chapter Five presents the conclusion of the study and recommendations for teachers, the Ministry of Education and researchers.

1.2 Statement of the Problem

The same as foreign language learners in non-English speaking countries, Palestinian students face several problems in learning English which cause their low level of proficiency. It has been generally well-known that there are several reasons that influence their poor English performance, such as crowded classes, insufficient time, unqualified teachers, students lack of confidence and motivation, the use of inappropriate curriculum and methodology, and the absence of practicing English outside the classroom. Therefore, the Ministry of Education in Palestine has required teachers to implement PBL as a new method of teaching and learning which supposedly may solve most of the problems encountered by teachers and students. Unfortunately, the Ministry of Education has not provided teachers with sufficient training to enable them implement this method successfully or explanation about its application and effectiveness. As a result, detecting the effects of PBL on the learning process and widening teachers' awareness about the effective way of implementing it and the challenges that both teachers and students may encounter become urgent.

1.3 Significance of the Study

There are several studies that explain the advantages of using Project-Based Learning in educational settings (Meyer, 1997; Ilter, 2014; Eskrootchi and Oskrochi, 2010; Bagheri et al., 2013; Yam & Rossini, 2010; Gultekin, 2005; and Abdul-Rahman et al, 2009). However, only a few of them have focused on PBL in English language teaching (Bas, 2011., Simpson, 2011; Bas and Beyhan, 2010; & Nassir, 2014). Therefore, this study is expected to assess and evaluate the effectiveness of PBL on students' academic achievement and motivation in EFL contexts as there are few studies tackling this issue. Moreover, it will provide teachers with guidelines for implementing PBL and increase their awareness about the challenges that teachers and students may face while using PBL in teaching English. Furthermore, it will lead to practical recommendations for the ministry of education and teachers to improve the educational setting.

1.4 Objectives of the Study

- 1 To investigate the extent to which the use of PBL improves students English achievement.
- 2 To provide teachers with sufficient information about using PBL and the challenges that encounter students and teachers while implementing PBL.
- 3 To find out the effects of using such a method on students' motivation.

1.5 Research Questions

- 1 Is there a significant difference between the achievement levels of students in the experimental group and students in the control group in terms of the usage of Project-Based Learning?
- 2 What is the effect of Project-Based Learning on students' motivation?

3 – What are the challenges that may face both teachers and students while implementing Project-Based Learning method?

1.6 Hypotheses

- 1. There is a significant difference between the achievement levels of students in the experimental group and students in the control group in terms of the use of Project-Based Learning method.
- 2. Project-Based Learning is a useful pedagogical method for increasing students' motivation.
- 3. Teachers and students face several challenges while implementing Project-Based Learning.

1.7 Limitations of the study

This research faces several limitations that hinder this study to be generalized. For one thing, this study is limited in its place and sample. The study has been conducted at just one Government Palestinian School at Hebron (Ibrahim Abu Al-Dabat) and only Ninth Grade students are involved in the sample of this study. Another thing, time is considered as one of the main limitations of this study as the practical section of this study lasts for just one semester. Finally, this study is restricted to investigate the effects of PBL on students' achievement and motivation neglecting other variables such as critical thinking, self-confidence, and attitude.

1.8 Definitions of key terms

Project-Based Learning: "It is a student-centred instructional approach used to promote active and deep learning by involving students in investigating real-world issues in a collaborative environment" (Yam & Rossini, 2010, p. 1).

Effectiveness: "An output of specific review/analyses that measure the quality of the achievement of a specific educational goal or the degree to which a higher education institution can be expected to achieve specific requirements" (Vlăsceanu, Grünberg, & Pârlea, 2004, p. 36)

Motivation: "It refers to reasons that underlie behavior that is characterized by willingness and volition. Intrinsic motivation is animated by personal enjoyment, interest, or pleasure, whereas extrinsic motivation is governed by reinforcement contingencies. Motivation involves a constellation of closely related beliefs, perceptions, values, interests, and actions" (Lai, 2011, p. 2).

Academic achievement: "It refers to a student's performance in academic areas such as reading, language arts, math, science and history as measured by achievement tests.......

Academic achievement also depends on a child's circumstances and situations, the quality of schools and teachers, and many other factors" (Cunningham, 2012, p. 1)

English as a Foreign Language (EFL) environments: "It refers to English learning in schools, colleges and universities around the world in non-English speaking countries" (Mitchell, 2016, para. 12)

Constructivist: "It refers to the idea that learners construct knowledge for themselves- each learner individually and socially constructs meaning as he or she learns. Constructing meaning is learning; there is no other kind." (Hein, 1991, para. 2)

Chapter Two

Literature Review

2.1 Introduction

This chapter mainly deals with issues related to Project-Based Learning. It consists of nine subsections presented as follows: theoretical background of PBL, history of PBL, definitions of PBL, features of PBL, steps of PBL, types of projects, benefits of PBL in language learning, challenges in implementing PBL, and evaluation in PBL.

2.2 Theoretical Background

Several modern approaches and theories of learning and teaching, which conflict with the traditional way, have appeared to improve the educational situation. Most of them are closely related to each other and share some features and principles. The theoretical foundation of PBL is strongly connected to constructivist approach. Railsback (2002) stated that "project-based instruction strategies have their roots in the constructivist approach" (p. 6).

Constructivism is seen as a huge umbrella that takes under it several new popular theories which share its assumptions about learning and instruction such as: Case-Based Learning, Discovery Learning, Inquiry-Based Learning, Task-Based Learning and Problem-Based Learning. These theories are discussed briefly in this section.

2.2.1 Constructivist Approach

The core ideas that constructivist approach expressed are not dramatically new as they have been clearly presented by John Dewey, Lev Vygotsky, Jerome Bruner, Jean Piaget and others. However, what is new is the serious need to change the educational situation, the strong agreement on the importance of these old ideas and the increasing amount of research that supports using such innovative ideas (Hein, 1991).

Educators defined "constructivism" in different ways since its meaning varies according to one's perspective and position. However, most of them agreed that "contructivism's greatest contribution to education may be through the shift in emphasis from knowledge as a product to knowing as a process" (Jones & Brader-Araje, 2002, p. 7). Railsback (2002) expressed that learning through constructivist theory is seen as a mental construction as learners have to construct new ideas based on their previous knowledge. Therefore, it focuses on giving learners the chance to experience things and reflect on these experiences.

Moreover, as learners do not acquire knowledge mechanically, they should actively construct their own knowledge through interacting and participating in the learning environment (Liu & Matthews, 2005). One of the core ideas of constructivism is the major change in the role of both teachers and students. Constructivist teacher acts as a guide and facilitator who provides students with opportunities to test their real abilities and help them to be independent learners. In addition, constructivist students play a more active role in the learning process and accept more responsibility for their own learning (Taber, 2011).

Hein (1991) presented several principles for the constructivist approach which are seen as basis for various new popular theories. First of all, learning is an active process in which learners have to take a role, participate, experience things, reflect on those experiences and completely engage in the learning process. Moreover, separating learning from real life is the biggest mistake that some educators may fall in; learning should be contextualized to reach the optimal outcome. In addition, learning does not start from nothing; that is, building on learners previous knowledge is the key component that educators should focus on.

Furthermore, significant learning needs sufficient time. Finally, the huge effort to be spent by educators needs motivated learners in order to come up with effective learning.

2.2.2 Case-Based Learning (CBL)

The idea of Case-Based Learning depends on providing learners with the chance to build their knowledge by resolving real-life questions about a specific case. Usually these questions are open-ended and have no single right answer (D'Angelo et al., 2009). Case studies can largely develop students' problem solving and decision making skills. Moreover, it can improve their ability to analyze, synthesize, evaluate, and apply information (The Center for Teaching and Learning, 1994). Oliver (1999) metaphorized "Cases" with stories that students read or explore interactively. The similarity comes from the assumption that both cases and stories can direct students toward a conclusion and provide students with context to discuss issues dynamically.

2.2.3 Discovery Learning

Discovery Learning depends on the idea that students learn better when they discover knowledge on their own. Therefore, the role of the teacher is to provide students with problems that need exploration to solve and to guide them to develop their creativity and problem solving skills (D'Angelo et al., 2009). In addition to improving students creativity and problem solving skills, discovery learning has several advantages including: encouraging active engagement, promotes motivation, autonomy, responsibility, and independence (Pappas, 2014). Castronova (2002) summarized the differences between discovery learning and the traditional methods in these points: discovery learning is more active, it is processoriented rather than content-oriented, failure in discovery learning is seen as a positive circumstance, feedback is necessary and understanding is deeper.

2.2.4 Inquiry-Based Learning (IBL)

The English term "inquiry" requires more than simply answering questions. The underlying concept refers to a question that prompts extensive investigation, exploration,

search and study on the part of the student (Kuhlthau, 2010). "Inquiry learning requires students to determine the content, the learning process, and the assessment of learning" (D'Angelo et al., 2009, Instructional approaches with constructive design section, para. 4). Teachers' role is completely different from the traditional one as teachers have to facilitate and monitor students' learning process, assess their progress and provide them with sufficient feedback through interviews, journaling, and group discussion (Friesen & Scott, 2013).

2.2.5 Task-Based Learning (TBL)

In Task Based Learning, students have to perform a series of activities by using language as a vehicle for authentic, real world needs (Curran, Deguent, Lund, Miletto, & Straeten, 2000). Nunan (2004) defined Task-Based Learning as a

Pedagogical task is a piece of classroom work that involves learners in comprehending, manipulating, producing or interacting in the target language while their attention is focused on mobilizing their grammatical knowledge in order to express meaning, and in which the intention is to convey meaning rather than manipulate form (p.4).

Moreover, he presented several principles for TBL which make it an effective way to teach and learn language. These principles include: teaching what suits students' needs and interests, interaction in the target language is the best way to learn it, using authentic texts, emphasizing the learning process itself not only on language, students personal experience contributes to classroom learning, and connecting classroom language with language used in the real world.

2.2.6 Problem-Based Learning (PBL)

The idea of Problem-Based Learning depends on providing students with complex, authentic problems to solve. This requires students to search, analyze, and communicate to collect the needed information. By doing that, students develop their problem solving, self-

assessment and critical thinking skills (The Center for Teaching and Learning, 2001). Graaff and Kolmos (2007) implemented both Problem-Based Learning and Project-Based Learning in teaching engineering. They have argued that Problem and Project Based Learning are based on the same principles, which may be mixed and adapted in different educational contexts. According to Larmer (2014), both Problem-Based Learning and Project-Based Learning have the same acronym "PBL" and share many features such as: focusing on an open-ended question, emphasizing student independence, and building 21st century success skills such as collaboration, lifelong learning, creativity, critical thinking, problem solving, communication, and social and cultural awareness. However, they still have some differences which make them two distinct approaches. For example, Project-Based Learning includes the creation of a product or performance while in Problem-Based Learning the product may be tangible or just a proposed solution. In addition, Project-Based Learning is often multidisciplinary and longer, whereas Problem-Based Learning is more likely to be a single subject and shorter. Moreover, Schwartz (2011) presented that in Project-Based Learning students focus on a project which may or may not address a specific problem. They work on and follow the production model to reach the end product that they have in their mind. On the other hand, in Problem-Based Learning, teachers present a specific problem that students work on to find a solution by using scenarios or case studies.

2.3 History of PBL

PBL is not a new method in language teaching and learning (Blumenfeld et al, 1991). In the 5th century BC, The Chinese philosopher Confucius presented the idea of learning by doing. In his popular quote "Talk to me and I will forget, show me and I will remember, involve me and I will understand, step back and I will act" (Graaff & Kolmos, 2007, p.1), he stressed the importance of involving students and making them responsible for their learning. Later, Socrates launched a new way of learning that encourages students to learn through

questioning, inquiry, and critical thinking. Jean Piaget, who is a philosopher from Switzerland, expressed the idea that students learn better through asking questions, investigating, interacting with others, and reflecting on these experiences. His thoughts set the basis for the constructivist approach to education which is seen as the foundation of PBL theory (Boss, 2011a).

In the early 1900s, the American educator and philosopher John Dewey commented on the benefits of collaboration, hands-on, and student-centered learning. He promoted teaching strategies that engage students in learning about topics relevant to their lives (Clark, 2006). He expressed that schools should prepare students for the real life. Therefore, Dewey's laboratory school was designed to facilitate research and experimentation and to provide learners with the opportunity to create their own experience under the direction and guidance of the teacher (Flanagan, 1994). Dewey stated that the teacher's role is not to impose his\her ideas on the students, but to give a huge attention to the students everyday life, needs and interests. In addition, teachers should guide students to develop their interests and experiences. Therefore, it is essential to have teachers who are highly skilled professionals, thoroughly knowledgeable and well trained (Westbrook, 1993). "To Dewey, it was enough to get students to think, for if we once start thinking no one can guarantee where we shall come out"(Karier, 1986, p. 246).

PBL is developed by William Heard Kilpatrick, who focuses on the need to have a purposeful activity for learners (Beckett, 2006). Kilpatrick stated that learners should use language in meaningful contexts to build their background knowledge and achieve their personal growth. He recommended that projects be interdisciplinary and topics come from students' interests and need to provide learners with better and deeper understanding to the world (Wrigley, 1998). Kilpatrick expressed that education should reflect students' real life as

the best way to prepare them for future life. Moreover, he emphasized that teachers should look at students as the center of the learning process and to provide them with purposeful activities that have immediate value (Beyer, 1997).

Knoll (1997) summarized the long history of the project method into five phases. First of all, in 1590 project work began in Europe. Later, projects became a regular teaching method and transmitted to America in 1765. Subsequently, projects were used in manual training and in general public schools. After that, the project method was redefined and transmitted from America back to Europe in 1915. Finally, the project idea was rediscovered and became an international method of teaching and learning in 1965.

2.4 Definitions of PBL

PBL is a complex concept which means much more than the simple inclusion of projects into the curriculum (Stoller, 2007). As PBL has been implemented in various disciplines in the classroom, it has various definitions (Welsh, 2006). Thomas (2000) defined Project-Based Learning in a very comprehensive way which includes most of PBL features. He has stated that

Projects are complex tasks, based on challenging questions or problems, that involve students in design, problem-solving, decision making, or investigative activities; give students the opportunity to work relatively autonomously over extended periods of time; and culminate in realistic products or presentations. ...[It also] includes authentic content, authentic assessment, teacher facilitation but not direction, explicit educational goals, cooperative learning, reflection, and incorporation of adult skills (p.1).

In a simpler way, Patton and Robin (2012) expressed that "Project-Based Learning refers to students designing, planning, and carrying out an extended project that produces a publicly-exhibited output such as a product, publication, or presentation" (p. 13). Other

researchers defined PBL as a "comprehensive perspective" that engages students in the investigation of authentic problems. They practice asking questions, discussing ideas, designing plans, collecting and analyzing data, constructing final outcome, and presenting and evaluating projects (Blumenfeld et al, 1991). A similar definition is provided by Wrigley (1998), who described PBL as an authentic learning strategy which involves a group of students discussing a question or problem close to their interests, developing a response or solution, and presenting and evaluating the results.

In short, PBL is a teaching method which aims at problem solving in a collaborative environment over an extended period of time. It is a hands-on experience which starts with driving questions or problems that create activities and lead to the meaningful products at the end (Simpson, 2011). Furthermore, "the details of project work are largely dependent on contextual factors, language program objectives, and available resources" (Alan & Stoller, 2005, p. 13).

2.5 Features of PBL

The features of PBL are exhibited in a similar way by many authors. For example, Hedge (1993) introduced the features of Project-Based Learning as follows: the use of authentic materials, an emphasis on student group-centered experience and de-emphasis of teacher-directed work, the encouragement of autonomous learners, the sequence of activities over a period of time, the use of a range of skills, and activity outside the classroom in the students own time. Similarly, Dunn (2014) stated the five key features of Project-Based Learning which are: real world connection, core to learning, structured collaboration, student driven, and multifaceted assessment. In addition, Harmer (2014) revealed that Project-Based Learning features can be presented in six points which are: learning by doing, role of the

tutor as a guide, interdisciplinarity, collaboration and group work, real world problems, and an end product.

The use of authentic materials, the encouragement of cooperative learning, and the new role of students and teachers in the learning process are presented by most of educators as major features of PBL. The following is a brief explanation of these features:

The use of authentic materials: authentic activities are one of the main features of PBL as students have an opportunity to tackle real world situations while completing their projects (Larmer, 2012; and Thomas, 2000). It is assumed that authentic problems have the strength to improve students' understanding and motivate them to evaluate their ideas (Blumenfeld et al, 1991). According to Seidel (2014), making a project an authentic one is possible through meeting a real need in the world beyond the classroom, focusing on a problem, issue or topic that is relevant to students' lives, and involving tools, tasks or processes used by adults in real settings "real world, real issues, and real work." Therefore, evaluating academic materials and deciding whether they are authentic or not is absolutely essential. Larmer (2012) presented a scale for authenticity, which can be divided into three levels. First, the project is not authentic when students' work does not resemble the world outside the school like making a PowerPoint presentation on a topic they've researched. Second, the project is somewhat authentic when students are doing work simulates the world outside the school like play a role that reflects what might actually occur in the real world. Finally, the project is fully authentic when students are doing work that is real to them or has a direct impact on or use in the real world like taking an action to improve the community.

- Cooperative learning is known as one of the successful teaching strategies. Project work is seen as a "cooperative rather than competitive. Students can work on their own, in small groups, or as a class to complete a project, sharing resources, ideas, and expertise along the way" (Stoller, 1997, p.110). Cooperative learning encourages learners to learn better, increase their awareness about language, develop communicative skills, and confront the conflicts between individual and group needs (Nunan, 1992). It may also enhance learners' ability to assess their own competence and create an atmosphere of achievement (Fragoulis & Tsiplakides, 2009).
 Furthermore, it is more likely that learners in cooperative learning groups can be successful in a second or foreign language learning experience (Simpson, 2011).
 However, successful Project-Based Learning should require both student collaboration and student autonomy and independence (Alan & Stoller, 2005).
- The role of students in PBL is discussed deeply by different researchers. The student needs to be involved in three major roles: a self-directed learner who chooses the topic that is related to his experiences and interests, a team member who work collaboratively for the success of the project, and a knowledge manager who search, collect, analyze and present information (Simpson, 2011). Learners should take "responsibility for their own learning, developing autonomy and skills in learning how to learn" (Nunan, 1989, p. 80). PBL put a great deal of responsibility on students by providing them with unsupervised work time and giving them the freedom to make their own choices (Thomas, 2000). Through PBL students are expected to be in charge of their own learning, including developing their own questions, designing possible answers, testing their hypotheses, presenting their findings, and solving their own problems (Clark, 2006).

• The role of teachers in PBL is different from that in a traditional class. The teacher's role has been changed from information provider and activities organizer to a guide and facilitator (Wrigley, 1998). The teacher in PBL acts as "a cognitive and metacognitive coach by asking, monitoring, probing, managing, group regulating, keeping moving" (Abdul-Rahman, Daud, Jusoff, & Ghani, 2009, p. 142). Furthermore, teachers should adjust tasks to make them convenient, train students in using problem solving strategies, and gradually give more responsibility to the students (Blumenfeld et al. 1991). In addition, teachers should not ignore providing students with sufficient support at different stages in the project, and they have to find the appropriate balance between teacher guidance and student autonomy (Alan & Stoller, 2005)

2.6 Steps of Project-Based Learning:

The process of PBL is an ongoing process undertaken by students with support from teachers. Fragoulis and Tsiplakides (2009) and Simpson (2011) expressed that in order to implement PBL successfully in the classroom, the learner should follow these general steps:

- Starting the project: students select the topic, establish the project outline, and plan the individual's responsibilities.
- Developing the project: students search for information to answer their driven question, note down the results they achieved, problems they encounter and ways to solve them.
- Reporting to the class: students present their projects and receive feedback from other students.
- Assessing the project: individual students, a group, a teacher or an external audience can take role in evaluating the final project.

Other researchers expanded these four major stages to a more detailed steps and clarify the role of teachers and students through following these steps. For example, Stix and Hrbek (2006) provided nine steps for implementing PBL as follows: teacher provides students with samples of the project, students design their project, students discuss and search for the information needed for their project, both teacher and students negotiate the criteria for evaluating the projects, students collect the needed materials for the project, students create their projects, students prepare to present their projects, students present their projects, students evaluate the projects based on the agreed criteria. Similarly, Alan & Stoller (2005) presented ten steps for implementing PBL as follows:

Students and instructor agree on a theme for the project, students and instructor determine the final outcome of the project, students and instructor structure the project, instructor prepares students for the demands of information gathering, students gather information, instructor prepares students to compile and analyze data, students compile and analyze information, instructor prepares students for the language demands of the final activity, students present the final product, and students evaluate the project (pp. 12-13).

It is clear that PBL is a systematic methodology that could be implemented in classroom settings (Stoller, 1997). The effectiveness of this methodology comes from the successful planning for all the stages of implementing it. Therefore, Baron (2010) stated six steps for planning a successful project: developing an authentic topic that provides all students with opportunities to work, designing a comprehensive final product, involving organizations and people from the community to connect their project with the real world, identifying the major learning resources and checking their availability, careful planning to ensure that both teachers and students have enough time to do their work perfectly, and planning for the final presentation inside or outside of school.

2.7 Evaluation in PBL

PBL assessment has a wider definition as it expresses the ability to assess open-ended learning, that involves 21st century skills such as critical thinking and collaboration, as well as content mastery. Even if several schools are shifting their instructional model to PBL, most of them remain using the traditional way of assessment (Boss, 2012). Several educators argued about what the new, authentic assessment for PBL should be like, but they don't agree on a one, simple, direct way of assessment. "It seems very difficult to create a complete assessment procedure in which both [instructors and students] assessment expectations are being met. This is due to crucial contradictions in opinions about assessment in project based education" (Bergh et al., 2006, p. 346).

Educators have to think carefully about three questions before starting the assessment process. First, what to assess: in PBL it is important to give a huge attention in assessment to the final product. However, it is necessary to give an equal attention to the learning process, content mastery, participation, and presentation. Second, when to assess: evaluating students should not be delayed until the final stage of the project. Feedback should happen frequently to give students the chance to improve their work and to reach mastery learning. Third, how to assess: the way of evaluating students' progress in PBL can be formal or informal as needed. Students can get their feedback from peers, teachers, and audience. In addition, self-evaluation plays a major role in PBL assessment as it makes students think about their strengths, weaknesses, and goals for the next time (Hernandez, 2016).

The ways in which projects are assessed varied hugely across the literature. According to Boss (2012), performance-based assessments that ask students to demonstrate, apply and reflect on what they have learned is seen as the best way to assess what students can produce rather than what they can recall for a test. Barnes (2014) presented a new way of assessment

which is called SE2R "summary, explanation, redirection and resubmission". There is no room for numbers, percentages or letter grades in SE2R. Instead, it provides students with narrative feedback in order to give them the opportunity for mastery learning. This narrative feedback should include four sections. At first, teachers summarize what the student accomplished in a project. Then, a more detailed explanation is offered to outline the strength and weakness points. Next, teachers redirect students towards improving their work. Finally, giving students another chance to resubmit their work for evaluation. Moreover, Boss (2015) explained how formative assessment in PBL can empower students to learn more and experience more success. That means students can improve and refine their work before the final presentation. They benefit from the feedback that comes from teachers, peers, and experts not just at the end of the project, but also in the middle when there's time for critique, revision and reflection.

Harmer (2014) expressed several ways for assessing students' performance through PBL as follows:

- The use of multiple stages of assessment. At first, instructors meet before the final presentation to discuss and decide on a group mark. Next, based on several criteria and the students' performance over the year the instructors evaluate each student individually. Finally, both instructors and students assess the group presentation.
- Using a combination of assessment such as: a group product, a presentation and a written report.
- The use of an assessment sheet to evaluate project outputs exhibited.
- The involvement of external assessors who enrich the assessment process through following his\her own criteria.
- Using peer-observation which allows the observing students to both critique and learn from other groups.

• The use of the personal reflective report and participation in group meetings which ensure that the evaluation of project processes is taken into account.

2.8 Types of Projects

Projects can be classified in different ways according to several factors. David (2008) stated that

Projects vary greatly in the depth of the questions explored, the clarity of the learning goals, the content and structure of the activity, and guidance from the teacher. The role of projects in the overall curriculum is also open to interpretation. Projects can guide the entire curriculum or simply comprise a few scattered hands-on activities. They might be multidisciplinary or single-subject. Some are whole class, others small group, and some individual. (p. 81)

The kind of work students have to do, the final outcomes, and data collection techniques are some of the major factors that educators express in their classification. First of all, Stoller (1997) divided projects into five types according to the sources of information:

- Research projects: students collect information through library research.
- Text projects: the needed information is collected from texts such as: literature, reports, news media, video and audio material, or computer-based information.
- Correspondence projects: collecting information through communication with individuals by means of letters, faxes, phone calls, or electronic mail.
- Survey projects: collecting information by using surveys.
- Encounter projects: the needed information is gathered through face-to-face contact.

Moreover, Harmer (2014) stated three types of projects based on the type of outputs produced:

- The research project: this kind of project results in a traditional academic output such as a dissertation, literature review or research report.
- The construction project: the final outcome should be centered on the design and production of a technical product or artifact. For example, a hot air balloon system, reality TV shows, and posters.
- The real-world project: this kind of project is based on collaboration with external partners. For example, the collaboration between students and a charity to produce a video to widen people's awareness about an important issue.

Furthermore, Seif (2014) presented seven types of projects showing the students' role in each type:

- Reading/writing projects: students have to read, comprehend and interpret specific texts. Moreover, it often includes class discussions about the chosen material.
- Information-data organizing projects: students have to collect, sort and summarize
 information from multiple sources. In addition, students might synthesize, analyze or
 present information in new formats like graphs and charts.
- Major investigation projects: in this type of projects, at first, students have to select their own topic based on their interests and needs. Then, they have to search, collect, organize, analyze, and evaluate information. Finally, they have to make their conclusions and present their results.
- Design projects: students have to design, create, or invent products and objects.
- Problem solving/decision making projects: students collect and analyze all the needed information to solve complex problems or to make decisions about specific situations.

- Argumentation projects: students have to research and discuss a topic to write a
 persuasive essay which includes their point of view and reasons to support this point
 of view.
- Real world, authentic projects: in this type of projects, students conduct projects that
 have direct links to their lives or to the outside world.

2.9 Benefits of PBL in Language Learning

Project-Based Learning offers a wide range of benefits to the learning process as the traditional textbook-driven approach does not engage students in the learning process in ways that PBL does (Maltese, 2012). Researches have shown that there are many benefits for implementing PBL in a variety of educational contexts. The benefits are: enhancing academic achievement and content knowledge relevant to the course, increasing autonomous learning, gaining important life skills, developing higher order thinking skills, and increasing motivation (Simpson, 2011). Moreover, projects can adapt to different types of learners and learning situations, increase students' interest, enhance deep understanding, and improve competence in thinking (Blumenfeld et al, 1991). Furthermore, PBL encourages creativity, self-discipline, cooperation, research and study skill, and cross-curricular work (Hedge, 1993).

Harmer and Stokes (2014) divided the benefits that students gain through using PBL to three major points:

1- PBL develops skills related to professional practice. PBL provides students with meaningful opportunities to apply the skills and knowledge they acquire (Clark, 2006). It moves students from passive learning to active learning as they become curious about answers, searching for information and spending extra time on task (Wrigley, 1998). Dunn (2014) presented that PBL has the strength to make students

lifelong learners and to think before, during, and after their time in the classroom. Similarly, David (2008) and Fragoulis and Tsiplakides (2009) looked at Project-Based Learning as a preparation for future life as it improves students social, cooperative, collaboration skills and group cohesiveness. Moreover, PBL "provoke serious thinking as the students acquire and apply new knowledge in a problem-solving context (David, 2008, p. 80). In short, PBL helps students develop a wide set of skills, including: teamwork, problem solving skills, communication skills, data collection, data analysis, innovative thinking, critical thinking, project management, interpersonal skills, time management, technical skills, self-evaluation, organizational skills, giving and receiving feedback, editing skills, inquiry skills, formulating goals, aims and objectives, negotiation skills, and leadership skills (Harmer, 2014).

- 2- PBL improves academic achievement. Several educators have stated that PBL is more effective than traditional methods for teaching math, economics, language, science, and other disciplines (Buck Institute for Education, 2013). The effect of PBL on improving and fostering language appears clearly through its characteristics and stages as "Students engage in purposeful communication to complete authentic activities, they have the opportunity to use language in a relatively natural context and participate in meaningful activities which require authentic language use" (Fragoulis & Tsiplakides, 2009, p. 114). The effectiveness of using PBL on students' achievement cannot be neglected as it provides meaningful opportunities for students to apply the knowledge they acquire (Simpson, 2011).
- 3- PBL fosters less tangible qualities such as motivation and self-discipline among students. PBL is presented by many authors in second language and foreign language learning and teaching (Gerlach, 2008; Maltese, 2012; Curtis, 2001) as a powerful and motivating teaching method to develop learners' second and/or foreign language

through learning by doing. PBL allows learners to research topics that interest them which, in turn, motivates students to increase their effort to produce a meaningful outcome (Gerlach, 2008). Several educators have stated that PBL motivates students and make the subject matter more interesting such as Yam & Rossini (2010), Thomas (2000), and Welsh (2006). According to Fragoulis & Tsiplakides (2009), project work encourages motivation, engagement and enjoyment as it focuses on using authentic tasks which is more meaningful to students and increase their interest. In addition, they believe that PBL directs students towards improving and enhancing their autonomy, self-esteem, confidence and independence.

Project-Based Learning benefits are not restricted to students as it is good for teachers, too. PBL enhances professionalism and collaboration among educators and improves the relationship between students and teachers (Hosler, 2013). According to the Project Foundry organization in the USA (2016), PBL has several benefits for teachers as it allows for greater dialogue with each individual student, gives teachers crucial information about the learning habits of their class, gives teachers a chance to go beyond the classroom, and the assessment process in a Project-Based Learning gives teachers sufficient and beneficial feedback in assessing their students.

2.10 Challenges in Implementing PBL

Despite the numerous benefits of PBL approach, it presents several challenges for teachers and students. Careful planning to avoid or reduce the negative effect of these challenges is crucial to reach the optimal results.

There are various challenges that may encounter students while using PBL. Mapes (2009) stated that students may have problems with: "generating meaningful questions, managing complexity and time, transforming data, and developing logical rational to support

decisions" (p. 22). Similarly, in a study on integrating PBL into science classrooms the same challenges are found as students have had difficulty creating important scientific questions, managing time, analyzing data and developing reasons to support the conclusions (Thomas, 2000). Harmer and Stokes (2014) presented other challenges that students may face while implementing PBL:

- Group work: which is seen as the hardest challenge faced by students undertaking PBL. Students' background which focuses on individual achievement, the lack of experience and training, and the lack of understanding of the value of collaborative work make students often find group work challenging and difficult. Wrigley (1998) expressed that students who are not familiar with group work and collaborative learning environment may find difficulties learning with and from their classmates.
- Preference for traditional teaching styles: PBL, as a student-centred approach, focuses
 on changing the traditional roles of both teachers and students through putting a huge
 responsibility on the students. The new burden of responsibility makes many students
 prefer the traditional way of learning. Moreover, Alan & Stoller, (2005) presented that
 some students look at project work as a source of entertainment and thus pay little
 attention to content and language learning.
- Evaluation: students may find it challenging to deal with the totally new way of
 evaluation as they are used to a traditional assessment system where grades
 correspond to correct answers given.
- Weight of work: The demanding workload for students through adapting PBL is completely increased. This challenges students as they have to work harder and to rearrange their life to have extra time for working on their projects.

Educators stated several challenges that face teachers while implementing PBL. Implementing PBL requires several changes in teachers' way of thinking about classroom structures and activities which is not easy to achieve (Blumenfeld et al, 1991). Marx, Blumenfeld, Krajcik, & Soloway (as cited in Thomas, 2000) mentioned four difficulties encountered by teachers. First, PBL requires more planning time and classroom time than typical lessons. Second, classroom management as teachers must balance student autonomy with order. Third, teachers need to focus on helping and supporting the students to construct their own knowledge rather than teach single subjects. Finally, PBL requires alternative forms of evaluating the student's knowledge. Clark (2006) presented that many teachers believe that project approach is a complex way of teaching as there is no single way to incorporate it into a curriculum and the absence of specific directions to use such as a teacher's manual or a guide for writing lesson plans. According to a study on integrating PBL into an English language tourism classroom in a Thai University, teacher workload was found to be the most difficult challenge of implementing PBL because of passive learners and the complexity of the process (Simpson, 2011). Furthermore, teachers cannot guarantee students commitment while working within groups. In an EFL class in a Japanese university, students have used their native language instead of the target language while creating magazine projects. This hinders their engagement in real communication in English (Eguchi and Eguchi, 2006).

Harmer and Stokes (2014) summarized the challenges that face teachers while implementing PBL in two major important points. First, the new role of the teacher. Many teachers resist their new role in the learning process. They struggle with the shift from being an information provider to a facilitator. Moreover, some teachers look at PBL as a mere change in the learning style rather than a new approach and philosophy. Therefore, teachers need intensive training and clear guidelines on how to implement this new approach

effectively, how to choose the appropriate methods of assessment, and how much scaffolding to provide. Second, time and resources needed is another significant challenge that faces teachers while using PBL. PBL can demand significant amounts of time from teachers in terms of identifying and developing appropriate projects, designing and supporting activities, observing the students' work, and using a combination of assessment. Furthermore, teachers suffer from the lack of available resources as it is essential to have sufficient materials and equipment to learn through projects.

2.11 Conclusion

To summarize, PBL is seen in the related literature as a beneficial way of teaching and learning as it motivates students, supports self-directed learning, develops lifelong learning strategies, and encourages collaborative teamwork. However, teachers need to carefully design and implement it as there are several challenges that encounter both teachers and students while implementing it. This chapter presents reasonable information about PBL through introducing its theoretical background, its history, definitions, features, and benefits. Moreover, the correct steps of implementing PBL, the different types of projects, and the assessment strategy are also discussed in this section. Eventually, the challenges that encounter teachers and students while implementing PBL are stated clearly.

Chapter Three

Methodology

3.1 Introduction

Many previous studies (Gultekin, 2005; Simpson, 2011; Bas and Beyhan, 2010; Nassir, 2014; and Bas, 2011) are carried out by comparing Project-Based Learning with traditional methods. However, this study focuses on the effects of Project-Based Learning with comparison to students' textbook activities and instructions in the Palestinian new curriculum "English for Palestine" which is seen as a mixture of communicative activities and skill work.

This chapter describes the methodology of this research. The first section describes the sample. The second section describes the instruments used in carrying out the study and data collection in addition to the validity and reliability of the tests. The third section describes the procedures and the material used in conducting the study. Finally, the fourth section describes how the data are analyzed.

In this study, both qualitative and quantitative research methods were used. In the quantitative aspect of the study, the pre-and post-test control group design was used to find out the effect of PBL on the students' achievement level. The researcher followed the true-experimental design which is the most highly recommended design for experimentation in education. According to Nelson, Morgan, and Marchand-Marlella (2013), "true experimental designs include clear procedures for addressing each of the first three key design features, including the random selection of participants from a population, the inclusion of a control group, and the equivalence of the experimental and control groups"(p. 136). In the qualitative part of the study, a few English teachers from several Hebron public schools and most of the experimental group students were interviewed to find out the effect of PBL on students' motivation and to point out the challenges that encounter both while implementing Project-Based Learning.

3.2 Participants

The sample of the study consists of 69 EFL ninth grade students whose native language is Arabic. They are all about 15 years old who have started studying English in their first grade. Two classes, 9-A and 9-B, from Ibrahim Abu Dabat Secondary School for Girls are selected as participants in this study. There are 34 students in 9-A class and 35 students in 9-B class. The academic achievement level of these two classes is understood to be similar according to their scores in English in the previous year. Randomly, one group (9-B class) is assigned to the experimental group, while the other (9-A class) forms the control group of the study. Table 1 shows the distribution of the participants according to their group and grade.

Table 1: The Sample's Distribution

Grade	Group	Count
Ninth Grade A	Control group	34
Ninth Grade B	Experimental group	35
TOTAL		69

In addition, 10 teachers, seven females and three males, from different Hebron public schools and 25 students from the experimental group are chosen randomly to be interviewed. Five of the teachers are specialized in English Literature, four of them are specialized in English teaching methods, and another one is specialized in English minor French. Most of them have more than 10 years of teaching experience. Moreover, two of them have obtained a master degree in applied linguistics and teaching English. Table 2 shows the distribution of the teachers according to the years of experience, gender, specific area of specialization, and qualification.

Table 2: The Teachers' Distribution

Sp	Specific area of		Gender Years of experience		rience	Qualification			
sı	pecializatio	n							
English	English	English	Male	Female	Five	Ten to	More	BA	MA
literature	teaching	minor			to	fifteen	than		
	methods	French			nine		sixteen		
5	4	1	3	7	3	6	1	8	2
Total	10		1	0 10 10		10		0	

3.3 Data collection

The data were collected through using two different instruments. In the quantitative phase, pre-and post-test was used to collect data about the students' achievement level. In the qualitative phase, two semi-structured interviews were used to collect data about students' motivation towards English and the challenges that encounter teachers and students while using PBL.

3.3.1 Pre-Test

In order to make sure that the control and experimental groups are equivalent, a diagnostic test is conducted on both the experimental and the control group before applying the Project-Based Learning method. This test includes six sections that cover the four language skills (reading, writing, listening and speaking) and the two content areas (language and vocabulary). The whole test is designed by the researcher except the language section which is adopted from Oxford university press diagnostic test. In order to avoid guessing in the language section as it consists of just two choices "A novel approach to the use of pre-and post-testing is used to take the element of guessing at answers to test questions out of this

method" (Barge, 2007, p. 1). Students are informed that even though the score of this test is not going to be accounted in their certification but they have to do their best in answering the test items as the results of this test reflect their current level in English and provides the teacher with all the information needed to design the next steps.

The total number of the test items is (80). Except the reading aloud, speaking orally and the final item in the writing section. The test items are given a score of half a mark, one mark or two marks. This makes the total mark given to the test (100). The researcher follows the Ministry of Education distribution for the percentage that each skill should have in the achievement assessment. These percentages are divided as follows: 10% listening, 10% speaking, 20% vocabulary, 20% reading, 20% language, and 20% writing. Table 3 shows the number of pre-test items and marks distribution for each skill:

Table 3: The Pre-Test Items and Marks Distribution:

Skills		Items	Marks
Reading	Comprehension	15	15
	Aloud	1	5
Language		20	20
Writing		6	20
Speaking	Written	10	5
	Oral	1	5
Vocabulary		20	20
Listening		7	10
Total		80	100

3.3.2 Post-Test

To examine the effects of the remedial plan "using PBL" on the students' achievement, an academic achievement test was developed by the researcher in relation to the new English for Palestine curriculum for the 9th grade. Similarly, to the pre-test, this test measures the four skills and the two content areas. The total number of the test items is (98) most of which are given a score of one mark, others are given half a mark. However, the reading aloud, speaking orally and the final item in the writing section are given five marks each. This makes the total marks given to the test (100). The researcher followed the Ministry of Education distribution for the percentage that each skill should have in the achievement assessment. Table 4 shows the number of post-test items and the marks distribution for each skill:

Table 4: The Post-Test Items and Marks Distribution

Skills		Items	Marks
Reading	Comprehension	21	20
	Aloud	1	5
Language		20	20
Writing		17	20
Speaking	Written	8	5
	Oral	1	5
Vocabulary		20	20
Listening		10	10
Total		98	100

3.3.2.1 Tests Validity

The validity of the tests is checked through presenting the tests to three instructors professors in Hebron university. They presented several comments and suggestions.

Moreover, they reported that the tests were valid and appropriate to achieve the purpose of the study. The test items have been modified according to their recommendations.

3.3.2.2 Tests Reliability

The reliability of the tests was checked by the test of internal consistency which calculates the extraction reliability coefficient (**Cronbach's alpha**) for the study. The reliability coefficient in this study is equal (0.80) which is understood to be good reliability coefficient for the research.

3.3.2.3 Objectivity of the Tests' Results

The researcher asked for the help of a colleague English teacher to help her in assessing students aloud reading, orally speaking, and writing to avoid subjectivity. After accepting the idea and showing her willingness to help, the researcher explained some details about the research aims and procedure. Moreover, she provided the assistant teacher with ready-made rubrics that are supposed to be used in assessing students' reading, speaking, and writing skills. The mean of the two scores was accounted at the end.

3.3.3 Interview

A semi-structured interview was used to identify the effect of Project-Based Learning on the participants' motivation and to find out the challenges that teachers and students face while using PBL. The interview questions were evaluated by three doctors at Hebron university who have stated that these questions are suitable to achieve the goals.

3.3.2.1 Teachers' Interview

The teachers' interview consisted of four questions. The following are the teachers' interview questions and the rational for using them.

- 1 In short, describe your way of implementing Project-Based Learning on your students. Do you think that you exactly follow the correct way of implementing PBL? How do you learn it? Depending on books, workshops, supervisors help or something else. This question is designed to examine the teachers' understanding to this new method and to be sure that these teachers are implementing PBL correctly. Their response to this question provides the researcher with essential information to build on while analyzing their response to the rest of the questions. Moreover, it shows if their answers to the interview questions reflect a real practice for this new method or just a surface knowledge about it.
- 2 Do you find the use of PBL beneficial or not? Why? This question conveys the teachers attitude towards this method with sufficient explanation for that.
- 3 What are the challenges that you faced while implementing PBL on your students? This question focuses on the challenges that encounter teachers while using PBL.
- 4 What are your recommendations as a teacher for the use of PBL in the Palestinian schools? This question is designed to get benefits from these teachers' experiences in implementing this method through presenting their recommendations for the use of PBL in Palestine.

3.3.1.2 Students Interview

The students' interview consisted of four questions. The following are the students' interview questions and the rational for using them:

1 – Do you like learning English in a conventional class? Why? This question is designed to assess the student's attitude towards the traditional way of learning. This provided the

researcher with background information that helped in comparing their previous attitude with the new one and therefore finding if the new method motivates them or not.

- 2 How do you feel towards using Project-Based Learning method in learning English? This question focuses on the students' emotions towards using this method. Knowing the degree to which the use of Project-Based Learning has changed the students' emotions is the first step towards assessing their motivation.
- 3 Would you like to learn through PBL again? Why? This question assesses students' motivation through presenting their willingness or reluctance to participate in the same experience again and expressing their positive and negative points about using PBL.
- 4 What are the challenges that you faced while implementing PBL? This question provided the researcher with essential information about the challenges that encounter students while implementing PBL.

3.4 Procedures

In this study, The same teacher (the researcher) taught the same units at the same duration for both groups, but in a totally different way. The empirical part of the study started on the 7th of September 2015 and ended on the 3rd of January 2016. Richards and Renandya (2002) stated that project work is not viewed as a replacement for other teaching methods but rather as a complementary method. Therefore, while the experimental group incorporated the use of Project-Based Learning into the curriculum, the control group depended only on English for Palestine students' textbooks.

There are two Pupil's Books for Grade 9, covering 14 units in the course of a year. Pupil's Book 9A contains units 1–7, and Pupil's Book 9B contains units 8–14. Each unit is based on a theme, allowing the new language to be taught in context. The themes meet the needs and interests of pupils of this age. Although the skills are integrated throughout the

course, there is an emphasis on a particular skill in each period. The designers of the new English for Palestine argue that the 9th grade course book can improve students' level as it introduces high-frequency English words and key grammatical structures. Moreover, they state that this new curriculum provides students with opportunities to engage in meaningful and authentic activities in English which extend their abilities in the key skills of listening, speaking, reading and writing (Beare, 2014).

Students in the experimental and control groups have studied five units each of which has its own theme and grammatical rule. The titles of the units are as follows: Getting to Palestine, I feel at home already!, Be fit, but be safe, A great leader, and A day in Istanbul. These units focus on different structures: tenses "present continuous, present simple, present perfect, present perfect continuous, past simple, past continuous, and past perfect", comparison of adjectives and adverbs, including the form "(not) as ... as; too ... / (not) ... enough", quantifiers, including "a lot, much, many, a little and a few", and articles.

In the control group, the teacher's book which includes adequate instructions for carrying out the activities in the class was used. As the new English for Palestine curriculum is designed to meet the communicative approach and student-centered method, the teacher played the role of a facilitator during the learning process in the classroom. Moreover, the teacher provided students with all the support and feedback needed and encouraged them to participate and take roles in the class activities.

To get the maximum benefits from PBL, it is crucial to develop appropriate techniques and provide necessary materials that reflect the principles of Project-Based Learning (Blumenfeld et al., 1991; Bas and Beyhan, 2010). Therefore, in the experimental group, the researcher has prepared all the procedures in light of the literature review and what is suggested as a beneficial way for implementing it. To start with, implementing a teaching

method without providing the learners with sufficient background knowledge about it makes the learning process more difficult and challenging. Therefore, a power-point presentation which includes information about the Project-Based Learning approach was presented to enrich the students' knowledge about this newly developed method, encourage them to implement it as an enjoyable way to improve their level, and widen their understanding for their new role in the learning process. Subsequently, steps and procedures of implementing PBL were presented and explained to students through using worksheets. To ensure that all students understand PBL and its procedures, a video that explains PBL in a very simple way was presented.

In light of the literature review, the researcher adopted these five steps both the teacher and students followed in this study:

- Organization of the groups: students were divided into seven groups, each group
 consisted of 5 students based on their proficiency levels, so that each group included
 students of various abilities "low, mid, and high". In this phase, the teacher provided
 students with an explanation of group work and the rules for working in a group,
 including respecting each other and dividing the tasks among the group members
 equally.
- Designing the project: each group made several projects in light of the unit's content.

 At this stage, for each project, the teacher and students made an agreement on the theme of their project. They considered the nature of the project, its objectives, and the most appropriate shape to reach the final outcome (Stoller, 1997). After they determined the theme and the final outcome, the students made an outline of the whole project work. They decided the kind of information they need to complete their project, the source from which they can collect this information, the procedures to

- analyze the information, the role of each student in the project, and the timeline that they have to follow.
- Application of the project: students, in groups, collected information and analyzed it to identify data that are particularly relevant to their project. "Student teams weighed the value of the collected data, discarding some because of their inappropriateness for the project and keeping the rest" (Stoller, 1997). According to their different roles, students worked cooperatively in making their final outcome.
- Presentation: students presented their projects, which have the same themes but different outcomes, in front of the whole class. They used tables, posters, photos, oral presentations, reports, brochures, games, role play, and songs in presenting their work. The teacher monitored students' work and gave them support where needed.
 Students were reminded that comments on their presentations are not to be taken negatively but are offered as advice to avoid these mistakes in future projects.
- Evaluation: as the assessment in PBL is almost qualitative, the teacher determined the evaluation criteria which includes creativity, correctness, and presentation. The teacher was not the only one who evaluates the project, students also took part in evaluating each other. Members of each group compared their own project with others and discussed the strengths and weaknesses of each project.

Each group made nine projects which made the total number of the project presentations in the class 63. The teacher supported and helped students while gathering information, analyzing information, and presenting the final product. The amount of the teacher intervention decreased gradually as students became more familiar with their new role.

This is a brief description of one of the projects that the students did through this experiment. As the unit four title is "A Great leader", the teacher and the students discussed this topic and stated several ideas for making projects related to this theme. Then, the teacher explained some vocabulary that the students may use while making their projects such as: battle, defeat, die, peace, prophet, respect, crusader, enemy, ruler etc. Subsequently, the teacher asked the students to sit in their groups for the rest of the lesson to make an agreement about their final outcome and to write their outline which show the role of each student in the project and the timeline that they have to follow. The teacher provided students with all the supports needed at this stage by telling them about the kind of information that they need to search for, the source from which they can collect this information, and the procedures to analyze and synthesize this information. Students were given one week to complete their projects. Through this period, students did their best to search for information, collect it, analyze it, and create their final product. The first five minutes in each English lesson were devoted to discussing the challenges that encounter the students while making their projects and providing them with the needed feedback to come up with the desired project. At the end of the week, each group presented their project in front of the teacher and the whole class who evaluated the projects according to the evaluation criteria. The seven groups were asked to make their project on the same theme, which is "A great leader". However, they presented different types of projects which reflect their interests and abilities. One of the groups wrote a song about our prophet Mohammad peace be upon him and presented it with music. Another group brought some photos for several leaders, such as Yasser Arafat, Ahmad Yaseen, Mahatma Gandhi....etc, and presented some information about each leader orally. One of the interactive projects was a game which depends on presenting information about a leader and give the audience the chance to guess the name of that leader. At the end of the game, the winners were given some chocolate as a prize. Two of the groups wrote reports about several leaders which include sufficient information about them and their important works. The rest of the groups made posters for a great leader such as Yasser Arafat, Salah Al-Din, and Nelson Mandela. Each poster included important information and some photos for that leader. Finally, the teacher and the students discussed the strengths and weaknesses of each project and evaluated them according to the agreed criteria.

3.5 Data Analysis

3.5.1 Statistical Analysis

The data analysis was performed by using Statistical Package for Social Science (SPSS) version 20. The mean, standard deviation, and the minimum and maximum marks for the four language skills and the two content areas of the control and experimental groups has been extracted. Moreover, an independent sample T-test was conducted to examine if there is a significant difference of achievement level between students in the control group and those in the experimental group before and after applying PBL method.

3.5.2 Content Analysis

The qualitative data in this research are analyzed through using the inductive approach which "involves analyzing data with little or no predetermined theory, structure or framework and uses the actual data itself to derive the structure of analysis" (Burnard, Gill, Stewart, Treasure, & Chadwick, 2008, p. 429). As there are various inductive approaches to analyzing qualitative data, the thematic content analysis method is used in analyzing the interviews in this study. The researcher analyzes the interview transcripts, identifies the themes within those data and gathers examples of those themes from the transcripts.

Even though there is no definitive answer to the issue of validity in qualitative analysis, the researcher tried to avoid lone researcher bias and to provide additional insights into the theme by implementing the process of peer review. The assistant teacher, who participates in assessing students' reading, writing and speaking, doesn't have sufficient information about analyzing qualitative data. Therefore, the researcher asked another teacher, who has an MA degree in applied linguistics and teaching English, to analyze the data independently. The amount of similarity among the two analysis was very high. However, having another perspective directs the researcher's attention towards some important points that aren't noticed.

3.6 Conclusion

One group, the experimental group, goes through the experience of Project-Based

Learning. The control group does not receive any kind of treatment over the same period of
time but undergoes exactly the same tests. The subjects in both groups are given a diagnostic
test as a pre-test. Meanwhile, the academic achievement test is employed to both groups after
the experimental process as a post-test; then, their results are gathered and analyzed.

Moreover, some of the experimental group students and some experienced teachers are
interviewed to assess students' motivation and widen the knowledge about the challenges that
encounter both students and teachers while implementing PBL.

Chapter Four

Results and Discussion

4.1 Introduction

After the application of the study methods and gathering the data through pre-and post-tests and interviews, this chapter presents the answers to the research questions. Data were analyzed both quantitatively and qualitatively. On the one hand, the pre-and post-test results were gathered and coded to be introduced to the computer. Then, these data were statistically treated by using the Statistical Package for Social Science (SPSS) to give results about the effect of PBL on students' achievement. On the other hand, the teachers and students' responses to the interview questions were collected and analyzed to give results about the effect of PBL on students' motivation and the challenges that encounter them while implementing it.

4.2 Pre-Test Results

To ensure the equality between students in the control and experimental groups, an independent sample T-test was conducted to examine if there is a significant difference of achievement level between students in these two groups before applying the Project-Based Learning method. The scores of the achievement pre-test of students in the experimental and control groups were compared. The average pre-test scores were found as Mean= 26,68 for students in the experimental group and Mean= 26,11 for students in the control group. The difference between students of these two groups was analyzed through independent samples T-test. The result indicated that there is no statistical significant differences in the mean scores of students in the pre-test between the experimental and control groups, in which p-value is 0.872, which is larger than the significance level (p≤0.05). According to this result, both groups' pre-learning level in English is equal to one another which makes conducting this study on them acceptable. The pre-test results are presented clearly in table 5 below:

Table 5: The Results of T-test for Pre-examination

Group	N	Mean	Std.	Df	t-	Sig.	(2-
1			Deviation		value	tailed)	
Control Group	34	26.1176	15.90076	67	.160	.874	
Experimental	35	24 4057	10.60746				
Group		26.6857	13.60746				

Furthermore, it is preferable to compare students' achievement in each skill separately to examine if there is a significant difference of achievement level in each skill between these two groups before applying the PBL method. Similar to the mean score of the whole test, the mean scores for the separated sections seem to be so close between the control and experimental groups. The control group mean scores were found as follows: 9.11 for language, 4.64 for speaking, 8.17 for vocabulary, 5.29 for listening, 5.05 for writing and 7.20 for reading. The experimental mean scores were found as follows: 8.91 for language, 4.88 for speaking, 8.38 for vocabulary, 5.02 for listening, 4.94 for writing and 7.47 for reading. Moreover, a paired sample T-test was conducted on the four skills and the two content areas. The results showed that there is no statistical significant difference of achievement level between the two groups, in which the p-values are 0.774 for language, 0.731 for speaking, 0.771 for vocabulary, 0.626 for listening, 0.918 for writing, and 0.774 for reading, which are larger than the significance level (p≤0.05). The following table (table 6) presents the results of the pre-test for the different test sections separately:

Table 6: The Pre-examination T-test for Each Skill

Skill	Group	N	Mean	Std. Deviation	Df	t- value	Sig. (2-tailed)
Language	Control	34	9.1176	3.83575	33	.289	.774
	Experiment	34	8.9118	3.36981			
Speaking	Control	34	4.6471	3.82085	33	247	721
	Experiment	34	4.8824	3.12143		.347	.731
Vocabulary	Control	34	8.1765	3.81759	33	.294	.771
	Experiment	34	8.3824	3.40245			
Listening	Control	34	5.2941	2.68022	33	.492	.626
	Experiment	34	5.0294	2.43068			
Writing	Control	34	5.0588	6.00475	33	.104	.918
	Experiment	34	4.9412	6.68305			
Reading	Control	34	7.2059	4.54459	33	.290	.774
	Experiment	34	7.4706	4.21567			

To sum up, the results showed that there is no statistical significant differences in the mean scores of students in the pre-test which ensures the equality between students in the control and experimental groups before applying the intervention (the Project-Based Learning method) on the experimental group.

4.3 Post Test Results

The post test was designed to answer the first research question: Is there a significant difference between the achievement levels of students in the experimental group and those in the control group in terms of the usage of Project-Based Learning?

Mean and T-test were used to confirm the above question. The average post-test score of students in the experimental group was found as Mean= 56.12, and the average post-test score of students in the control group was found as Mean= 50.75. The mean score of students in the experimental group is higher than the mean score of the control group. This statistical result indicates the positive effect of using PBL on students' achievement. However, this

difference in the mean scores is not necessary to be sufficient to make a statistical significant difference. Therefore, the difference between students of these two groups was analyzed through independent samples T-test. The results showed that there is no statistical significant difference in the achievement level between students in the control and experimental groups due to the use of Project-Based Learning method in which the p-value is (0.438), which is larger than the significance level $(p \le 0.05)$. This is obvious in the following table (table 7)

Table 7: The Results of T-test for Post-examination

Group	N	Mean	Std.	Df	t-	Sig.	(2-
Group	14	Wican	Deviation		value	tailed)	
Control Group	34	50.7500	29.67533	67	.780	.438	
Experimental	35	56.1286	27.58099				
Group	33	30.1280	21.30099				

Knowing that there is no statistical significant difference in the achievement level between the two groups according to the post-test general results does not mean that the use of this new method does not cause a significant difference in the achievement level between the two groups on any of the four skills or the two content areas individually. Therefore, the mean scores for each skill was compared and a paired sample T-test was conducted to find if the use of PBL affects one skill more than the others or not.

The mean scores' results showed that the writing and reading skills have a clear difference with 8.45 for the control group versus 11.95 for the experimental group in the writing skill, and 10.67 for the control group versus 14.52 for the experimental group in the reading skill. A paired sample T-test was conducted to find if these differences in the mean score are sufficient to make a significant difference or not. The results showed that there are statistical significant differences of achievement levels between students in the control group and the students in the experimental group in reading and writing skills, with p-values

(0.011) for reading and (0.029) for writing which are smaller than the significance level ($p \le 0.05$). These results are presented clearly in the following tables (table 8 & 9)

Table 8: The Results of T-test for the Writing Skill

Group	Minimum	Maximum	Mean	Std.deviation	Df	t- value	Sig. (2-tailed)
Control	.0	19.0	8.456	6.7390	33	2.280	.029
Experimental	.0	19.0	11.957	5.3253			

Table 9: The Results of T-test for the Reading Skill

Group	Minimum	Maximum	Mean	Std.deviation	Df	t- value	Sig. (2-tailed)
Control	1.0	20.0	10.676	6.2896	33	2.684	.011
Experimental	6.0	20.0	14.529	4.7973			

Even though the differences in the mean score between the two groups in the other skills are not considerable, all the mean scores present the favorability of the experimental group. The mean scores were found as follows: 11.71 for the control group versus 12.80 for the experimental group in vocabulary, 4.47 for the control group versus 5.25 for the experimental group in speaking skill, 7.41 for the control group versus 7.80 for the experimental group in language, and 6.92 for the control group versus 7.34 for the experimental group in the listening skill. The T-test results showed that these differences remain insufficient to be statistically significant as the p-values are 0.318 for vocabulary, 0.156 for speaking, 0.986 for language and 0.628 for listening which are larger than the significance level ($p \le 0.05$). The tables below (table 10, 11, 12 & 13) present these results:

Table 10: The Results of T-test for Vocabulary

Group	Minimum	Maximum	Mean	Std.deviation	Df	t- value	Sig. (2-tailed)
Control	2.0	20.0	11.714	5.1368	33	1.013	.318
Experimental	4.0	20.0	12.809	6.4843			

Table 11: The Results of T-test for Language

Group	Minimum	Maximum	Mean	Std.deviation	Df	t- value	Sig. (2-tailed)
Control	.0	20.0	7.412	8.0269	33	.018	.986
Experimental	.0	20.0	7.800	7.5100			

Table 12: The Results of T-test for the Listening Skill

Group	Minimum	Maximum	Mean	Std.deviation	Df	t- value	Sig. (2-tailed)
Control	3.0	10.0	6.926	2.8818	33	.490	.628
Experimental	3.0	10.0	7.343	2.6312			

Table 13: The Results of T-test for the Speaking Skill

Group	Minimum	Maximum	Mean	Std.deviation	Df	t- value	Sig. (2-tailed)
Control	2.0	9.0	4.471	2.1914	33	1.452	.156
Experimental	2.0	9.0	5.257	2.0486			

In short, students in the experimental group reached a higher achievement level compared to those in the control group according to the post-test mean score. Nevertheless, according to the T-test results, this difference in the mean score between the experimental and control groups was not enough to indicate statistical significant difference between them. After all, a paired sample T-test was conducted to find if there are significant differences between the two groups in any of the four skills or the two content areas. The results showed

that there are statistical significant differences between them in the reading and writing skills. As the research question focuses on achievement in general, it can be said that the statistical analysis and findings of this study do not prove the correctness of the first hypothesis.

4.3.1 Discussion of the Post-Test Results

According to the quantitative data, the result of this study does not only conflict with the previous studies which present the effectiveness of using PBL to enhance students' level in subjects other than English such as Bagheri et al, 2013; Yam & Rossini, 2010; Abdul-Rahman et al, 2009; and Eskrootchi & Oskrochi, 2010, and Gultekin, 2005, but it also does not match with most of the previous studies which suggest the important role of PBL in improving students' English academic achievement such as Bas and Beyhan, 2010; Simpson, 2011; Bas, 2011; and Nassir, 2014. In their research, Bas & Beyhan (2010) aim at investigating the effects of multiple intelligences supported PBL and traditional foreign language-teaching environment on students' achievement and their attitude towards English lesson. At the end of the research, it is revealed that the students who are taught by multiple intelligences supported PBL method are more successful and have a higher motivation level than the students who are taught by using the traditional instructional methods. Similarly, Bas (2011) has investigated the effects of PBL on students' academic achievement and attitudes towards English lessons. It is found out that the use of PBL has a positive effect on the academic achievement and attitudes towards English. Furthermore, Nassir (2014) has studied the effectiveness of PBL strategy on students' achievement level and their attitude towards English. The results show that the use of PBL has a positive effect on the students' achievement level and their attitude towards learning English.

It can be said based on the related literature that the successfulness of PBL method is guaranteed when implemented well. Surprisingly, this study presents unexpected findings although the researcher implemented PBL steps carefully and paid attention to all the components that the scholars identified as critical features to successful PBL.

Nevertheless, after a careful reading of the related literature and a deep analysis of the way of implementing PBL in this study, the researcher has come up with possible reasons for this difference. The following are some of these reasons:

1 - Although most of the previous studies represent supporting evidence that PBL can improve students' academic achievement, it is not necessarily true in all cases.

First of all, the findings of the present study are similar to the findings of Demirel, Başbay, Uyangör, and Biyikli and Yurtluk. As cited in Bas and Beyhan (2010) "Demirel, et al. (2000) and Yurtluk (2003) studied the effect of the Project-Based Learning approaches on students' achievement levels. In these research papers, no change was observed in the achievement levels of the students both in the experimental and the control groups"(p. 378).

Secondly, implementing the same method on students in the same way does not mean that the same results should appear. In a study conducted by New American Schools Development Corp (1997), one out of ten schools that implemented PBL did not demonstrate significant improvement in students' academic achievement (as cited in Thomas, 2000). Even though the percentage of 10% is not considered weighty, but it is adequate to support the idea that in some cases PBL may not improve students' academic achievement.

Thirdly, according to the post-test results of this study, none of the groups has outperformed the other. Several previous studies support this result, especially when the post-test is designed in the shape of traditional achievement test or high stakes tests. Parker et al (2011) and Hansen (2014) have stated that PBL students perform as well or better than traditionally taught students when they undertake high-stakes tests. Moreover, in a study conducted by The Cognition and Technology Group at Vanderbilt University in 1992, the

results show that PBL students have scored higher than traditionally taught students in solving word problems and in planning. However, on tests of basic math concepts, both groups have scored the same.

Finally, having a general statistical significant improvement in the students' achievement does not mean that this improvement includes all skills. As stated before, Simpson (2011) has examined whether PBL can enhance Thai university students' English language proficiency, their learning skills and self-confidence or not. She concludes that PBL can be an effective means of teaching English as a foreign language as there is a statistically significant effect on the development of students' English language skills. However, in the discussion section, she clarifies that this improvement has some exceptions. For example, the low achievers structure and writing expression do not improve. Moreover, the high achieving students' results show no statistically significant improvement in listening and reading.

2 - This study tackles this issue from a totally different angle since most of the previous studies in related literature compare the use of PBL with traditional methods of teaching, this study compares the use of PBL with students' textbook instructions. The New English for Palestine curriculum is designed in light of the communicative teaching approach. Thus, the comparison in this study is between the use of the communicative teaching approach and the PBL method. According to the related literature, the theoretical foundation of PBL is strongly connected to the constructivist approach. Therefore, it can be stated that the constructivist and the communicative approaches are compared here. Crawford (as cited in Schaub, 2012) has stated that the communicative approaches to second-language acquisition are based on concepts, theories, and hypotheses that converge around the constructivist paradigm.

Accordingly, the identicalness between these two approaches could be the reason for having similar results in the post-test without any remarkable statistical significant difference between the two groups.

3 - It is not fair-minded to say that the students' academic achievement level in this study does not improve at all. A statistical significant difference is found in two skills when comparing the two groups' results for each skill. Moreover, a clear enhancement is seen when comparing the differences between the pre-and post-test mean scores results.

First of all, when comparing the two groups' results for each skill, it is proven that there are statistical significant differences between the two groups in reading and writing.

Improving one of the receptive skills and one of the productive skills statistically seems to be satisfactory as the new method is implemented for just one semester. Knowing that "practice makes perfect" backs up this result as the experimental group students have to read a lot while searching for the information needed to complete their projects. Moreover, it is well-known by educators that listening is important to become better at speaking and reading is vital to improve one's writing. Therefore, students' exposure to a wide range of reading texts makes them better writers.

Furthermore, Comparing the differences between the pre-and post-test mean scores results can be a good way to assess students improvement. To start with, the difference between the two groups in the post-test mean score is (5.37) in favor of the experimental group, though this difference is not sufficient to make a statistically significant difference. However, when comparing it with the pre-test mean score where the difference between the two groups is only (0.56) in favor of the experimental group it becomes explicit that there is a little improvement on the students' achievement level due to the use of PBL. Moreover, the post-test mean scores in language, listening, speaking and vocabulary reveal a noticeable improvement in favor of the experimental group. In the pre-test, the differences in the mean scores between the two groups in language and listening are (0.20) & (0.26) in favor of the control group, while the differences in speaking and vocabulary are (0.23) & (0.20) in favor

of the experimental group. However, the post-test mean scores results show greater differences between the two groups in language (0.38), listening (0,41), speaking (0,78) and vocabulary (1.09) in favor of the experimental group. Although these slight differences in the mean scores are not sufficient to consider significant, they definitely have meaning and should not be neglected.

- 4 Improving students' academic level and reaching the desired outcomes require using a suitable method, exerting huge efforts and spending adequate time. Therefore, paying attention to all the critical components for successful implementation of PBL without providing students with sufficient time to be totally engaged in this new method makes reaching the desired results hard to achieve. In their study, Nichols-Barrer and Haimson (2013) aim at estimating the impacts of PBL on students' reading and math test scores. The results show that the longer the students stay in the program, the more their achievement improvers. In reading, the average of students' test scores has changed from 50% after the first year to 54% after two years and to 56% after three years. Moreover, the average students' test scores in math has changed from 50% after the first year to 54% after two years or to 61% after three years. Moreover, Boaler (2002) has compared students' mathematics achievement in two British schools, one using traditional instruction and the other using PBL instruction. The results indicate that PBL students significantly outperform the traditional school students after implementing PBL for three years. Consequently, implementing PBL for just one semester in this study seems to be insufficient to reach the desired results.
- 5 A large number of students in Palestinian public schools are low achievers which makes the results of implementing such methods not as useful as desired. In Palestine, there are different ways to assess the students' general level, such as: unified tests, national assessment tests and TIMSS (trends in international math and science study). Unfortunately, the results

of these tests indicate that the education level in Palestine suffers from serious problems. In 2016, Dr.Sabri Saidam, the minister of education in Palestine, has stated that the percentage of success in Al-Tawjehi exam (2016) was 64%, which means that nearly one third of the students failed in this national exam. Moreover, the TIMSS results in 2011 indicated that the average score of students in Palestine was well below the international average. More than 40% of Palestinian students scored less than the low benchmark (Global Investment and Business Center, 2016).

Having official documents that state students real success percentage in English in Palestine is nearly impossible. First of all, at schools, teachers are forced to make a curve to raise students' grades at the end of each year as the general failure percentage should not exceed 5%. Moreover, the National English Test result does not reflect the students' real level. It is stated by the head of examination department in the directorate of education in Hebron and several English supervisors that the percentage of success in English language in Al-Tawjehi exam is around 30%. However, this percentage is officially adapted to suit the percentage of success in other subjects. Therefore, statistical evidence from universities is presented in this study to reflect students' real level in English.

Ashour (2010) has conducted a study to find the attitudes of non-English major students at universities in Hebron towards the required English service courses. The study presents the students accurate results in their required English service courses at four universities in Hebron: Hebron University (HU), Palestine Polytechnic University (PPU), Al-Quds Open University (QOU) and Palestine Technical Colleges/Al-Arroub (PTC). The percentage of the students who failed in the PPU is relatively low. Only 20.6% of the students fail English I (4003) course. The high degree of performance at PPU can be attributed to the fact that most of the students taking this course are scientific-stream graduates. Whereas the percentage of

the students who failed English (22106) course at HU was 40.6%, which is much more than the failure percentage at PPU. In PTC, one third of the students (31.4%) failed in General English and Technical English courses. However, if the passing grade is 60% like HU and PPU, the percentage of the students who fail these courses will be more than the half (about 53%). The worst result is derived from QOU where more than half of the students (54.5%) fail the English 1 course. This percentage could be worse if the passing grade in this course is 60%. As the percentage of students who get between 50-59 is 27.3%, more than 80% of the students would have failed this course. It seems strange to have such differences between students in universities in the same city, especially between PPU and QOU results. However, these results can be justified if the conditions of admission to these universities are taken into consideration. Logically, if the good students who pass Tawjehi exam have scored such bad results in the required English service courses at HU, QOU and PTC, it can be said that the students level in English in Palestinian schools is even worse.

Knowing that PBL is a student centered approach where students have to take responsibility for their own learning, searching for information, and using higher order thinking skills makes it more suitable for high and middle achieving students who have sufficient background information to build on. Even though low achieving students have the ability to participate within a group and do some simple tasks, but they may have problems in dealing with complicated tasks that require using higher order thinking skills or being in decision making positions. Zohar and Dori (2003) have stated that when low achieving students are challenged with higher order thinking problems, they might not approach the class average expectation. Moreover, when dealing with low achieving students it is essential to implement the new method for a long period of time to reach a significant academic improvement. Doppelt (2003) has investigated the effect of using PBL science on low-achieving students. At the beginning, many of the students lacked motivation and reported

low academic results. However, after three years, they reported higher academic results and greater interest in school.

6 – It is agreed among educators that testing should reflect teaching. Therefore, assessing experimental group achievement in a way that reflects their new way of learning is essential to have accurate and valid results. Boss (2011b) has stated that in real world learning experiences like PBL, the traditional way of assessment would not be adequate to assess students' improvement and that authentic assessment strategies and formative assessment are needed to have precise results. In this study, the way of assessing the experimental group's achievement is totally different from their way of learning. The experimental group students learn through using PBL, which depends on searching for information, collaboration and learning by doing. However, similar to most of the previous studies, students' achievement in this study is assessed through using traditional achievement tests where they have to memorize information and write their answers individually. Using an innovative way of testing, which reflects PBL features, seems to be unfair in the studies which compare between two groups as the traditional group students may encounter serious problems in responding to such a new way of assessment. Therefore, using the traditional way of assessment is a logical choice as all the students in both groups are familiar with. After all, even though the traditional way of assessment is the most familiar way to test students' achievement in high stakes tests, standardized tests and research, the experimental group students' way of learning is still not reflected in this study.

4.4 The Interview Results

The qualitative part of this research provides the researcher with sufficient information to answer the second and the third research questions: What is the effect of project-based learning on students' motivation? And what are the challenges that may face both teachers

and students while implementing the PBL method? In general, the interview results indicated that learning through the PBL method is enjoyable and increases students' motivation level towards learning English. In other words, the interview results in this study prove the correctness of the second hypothesis. Moreover, the results showed that there are seven challenges that face teachers while implementing PBL and four challenges that encounter students while using it. The best way to justify the general results is through detailed analysis of the teachers and students' interview responses to each question.

4.4.1 Discussion of the Teachers' Interview Results

As the first question consists of three parts, the discussion of this question is divided into three sections:

1 - According to the teachers' responses to the first part of the question "Describe your way of implementing Project-Based Learning on your students", it is clear that more than half of the teachers do not know how to implement PBL correctly. It can be said that only 40% of them know how to use PBL in the classroom while 60% of them are not fully aware of how the method is to be implemented. When they are asked to state the stages followed in implementing PBL, quite a good number of them say that they divide students into groups, instruct them to design their projects in light of specific themes, decide the due date for presentation and give students' marks for their work. Some of the teachers even declare that sometimes they ask students to submit their projects without giving them the chance to present their work in order to save time. One of the teachers describes his way of implementing PBL literally in this way "I divide my students into groups. Then I ask each group to choose an idea. After that I give them colored papers and ask them to develop their idea. Finally, I ask them to present their works" (See Appendix H). Surprisingly, he really believes that PBL is only about dividing students into groups and providing them with papers and colors to express their ideas through drawing and painting. In addition, it seems that most

of the teachers have misunderstood the concept of student-centered learning and the real role of the teacher in PBL. They think that students have to do all the work by themselves and that teachers should not intervene at all to give the students the chance to be independent learners. Giving students the needed help, providing them with sufficient feedback through the various steps of making a project and facilitating their work are the basics of the teachers' new role in PBL. However, these ideas appeared to be vague and not well-known for most of the teachers. Gultekin (2005) has expressed that "If one desires to benefit from the outcomes of the project based learning approach, one should pay attention to its main characteristics and implementation stages" (p. 553). Unfortunately, it is clear according to the teachers' responses to this question that most of them do not pay attention to these factors.

2 - The teachers' responses to the second part of the first question "Do you think that you exactly follow the correct way of implementing PBL? "Indicate that there is a giant gap between what teachers are supposed to do in reality and what they think they have to do. As indicated in the first section, only 40% of the teachers use PBL correctly in their classes. However, 80% of them are completely sure that they are implementing it in a correct way. Surprisingly, only 20% of them state that they are not sure if they are implementing it correctly. Furthermore, one of the teachers objected to the use of the word "correct" in the question saying that "I don't agree with the word correct in this question, I prefer using the word suitable. My way of implementing PBL is highly situational and a little bit random. It depends on the nature of the class ambiance, the objectives of the lesson and the students' aspirations" (See Appendix H). Her argument can be true to some extent as it is essential to take the aims of the lesson, students' interest and classroom environment into consideration. Nevertheless, that does not mean implementing PBL randomly without planning or determining its general steps. It is essential to provide students with an explicit description of

all the steps that they have to follow in order to make their projects or else they may feel lost and confused about how to deal with this new method.

3 – In responding to the third part of the first question "How do you learn it?", the teachers present four sources for their knowledge about the way of implementing PBL. 40% of them state that their supervisors told them about it when they came to their school for the regular annual visit. 30% of them reveal that they took an academic course about it at the university while they were studying for their MA degree. 20% of them learned about it through reading several academic papers and searching on the internet. Furthermore, only 10% of them state that they got the information needed about its use from their colleagues. Unfortunately, none of them has participated in an official workshop about PBL. One of the teachers says that "the first time I heard about PBL is when I read an official announcement offered by the Ministry of Education telling us that the learning process should include projects without presenting how this new teaching method to be employed" (See Appendix H). The answer given by one of the supervisors in the Directorate of Education when asked about the main criteria of the projects and whether there is a specific way to be followed in implementing PBL was " Every teacher can determine how to design the projects and how to implement them" (See Appendix H).

Responses to the second question "Do you find the use of PBL beneficial or not? Why?" show that about 80% of the teachers responded positively for several reasons. First of all, they believe that PBL motivates students, makes them more active and engages all the students in the learning process despite their level of proficiency. Moreover, they look at PBL as a great way to direct students towards autonomous learning and increase their self-confidence. Furthermore, some of the teachers state that the use of this new method helps them in discovering their students' abilities away from tests and grades, especially low

achieving and shy students. An adequate number of teachers express that they felt surprised when they saw what their students are capable of and how some of the low achieving students did a great job on their projects. Some of the teachers stress the point that PBL will be a beneficial way of teaching English only if it is implemented appropriately. One of the teachers states that "I think that the use of projects is beneficial only if the projects are discussed in the class, and students present what they have learned to their classmates; otherwise projects will be a waste of time if they are done as an individual or group learning task" (See Appendix H). On the other hand, about 20% of the interviewed teachers look at PBL as a completely helpless way of teaching. They believe that our students do not have the ability to take responsibility for their own learning at this early age and that this method could be suitable for university students only. Moreover, they think that it would be better for students to dedicate all the class time for doing the activities, practicing the grammatical rules explicitly and listening to their teacher's explanation than wasting their time searching for information as they do not have the ability to distinguish between what is right and what is wrong. It is clear that their reason for rejecting PBL is not because they think it is a harmful way of teaching, but because they think it is unsuitable for their students' level.

The pleasant feeling that appeared on all the teachers' faces when they heard the third question "What are the challenges that you faced while implementing PBL on your students?" emphasizes that they really look for a chance to talk about the things that prevent them from implementing PBL in the desired way. There are three major challenges that are stated by most of the teachers and four others stated by a few of them.

First of all, PBL is time consuming. It is obvious according to the related literature that implementing PBL correctly costs time. On one hand, teachers are responsible for finishing their heavy curriculum and they have determined material for each lesson. On the other hand,

following the appropriate criteria while implementing PBL and providing students with sufficient time to discuss the development of the project or even presenting their project put teachers in sidetrack from the semester and annual plans. Some of the teachers express that even though the directors and supervisors encourage them to use PBL, they care a lot about the quantity of the material to be finished and look at it as an essential element in the teachers' assessment.

Secondly, the insufficient resources at schools is also seen as a very important challenge by most of the teachers. It's supposed to be the school's responsibility to provide students with all the material needed for their projects. However, at our schools, students have to collect money from the group members to make their project as the school low financial position prevents it from providing all the students with the material needed for their projects. In some cases, making good projects may cost students an amount of money that they cannot afford. Some teachers claim that their students have some creative ideas for their projects, but the insufficient resources force them to change their project to a simpler one that they can afford.

Thirdly, students' refusal of teamwork is also one of the major challenges that is stated by the teachers. Most of the teachers reveal that dividing students into groups is one of the serious challenges that they encounter while using PBL. On one hand, students want to work with their friends or with students who have the same or a higher achievement level. High achieving students always complain to their teachers that they can do a better job if they work alone or with students who have the same achievement level as working with low achievers hinders them and reduces the value of their work. On the other hand, teachers prefer to have mixed-ability groups as the low achieving students do not have the ability to solve the complicated problems that they may encounter while making their projects. Therefore,

having a few high achieving students in each group is essential to come up with good projects and to give the low achieving students the needed support. In addition, the fact that all group members are responsible for supporting each other as the final assessment will be on the whole project makes some students feel hostile towards the teamwork and find it unfair. Furthermore, some of the teachers state that the surrounding environment prevents students from getting the desired benefit from using teamwork. It is essential for students to meet after school or on the weekend as the school time is insufficient for them to discuss their ideas, search for information and make their final project. However, most of the parents do not allow their daughters to meet after school. This problem forces students to work individually at home and do their best to complete their final project at limited time at school. What's worse, in some cases, one or two students make the whole project instead of others. This will not only make students lose the academic benefits that they can gain from using teamwork, but also they are going to miss a lot of fun and enjoyable time that teamwork provides students with.

The other four challenges that are mentioned by some of the interviewed teachers are as follows:

- 1 Some students don't take PBL seriously. They told their teachers that through "PBL" they do not learn anything and that they prefer the traditional linear way.
- 2 Students' individual differences and the large number of low achieving students make finding a suitable project for all the students very hard.
- 3 Assessment in PBL is very challenging. The absence of ready-made rubrics which help both teachers and students in assessing the project makes the assessment process a little bit subjective.
- 4 Not all students have access to different sources. Moreover, some of them do not even know how to use these sources.

The teachers reveal a wide range of ideas in responding to the final question in the teachers' interview "What are your recommendations as a teacher for the use of PBL in the Palestinian schools?" This can be summarized in the following points:

- 1 Most of the teachers agree that a well-planned professional training regarding PBL is needed for both teachers and students. Some of them express that having trained teachers should be prioritized as only teachers have the strength to make using PBL effective and beneficial. If the teacher does not believe in its efficacy or he is not qualified enough to deal with such a method, then the use of PBL will not end with the desired results, and students acceptance and engagement in this method will be affected negatively. Moreover, they state that students need to be trained gradually on how to do projects as well as how to use them for functional learning. One of the teachers presents that "Students should be trained to do projects gradually from the elementary stage. It shouldn't be sudden in any way or it would be for vain" (See Appendix H).
- 2 Neglecting all the problems that exist in our schools such as: crowded classes, heavy curriculum, insufficient resources and teachers' heavy loads may hinder the education system improvement and reduce the efficiency of using any creative method. Therefore, finding solutions to these problems is essential before start implementing any new method.
- 3 Projects should be simple and interesting. Asking for complicated and fancy projects makes students feel that this method of learning is totally beyond their level.
- 4 Awards and prizes for students who made great projects is the best way to motivate and encourage them to do their best.
- 5 Projects should have more impact on students' learning. Making one project for the whole semester as the Ministry of Education requires students to do is not sufficient. Including more projects is crucial to guarantee better results.

6 – Surprisingly, one of the teachers recommends to stop using this method. He states that " if I am in a decision making position, I will prevent using such methods" (See Appendix H). He believes that most of the educators try to convince people that the traditional way of teaching is not effective. This is completely wrong as the proficiency level of student who were taught twenty years ago by using the traditional method is obviously higher than today's students who are taught by using such new methods.

4.4.2 Discussion of the Students' Interview Results

Similar to the teachers' interview results, students' interview results are discussed through analyzing the students' responses for each question.

In responding to the first interview question "Do you like learning English in a conventional class? Why?", students are divided into three groups. First, 36 % of the students express that they like learning in a conventional class. They clarify that their textbook provides them with information suitable to their level and includes variety of enjoyable activities. Moreover, they like listening to their teacher's explanation and how she can simplify all the complicated points. Second, 40% of the students express that learning in conventional class is very boring. Some of them state that in conventional class they find themselves as passive learners where the teacher manages all the work and they are hardly listening, writing notes, or answering questions. Others indicate that there is a huge gap between their level and the textbook activities which are designed to be suitable for good achieving students only. One of the students states that "I completely agree that the English textbook includes several kinds of activities and that our teacher uses great methods in teaching, but the English lesson seems to be boring for most of us as we don't have the ability to apply these activities" (See Appendix I). Finally, 24% of the students point out that their feeling towards the conventional English class strongly depends on the subject of the lesson.

In general, they like vocabulary and reading lessons and find grammar and writing lessons very boring. Moreover, they mention that when their teacher uses some attractive strategies, such as LCD, videos, cards, and photos, they like the lesson and when she lectures them, they get bored. In other words, the way of teaching affects the degree of enjoyment.

The students' responses to the second question "How do you feel towards using project based learning method in learning English?", are clearly in favor of using PBL. 88% of the students express their high admiration for the use of this method in learning English. They state that PBL changes their negative feeling towards English lesson and motivates them to be better language learners. Furthermore, they clarify that seeing their final project which reflects their efforts and excellence is the most important but not the only source of their cheerfulness while implementing PBL. Searching for information with other students, discussing ideas and supporting their point of view with evidence, standing in front of the whole class to present their work and having a role in the assessment process are also seen as sources of happiness for them. Moreover, the sense of achievement that they feel when they find a solution for their problems motivates them and increases their self-confidence. A few of them present their incredible satisfaction when the teacher and other students show their admiration for the work of their groups. Furthermore, some of the students indicate that they used to hate English and looked at it as the most difficult subject, and being good at it was something impossible. However, this short experience makes them think in a different way and believe more in themselves. One of them emphasizes that "even though I do not have the ability to participate in English like other students and that I always have very bad scores in my English tests, I feel, for the first time in my life, that I have a role in English lessons and that other members in my group respect and support me" (See Appendix I).

On the other hand, the rest of the students (12%) mention that the use of PBL is not as enjoyable as the introductory presentation and the video indicate. Moreover, they do not find that participation in this new method of learning for the whole semester improves their level in English in any way. In general, it is obvious according to their responses that their hatred to this method is strong because they do not accept changes, and that is partly because PBL puts more responsibility on them. They state that "learning through a conventional class is satisfying, so why we should change our way of learning" (See Appendix I). Moreover, they hate working in groups as they have to fight with their group members several times. One of them reveals that "I hate this method because it forces us to work in groups. Satisfying my group members is impossible, they make me feel that my work is never good enough. Honestly, this experience does not only make me hate this method, but it also makes me hate some girls" (See Appendix I).

Students' responses to the third question "Would you like to learn through PBL again? Why?", divide students into three parts. First, a great number of students, actually 72% of them, show their willingness to learn through projects again even though it places more responsibility on them. They indicate that it is a beneficial experience for them and that learning through projects motivates them and lets them have fun while learning. One of them says that "we have faced many challenges, but we have also learned that we should never give up. We know that learning through PBL is not easy, but the results that we gain from using it make it worth to be lived again" (See Appendix I). Second, 16% of the students reveal that they would like to live this experience again only if the members in their groups are changed. They state that there are some girls in their groups who do not take PBL seriously and that their carelessness affects the whole group in a negative way. Moreover, some of them mention that having a girl who believes that nothing is right except for what she already does in your group is enough to make you want to change your group. Finally, a

very small number of students (12%) indicate that learning through PBL is really hard and the results of using it do not deserve all those efforts. Therefore, they would not like to do that again in the future.

Based on students' responses to the final interview question "What are the challenges that you faced while implementing PBL?", the challenges can be summarized in the following four points:

- 1 As PBL is time consuming, having insufficient time for making projects is seen as the most important challenge that encounters students while implementing PBL. Searching for information, collecting material, evaluating it, solving problems, and making the project take most of the students' free time. Most of the students express that they spend a long time thinking about and working on their projects which affects their grades in other subjects in a negative way as they do not have enough time to prepare and study for them. These are some of the students' comments: " I can make better projects if I have time."," I wish I had more than 24 hours each day."," We have to study for other subjects as well and that costs time." and " I love learning through PBL; however, I do not have enough time to make it my way of learning" (See Appendix I).
- 2 Teachers and students' new roles are seen as the second challenging issue. Most of the students express their admiration for their new role in the learning process. However, this does not mean that this changeover in their role is an easy task. Moreover, some of the students have difficulty in accepting the new role of the teacher as a facilitator and not as a source of knowledge and solutions provider. Unfortunately, the students are used to be receptive only. Their textbook provides them with all the needed information and the teacher clarifies and simplifies all the difficult points which limit the students' role to receiving and memorizing information. Nevertheless, their role through PBL is completely the opposite. Now, they have to depend on themselves in order to learn. The teacher is no more the only

source of information as they have to search for knowledge by themselves. When they encounter any problem, they have to search more and more and use their higher order thinking skills to find the solution for their problem. In general, students do not reject their new role, but they find it challenging, especially for those who are used to the traditional way of learning and find it acceptable. At last, it is worth saying that some of the students indicate that when they become more familiar with their new roles and responsibilities the degree of struggling with the concept of autonomous learning decreases gradually.

- 3 Group work is also seen as a challenging issue that encounters students while implementing PBL. As mentioned before, there are two kinds of students who make others find working in groups very hard and challenging. The first kind is the students who do not accept the others viewpoint and believe their own way of doing things is the best. The second kind is the careless students who do not show their seriousness about anything and their work is less than the average in general. Since having these two kinds is unavoidable, the teacher's intervention in these cases is vital to facilitate students' group work. In addition, some of the students clarify that having an agreement about the way of dividing the project roles among students and giving each student the role that comes with her ability and interest is really demanding. In some situations, it may become even worse and cause a kind of hatred among them.
- 4 Students' notable weakness is also seen as a challenging issue that hinders students from doing their projects in the desired way. Most of the students indicate that they do not have the confidence and the ability to interact and express themselves in English. Therefore, they immediately switch to the Arabic language in their discussions and presentations which reduces their satisfaction towards their work. Moreover, they state that searching for information in English is exhausting as they have to translate all the information they find in order to understand and find out if it is beneficial for their project or not. An adequate number

of students reveal that in some situations they feel that what PBL requires them to do is beyond their level. Other students express that they face a real problem in communicating with others as they can't make the thing the way they wish. One of them states that " I compile the sentence elements in my mind and I really think that it is a good one. However, when I speak nobody understands me and the teacher restates my sentence to be understood" (See Appendix I).

4.5 Conclusion

To sum up, this chapter provides the researcher with all the information needed to answer the three research questions. The researcher presents and analyzes the results of the pre and post tests and the interview results to justify her answers to the research questions.

To begin with, the results do not prove the first hypothesis "There is a significant difference between the achievement levels of students in the experimental group and students in the control group in terms of the use of Project-Based Learning method." The study reveals that there is no significant difference in the students' achievement level after using PBL for one semester. However, there is a significant difference in the student's achievement level for the reading and writing skills only. Moreover, the researcher provides several reasons to justify this result, such as students' weakness and the short period of implementation.

Although the results do not prove the first hypothesis, it proves the second one "Project-Based Learning is considered a useful pedagogical method for increasing the students' motivation." It is clear, depending on the students and teachers' responses to the interview questions, that PBL increases students motivation towards learning English. Students full engagement, their desirability and willingness to learn English through this method show the positive effect of this method on students' motivation.

Ultimately, the third research question "What are the challenges that may face both teachers and students while implementing the PBL method?" is answered in light of the teachers and students' responses to the interview questions. There are seven challenges that encounter teachers while implementing PBL such as inadequate resources, students' weakness, the refusal of team work, the lack of seriousness, the new way of assessment, the unqualified students and the insufficient time. Furthermore, there are four challenges that face students while using PBL such as teachers and students' new role, insufficient time, students' weakness and group work.

Chapter Five

Conclusion and Recommendations

5.1 Conclusion

Following the modern trends in teaching and learning by changing the old methods and strategies is essential. However, using a method just because it is a new one does not show careful thought or good judgment. Therefore, examining any new method through designing empirical studies is the best way to assess its effectiveness. Developing students' skills can be derived from several learning methods, especially those related to constructivist approach.

PBL is one of these innovative methods that most of the researchers encourage using in the teaching and learning process in their theoretical and practical research. As the Ministry of Education in Palestine starts implementing PBL in its schools, it is essential to examine whether the use of this new method is effective in the Palestinian context or not.

Project-Based Learning is based on the idea that students study a specific subject in a deeper context (Thomas, 2000). Project work is viewed by most of its advocates not as a replacement for other teaching methods, but rather as an approach to learning which complements mainstream methods and which can be used with almost all levels and ages of students (Stoller, 1997). In short, Project-Based Learning is a beneficial way to indirectly teach students how to be researchers and autonomous learners. Using this method will teach them to tackle their life problems in an organized manner and allow them to achieve their goals as PBL develops a wide set of complex skills, such as higher-order thinking, problem-solving, collaborating, communicating, self-evaluation, time management (Harmer, 2014).

This study investigates the effects of Project Based Learning on students' academic achievement and motivation towards English. Both qualitative and quantitative methods are used in this study. In the quantitative aspect of the study, the pre-and post-test control group design is used to find out the effect of PBL on the students' achievement level. Whereas

Project-Based Learning is applied to the experimental group, instruction based on student textbooks is applied to the control group. The SPSS is used to calculate the means and standard deviations. Moreover, the T-test technique is used to determine whether there are significant differences between the two groups or not. In the qualitative part of the study, a few English teachers from several Hebron public schools and most of the experimental group students are interviewed to find out the effect of PBL on students' motivation and to point out the challenges that encounter both while implementing Project-Based Learning. The thematic content analysis technique is used in analyzing the data which has been derived through the interview method.

The pre-test findings show that there is no statistical significant difference between the experimental and control groups which indicates the equality of the two groups. Although the findings of the post-test indicate that there is no statistical significant difference between the two groups due to the use of Project-Based Learning method, it is worth saying that the mean score of students in the experimental group is higher than that of the control group which indicates the positive effect of using PBL on students' achievement. In addition, the experimental group students outperform the control group students in reading and writing skills. The results of the T-test show that there is statistical significant differences of achievement levels between students in the control group and those in the experimental group in reading and writing skills

In terms of motivation towards English lessons, the teachers and students' interview findings show that the use of PBL motivates students towards learning English, improves their self-confidence, engage them in the learning process and change learning to an enjoyable activity. Eventually, the challenges that encounter teachers and students while implementing PBL are presented according to their responses to the interview questions.

Several challenges are stated by students such as: inadequate resources, students' weakness, the refusal of team work, the lack of seriousness, the new way of assessment, the unqualified students, the insufficient time and the new roles for both teachers and students. Finding solutions to these challenges or even preparing well to reduce their negative effects is the reason for investigating them in this study.

To sum up, there are two points that the researcher wants to raise as a researcher and a teacher in the field. First of all, The Ministry of Education in Palestine has taken several steps towards altering the traditional direction of teaching and starts implementing PBL. According to the related literature and the results of this study I can say that choosing PBL as a new method of teaching and learning is entirely a right decision. Knowing that PBL has the ability to improve students' achievement, provide students with the opportunities for collaborative learning, direct students towards practicing creative and critical thinking, develop autonomous learning and lifelong learning skills and increase students' motivation towards the learning process are sufficient reasons to motivate instructors to implement it. I believe that rejecting change is the first step towards education collapse. Therefore, teachers should be open minded towards all the new method and accept only what proves to be beneficial and suitable for their students.

Furthermore, even though I completely disagree with the Ministry of Education about their way of implementation to this method, but I believe that teachers are partly responsible for not achieving noticeable improvement on the students' achievement level after implementing it for nearly three years in our schools. The contradiction between what the teachers ask their students to do and what the teachers do appeared clearly through their responses to the interview questions. On one hand, teachers want their students to search for information and to become independent learners. On the other hand, most of the teachers do

not even try to search for information about PBL and they have implemented it just depending on what their supervisors or other colleagues tell them about it. As teachers, If they really want to change the current situation of education in Palestine positively, they have to start with themselves since they are the most influential in the teaching and learning process.

5.2 Recommendations

In the light of the study results, the researcher presents several recommendations for teachers, the Ministry of Education and researchers.

First of all, for teachers:

- Training your students before implementing any new teaching method is essential.
- Taking into consideration students' individual differences and different learning styles, thinking carefully before selecting the projects and choosing what is suitable to their abilities, interests and needs.
- Be a great model for your students by taking the first step towards making the required change. Do not just stay passive where you can be creative and able to destroy all barriers.

Secondly, for the Ministry of Education:

- Enriching the Palestinian curriculum with different educational projects without neglecting that the current curriculum is too heavy, therefore, deleting some parts will be beneficial.
- Providing teachers with intensive training is the most important thing to do before implementing any new method. It is never too late, train teachers to use PBL correctly.

 Not to overload teachers with unneeded burden as using such method is time consuming and needs a lot of effort.

Finally, for researchers:

- As there are only few studies on the application of project based learning in English lessons, especially in Palestine, there is a need to conduct more studies on this issue.
- As this study focuses on using PBL on 9 grade, it is essential to assess the effect of using it on elementary stages and high school.
- This study investigates the effect of PBL on students achievement and motivation only. Therefore, examining its effect on other variables such as metacognitive skills and attitude is needed
- Designing a longitudinal study to assess the effectiveness of PBL is needed to gain valid results.

References

- Abdul-Rahman, B.H.A., Daud, K.A.M., Jusoff, K., & Ghani, N.A.A. (2009). Project Based Learning (PjBL) Practices at Politeknik Kota Bharu, Malaysia [Electronic version]. International Education Studies, 2 (4), 140-148.
- Alan, B., & Stoller, F. (2005). Maximizing the benefits of project work in foreign language classrooms [Electronic version]. *English Teaching Forum*, 43 (4).
- Ashour, H. M. (2010). Attitudes of non-English major students at universities in Hebron towards English service courses (Unpublished Master dissertation). Hebron University, Hebron.
- Bagheri, M., Ali, W., Abdullah, M., & Daud, S. (2013). Effects of project-based learning strategy on self-directed learning skills of educational technology students [Electronic version]. *Contemporary Educational Technology*, 4 (1), 15-29.
- Barge, G.L. (2007). Pre-and-post testing with more impact [Electronic version]. *Journal of Extension*, 45 (6).
- Barnes, M. (2014). SE2R can revolutionize how we assess learning. Retrieved from the source website: http://www.advanc-ed.org/source/se2r-can-revolutionize-how-we-assess-learning
- Baron, K. (2010). Six steps for planning a successful project. Retrieved from Edutopia website: http://www.edutopia.org/stw-maine-project-based-learning-six-steps-planning
- Bas, G. (2011). Investigating the effects of project-based learning on students' academic achievement and attitudes towards English lesson. *The Online Journal of New Horizons in Education, 1* (4). Retrieved January 24, 2016, from https://www.tojned.net/journals/tojned/articles/v01i04/v01i04-01.pdf

- Bas, G., & Beyhan, O. (2010). Effects of multiple intelligences supported project-based learning on students' achievement levels and attitudes towards English lesson.

 International Electronic Journal of Elementary Education, 2 (3), 365-386. Retrieved January 11, 2016, from http://files.eric.ed.gov/fulltext/EJ1052017.pdf
- Beare, N. (2014). English for Palestine 9th grade teacher's book. London: Macmillan Education
- Beckett, G.H. (2006). Project-based second and foreign education: Theory, research, and practice. In G.H. Beckett and P.C. Miller (Eds.), *Project-based second and foreign language education: Past, present, and future* (p. 3-18). USA: Information Age Publishing.
- Bergh, V. V., Mortelmans, D., Spooren, P., Petegem, P. V., Gijbels, D., & Vanthournout,
 G. (2006). New assessment modes within project-based education The
 Stakeholders [Electronic version]. Studies in Educational Evaluation, 32 (4), 345-368.
- Beyer, L. E. (1997). William Heard Kilpatrick (1871–1965). *Prospects*, 27 (3), 470-85. Retrieved from: http://www.ibe.unesco.org/sites/default/files/kilpatricke.PDF
- Blumenfeld, PC., Soloway, E., Marx, RW., Krajcik, JS., Guzdial, M.,. & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational Psychologist*, 26 (3&4), 369-398.
- Boaler, J. (2002). Learning from teaching: Exploring the relationship between reform curriculum and equity [Electronic version]. *Journal for Research in Mathematics Education*, 33 (4), 239–258.
- Boss, S. (2011a). *Project-based learning: A short history*. Retrieved from Edutopia website: http://www.edutopia.org/project-based-learning-history

- Boss, S. (2011b). *Top ten tips for assessing PBL*. Retrieved from Edutopia website: http://www.edutopia.org/pdfs/guides/edutopia-10tips-assessing-project-based-learning.pdf
- Boss, S. (2012). *The challenge of assessing project-based learning*. Retrieved from District Administration website: http://www.districtadministration.com/article/challenge-assessing-project-based-learning
- Boss, S. (2015). *Use formative assessment to put students on a winning streak*. Retrieved from ISTE website:

 https://www.iste.org/explore/articleDetail?articleid=298&category=ISTE-Connects-blog&article=
- Brown, H.D. (2000). Principles of language learning and teaching. New York: Longman.
- Buck institute for education. (2013). *Research summary: PBL and 21st century*competencies. Retrieved from BIE website:

 http://www.bie.org/object/document/research_summary_on_the_benefits_of_pbl
- Burnard, P., Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Analyzing and presenting qualitative data [Electronic version]. *British Dental Journal*, 204, 429 432.
- Castronova, J. A. (2002). Discovery learning for the 21st century: What is it and how does it compare to traditional learning in effectiveness in the 21st century? Retrieved from: http://www.myenglishpages.com/files/1282044031.pdf
- Clark, A. M. (2006). Changing classroom practice to include the project approach [Electronic version]. *Early Childhood Research and Practice*, 8 (2).
- Cunningham, J. (2012). *Student achievement*. Retrieved from: http://www.ncsl.org/documents/educ/CharterSchoolStudentAchievement.pdf

- Curran, P., Deguent, S., Lund, S. W., Miletto, H., & Straeten, C. V. (2000). *Methodology in language learning: T-kit* [Electronic version]. Strasbourg: Council of Europe publishing.
- Curtis, D. (2001). *Project based learning: Real-world issues motivate students*. Retrieved from Edutopia website: http://www.edutopia.org/project-based-learning-student-motivation.
- D'Angelo, C., Touchman, S., Clark, D., O'Donnell, A., Mayer, R., Dean, D., & Hmelo-Silver, C. (2009). *Constructivism*. Retrieved from Education website:

 http://www.education.com/reference/article/constructivism/
- David, J. L. (2008). What research says about project-based learning [Electronic version]. *Educational Leadership*, 65 (5), 80-82.
- Doppelt, Y. (2003). Implementation and assessment of project-based learning in a flexible environment [Electronic version]. *International Journal of Technology and Design Education*, 13, 255-272.
- Dunn, J. (2014). *The 5 key features of project-based learning*. Retrieved from Daily genius website: http://dailygenius.com/key-features-of-project-based-learning/
- Eguchi, M., & Eguchi, K. (2006). The limited effect of PBL on EFL learners: A case study of English magazine projects [Electronic version]. *Asian EFL Journal*, 8 (3), 207-225.
- Eskrootchi, R., & Oskrochi, G. R. (2010). A study of the efficacy of project-based learning integrated with computer-based simulation STELLA [Electronic version]. *Educational Technology & Society, 13* (1), 236-245.
- Flanagan, F. M. (1994). *John Dewey*. Retrieved from http://www.minerva.mic.ul.ie//vol1/dewey.html

- Fragoulis, L., & Tsiplakides, I. (2009). Project-based learning in the teaching of English as a foreign language in Greek primary schools: From theory to practice [Electronic version]. *English Language Teaching*, 2 (3), 113-119.
- Friesen, S., & Scott, D. (2013). *Inquiry-based learning: A review of the research literature*.

 Retrieved from http://galileo.org/focus-on-inquiry-lit-review.pdf
- Gerlach, D.L. (2008). *Project based learning as a facilitator or self-regulation in a middle school curriculum* (Unpublished doctoral dissertation). University of Pittsburgh, USA.
- Global Investment and Business Center. (2016). *Palestine (West Bank and Gaza) education*system and policy handbook [Electronic version]. USA: International Business

 Publications.
- Graaff, E. D., & Kolmos, A. (2007). History of problem-based and project-based learning. In
 E. D. Graaff & A. Kolmos (Eds.), *Management of change: implementation of problem based and project based learning in engineering* (p. 1-8). Netherlands:
 Sense publishers.
- Gultekin, M. (2005). The effect of project based learning on learning outcomes in the 5th grade social studies course in primary education [Electronic version]. *Educational Sciences: Theory & Practice*, 5 (2), 548-556.
- Hansen, B. C. (2014). Oral History Project: Lithuanian Students Study the Past to Gain Skills for the Future [Electronic version]. *Macrothink Institute*, 6 (3), 216-228.
- Harmer, N. (2014). *Project-based learning: Literature review*. Retrieved from: https://www.plymouth.ac.uk/uploads/production/document/path/2/2733/Literature_r eview Project-based learning.pdf

- Harmer, N., & Stokes, A. (2014). The benefits and challenges of project-based learning: A review of the literature. Retrieved from:

 https://www1.plymouth.ac.uk/research/pedrio/Documents/PedRIO%20Paper%206.pdf
- Hedge, T. (1993). Key concepts in ELT [Electronic version]. ELT Journal, 47 (3), 275-277.
- Hein, G. E. (1991). *Constructivist learning theory* [Electronic version]. Paper presented at the meeting of the International Committee of Museum Educators, Jerusalem.
- Hernandez, M. (2016). *Evaluation within project-based learning*. Retrieved from Edutopia website: http://www.edutopia.org/blog/evaluating-pbl-michael-hernandez
- Hosler, A. (2013). What you should know about project-based learning. Retrieved from Education World website: http://www.educationworld.com/a_curr/project-based-learning-benefits-best-practices.shtml
- Ilter, ilhan. (2014). A study on the efficacy of project-based learning approach on social studies Education: conceptual achievement and academic motivation [Electronic version]. *Academic Journals*, *9* (15), 487-497.
- Jones, M. G., & Brader-Araje, L. (2002). The impact of constructivism in education:

 Language, discourse, and meaning [Electronic version]. *American Communication Journal*, 5 (3).
- Karier, C. J. (1986). *The individual, society, and education: A history of American educational ideas* [Electronic version]. USA: University of Illinois Press.
- Knoll, M. (1997). The project method: Its vocational education origin and international development. *Digital Library and Archives*, *34* (3). Retrieved from: http://scholar.lib.vt.edu/ejournals/JITE/v34n3/Knoll.html
- Kuhlthau, C. C. (2010). Guided inquiry: School libraries in the 21st century [Electronic version]. *School Libraries Worldwide*, *16* (1), 17-28.

- Lai, E. R. (2011). *Motivation: A literature review*. Retrieved from Pearson's Research

 Reports:http://images.pearsonassessments.com/images/tmrs/Motivation_Review_fin
 al.pdf
- Larmer, J. (2012). *PBL: What does it take for a project to be "Authentic"?*. Retrieved from Edutopia website: http://www.edutopia.org/blog/authentic-project-based-learning-john-larmer
- Larmer, J. (2014). *Project-based learning vs. problem-based learning vs. X-BL*. Retrieved from Edutopia website: http://www.edutopia.org/blog/pbl-vs-pbl-vs-xbl-john-larmer
- Liu, C. H., & Matthews, R. (2005). Vygotsky's philosophy: Constructivism and its criticisms examined [Electronic version]. *International Education Journal*, 6 (3), 386-399.
- Maltese, R. (2012). *Project based learning: 25 Projects for 21st century learning*. Indianapolis: Dog Ear Publishing.
- Mapes, M. R. (2009). *Effects and challenges of project-based learning: A review* (Unpublished master dissertation). Northern Michigan University, USA.
- Meyer, D.K., Turner, J. C., & Spencer, C. A. (1997). Challenge in a mathematics classroom: students' motivation and strategies in project based learning [Electronic version].

 The Elementary School Journal, 97 (5), 501-521.
- Mitchell, R. (2016). *ESL and EFL Are they the same?*. Retrieved from Pearson website: https://www.english.com/blog/esl-and-efl
- Nassir, S. M. (2014). The effectiveness of project-based learning strategy on ninth graders' achievement level and their attitude towards English in governmental schools (Unpublished master dissertation). The Islamic University, Gaza.
- Nelson, J. R., Morgan, R. L., & Marchand-Marlella, N. E. (2013). *Understanding and interpreting educational research*. New York: The Guilford Press

- Nichols-Barrer, I., & Haimson, J. (2013). *Impacts of five expeditionary learning middle schools on academic achievement* [Electronic version]. Cambridge, MA:

 Mathematica Policy Research.
- Nunan, D. (1989). *Designing tasks for the communicative classroom*. Cambridge: Cambridge University Press.
- Nunan, D. (1991). Language teaching methodology: A textbook for teachers. USA: Prentice Hall.
- Nunan, D. (1992). *Research methods in language learning*. Cambridge: Cambridge University Press.
- Nunan, D. (2004). *Task based language teaching* [Electronic version]. United Kingdom: Cambridge University Press.
- Oliver, K. (1999). *Case Based Learning* [PowerPoint slides]. Retrieved from http://wings.buffalo.edu/ubtlc/resources/Case-based_teaching.pdf
- Pappas, C. (2014) Instructional Design Models and Theories: The Discovery Learning Model. Retrieved from e-Learning Industry website:

 https://elearningindustry.com/discovery-learning-model
- Parker, W. C., Mosborg, S., Bransford, J. D., Vye, N. J., Wilkerson, J., & Abbott, R. (2011).

 Rethinking advanced high school coursework: Tackling the depth/ breadth tension in the AP US Government and Politics course [Electronic version]. *Journal of Curriculum Studies*, 43 (4), 533–559.
- Patton, W.A., & Robin, J. (2012). Work that matters, The teacher's guide to project-based Learning [Electronic version]. London: The Paul Hamlyn Foundation.
- Project Foundry. (2016). *Why project-based learning?* Retrieved from Project Foundry website: http://www.projectfoundry.com/why-project-based-learning/

- Railsback, J. (2002). *Project based instruction: Creating excitement for learning* [Electronic version]. USA: North West Regional Education Laboratory.
- Richards, J.C., & Renandya, W.A. (2002). *Methodology in language teaching: An Anthology of Current Practice*. Cambridge: Cambridge University Press.
- Schaub, S. (2012). Acquiring second-languages through constructivist and communicative approaches in literacy collaborative schools. Retrieved from Literacy Collaborative at OSU: http://lcosu.blogspot.com/2012/04/acquiring-second-languages-through.html
- Schwartz, J. (2011). Project based vs problem based learning. *ETC Journal*. Retrieved from https://etcjournal.com/2011/06/26/project-based-vs-problem-based-learning/
- Seidel, S. (2014). Authenticity to self: Engaging students' identities in project based learning.

 Retrieved from BIE website:

 http://bie.org/blog/authenticity_to_self_engaging_students_identities_in_project_based_learning
- Seif, E. (2014). Seven types of projects that foster powerful learning. Retrieved from EDGE website: http://edge.ascd.org/blogpost/seven-types-of-projects-that-foster-powerful-learning
- Simpson, J. (2011). *Integrating project-based learning in an English Language Tourism*Classroom in a Thai University (Unpublished doctoral dissertation). Australian Catholic University, Australia.
- Stix, A., & Hrbek, F. (2006). *Teachers as classroom coaches: How to motivate students*across the content areas [Electronic version]. Virginia: Association for Supervision and Curriculum Development.

- Stoller, F. (1997). Project work: A means to promote language content. In J.C. Richards & W.A. Renandya (Eds.), *Methodology in language teaching: An anthology of current practice* (p. 107-120). Cambridge: Cambridge University Press.
- Taber, K. S. (2011). Constructivism as educational theory: Contingency in learning and optimally guided instruction [Electronic version]. In J. Hassaskhah (Eds.), *Educational theory*. (pp. 39-61). New York: Nova Science Publisher.
- The Center for Teaching and Learning. (1994). Teaching with case studies [Electronic version]. *Speaking of Teaching* 5 (2), 1-4.
- The Center for Teaching and Learning. (2001). Problem-based learning [Electronic version].

 Speaking of Teaching 11 (1), 1-8.
- The Cognition and Technology Group at Vanderbilt. (1992). The Jasper series as an example of anchored instruction: Theory, program description, and assessment data [Electronic version]. *Educational Psychologist*, 27 (3), 291–315.
- Thomas, J.W. (2000). *A review of research on project based learning*. Retrieved from: http://www.bie.org\pdf\researchreviewPBL.pdf.
- Vlăsceanu, L., Grünberg, L., & Pârlea, D. (2004). *Quality assurance and accreditation : A glossary of basic terms and definitions*. Romania: UNESCO-CEPES. Retrieved from: http://www.aic.lv/bolona/Bologna/contrib/UNESCO/QA&A%20Glossary.pdf
- Welsh, J.A. (2006). *An exploration of project-based learning in two California charter schools* (Unpublished doctoral dissertation). University of Southern California, USA.
- Westbrook, R. B. (1993). *John Dewey (1859-1952)*. Retrieved from UNESCO website: http://www.ibe.unesco.org/fileadmin/user_upload/archive/Publications/thinkerspdf/deweyf.PDF

- Wrigley, H. S. (1998). Knowledge in action: The promise of project-based learning [Electronic version]. *Focus on Basics*, 2 (D), 13-18.
- Yam, L. H. S., & Rossini, P. (2010). *Implementing a project-based learning approach in an introductory property course*. Paper presented at the 16th Pacific Rim Real Estate Society Conference, Wellington, New Zealand. Retrieved from http://www.prres.net/Proceedings/..%5CPapers%5CYam_Implementing_a_Project-Based_Learning_Approach_in_an_Introductory_Property_Course.pdf
- Zohar, A., & Dori, Y. J. (2003). Higher order thinking skills and low-achieving students: Are they mutually exclusive? [Electronic version]. *The Journal of the Learning Sciences*, 12 (2), 145-181.

Appendix A: Pre-Test First Section

Ninth Grade Pre - test		Ministry of education and higher education			
Name:	diameter (Ibrahim Abu Dabat Girls			
Date:	وزارة التربية والتعليم العالي	School			
Reading: Read the following passage and answer the questions below: 15 marks					
	made while scientists were research	•			

Many great discoveries were made while scientists were researching something else. We say they happened by accident. But the scientists were clever enough to recognize the importance of something strange or unusual. <u>They</u> used a combination of imagination and knowledge to understand the importance of what they found.

Penicillin (Alexander Fleming, Scottish scientist, 1881-1955)

In 1922 Fleming was doing some research into diseases. He noticed that one of his dishes had mold on it. Mold is a soft brown or green substance that grows on old food. Normally Fleming would throw moldy dishes away. But instead he decided to experiment. Under the microscope, he saw that the mold was killing some very dangerous bacteria. Alexander discovered that <u>it</u> produced a chemical that killed the bacteria. Today we can treat serious illnesses because of Fleming's accidental discovery.

A) Answer the following questions:			
1- When was Alexander Fleming born?			
2. What is mold?			
3. Can we treat illnesses nowadays?			٠.
4. Write a suitable title for the passage			_
B) True or False:			
1- All the great discoveries were made by accident.	T	F	
2- Fleming was a Scottish inventor.	T	F	
3- The mould produced a chemical that killed the bacteria.	T	\mathbf{F}	
C-The underlined pronouns			
(1) - (they) line 3 refers to			
(2) – (it) line 9 refers to			

D) From the text, find words that mean:
 The ability to form pictures or ideas in your mind Very small living things
F – Find in the text:
A) Past continuous tense:
B) Passive:
C) Two adjectives
Vocabulary: 20 marks
Complete the sentences with the suitable word:
jug - sell - bridge - traffic - find out
1 - What do they in this shop?.
2 - We'll be late – there is a lot of in the streets.
3 – We could use this for water or lemonade.
4 – I want to how this machine works.
5 – We need to go over the river – let's find a
Add the words to their definitions:
{ brave - fair - generous - intelligent }
1: Having good thinking, understanding and learning.
2:Being not afraid of danger.
3:Giving others more of your money or time more than people do.
4: treating people equally.
Complete the following table:

Nouns		Safety		Danger
Adjectives	Healthy		Active	

Write the opposites:

1- safe	()
2- inside	()
3-beautiful	()
4- fast	()

Match the abbreviation with its meaning:

1- am for example

2- eg and so on

3- etc before midday

Language: 20 marks

Choose the best way to complete the sentences.

1- I like listening (to \ of) music.	I know the answer - I am guessing
2- Ahmad is an (intelligent / intelligently) student	I know the answer - I am guessing
3- I play football very (good / well).	I know the answer - I am guessing
4- Salma is lovely. I really like (she\her).	I know the answer - I am guessing
5 – Sandra doesn't (listen \ listens) to the radio.	I know the answer - I am guessing
6 − (Does \ Do) you play tennis?	I know the answer - I am guessing
7 – John is (play\ playing) football at the moment.	I know the answer - I am guessing
$8 - $ I've been a student (for \ since) one year.	I know the answer - I am guessing
9 – Have you cleaned the car (yet\already)?	I know the answer - I am guessing
10 – Pablo has (been\being) doing his homework for how	urs.
	I know the answer - I am guessing
11 − I hate pizza now but I (use\used) to like it.	I know the answer - I am guessing
12- I will come and see you (when\until) I am in town.	I know the answer - I am guessing
13 – (What\Why) did you leave your job?	I know the answer - I am guessing
14 – How (often\long) do you eat in a restaurant.	I know the answer - I am guessing
15 – (Whose\who's) MP3 player is that?	I know the answer - I am guessing
16 – Ivan doesn't like milk, (does\doesn't) he?	I know the answer - I am guessing

in the office.
I know the answer - I am guessing
n? I know the answer - I am guessing
ays. I know the answer - I am guessing
80%. I know the answer - I am guessing
1. I'm hungry. ()
2. I've lost my pencil. ()
3. This bag is heavy. ()
4. I am not going out tonight.
()
5. Are you studying English tomorrow? ()
()
ces of conversations.
Information Technology.
They are my favourite! ings more slowly.
· ·
It's on your right.
It's on your right.
It's on your right.
1 8

Writing: 20 marks 1 – Rewrite the sentence with the correct punctuation. 1 . im so happy i got a job offer 2 . salma its been a long time how are you man 2 – Re-arrange the following: 1. was – after – the exam – passing – happy – My brother 2. movie – you – to – What – did – come – see? $3 \cdot my - restaurant - This - favorite - is$ Write a short paragraph about a famous place in Palestine.

THE END

Appendix B: Pre-Test Second Section

Listening: 10 marks

Rock climbing sport is too dangerous for you, and it is more dangerous than most sports. The safest activity is swimming, and that's also good for old injuries. But with all sports, always remember to warm up first. Do gentle exercises for the various parts of your body. This helps stop injuries.

A – True or False:

- 1 () Rock climbing is the safest sport.
- 2-() Do gentle exercises for all parts of the body.
- 3-() Swimming is good for old injuries.

B – Choose the correct answer:

- 1 the first thing to do when playing a sport is to (exercise warm up climb).
- 2 (Swimming Rock climbing Exercises) is too dangerous for you.

C – Answer:

- 1- What do we have to do in all sports?
- 2 Do gentle exercises help stop injuries?

Speaking: 5 marks

As a student in the ninth grade, what are the rights and responsibilities of school students towards their family, teachers, friends, community and the whole country.

Reading aloud: 5 marks

The reading comprehension text.

Many great discoveries were made while scientists were researching something else. We say they happened by accident. But the scientists were clever enough to recognize the importance of something strange or unusual. They used a combination of imagination and knowledge to understand the importance of what they found.

Penicillin (Alexander Fleming, Scottish scientist, 1881-1955)

In 1922 Fleming was doing some research into diseases. He noticed that one of his dishes had mould on it. Mould is a soft brown or green substance that grows on old food. Normally Fleming would throw mouldy dishes away. But instead he decided to experiment. Under the microscope he saw that the mould was killing some very dangerous bacteria. Alexander discovered that it produced a chemical that killed the bacteria. Today we can treat serious illnesses because of Fleming's accidental discovery.

Appendix C: Post-Test First Section

State of Palestine High Ministry of Education

Hebron Directorate

Name:_				
Points:	80 r	oints	S	



بسم الله الرحمن الرحيم

Ibrahim Abu Dabat School for Girls English Language First Semester Exam (Post-test)

Grade: Nine (A-B)

Date: \December\2015

Part one: Reading comprehension:

Q.1 Read the text, and then answer the questions below

15 marks

For over 1,400 years, Muslims have remembered this man as Islam's first Caliph. The many stories clearly show that he was a great man and a great Muslim.

The future Prophet Mohammad () saw that Abu Bakr was a very good and honest person, and <u>they</u> became very good friends. Later, after Mohammad () <u>had received God's Word</u>, Abu Bakr became an early believer. Because <u>he</u> believed so deeply, the Prophet Mohammad () gave him the name 'Al-Siddiq'.

As a young man, <u>Abu Bakr made a lot of money</u>, but he gave most away, and he kept only a little for himself. <u>He was also as brave as he was generous</u>, as this next story shows.

Makkah's leaders hated Islam at first. Once, one of them saw the Prophet while he was visiting the Ka'ba. This man, Abu Jahl, said to his friends, '<u>I</u>'ve been waiting to kill him for a long time and now I'm going to do it!'

When Abu Bakr saw the danger, he ran to rescue the Prophet. But then Abu Jahl and the others attacked him instead, and he was almost killed. This meant nothing to Abu Bakr, however. When he finally opened his eyes, his first words were, 'Is the Prophet safe?'

Through the things he said and did, Abu Bakr was very important to the Prophet and to Islam. So, after the Prophet had died, he became the first Caliph, and he continued the work of taking Islam's message to the world.

	1. a.	Answer the questions: What good personal qualities did Prophet Mohammad see about Abu Bakr?		
	b.	What two things made him a very special Muslim in the eyes of the Prophet?		
	c.	How did Makka's leaders feel about Islam in its early ages?		
	d.	Who attacked Abu Bakr?		
	e.	What did Prophet Muhammad call Abu Bakr?		
2. 1	Finc	d if the following sentences are true or false:		
b.				

3.F	ind in the text:
a.	A word which means (not afraid of danger)
b.	A synonym of (saved)
	e opposite of 1. (a lot of)
	2. (closed)
c I	Past continuous tense:
	Past perfect tense:
w	was periods tense
4 . '	The underlined pronouns A) (he) line (5) refers to
••	B) (I) line (10) refers to
	C) (they) line (3) refers to
5 (Choose the correct answer from the text above:
a. I	Line (4)had received God's Word mean:
1 1	a. Gode's rules b. God's orders c. God's Message
b. I	ine (8) he was <u>as brave as he was generous</u> mean:
	a. He was very brave and very generous b. He wasn't brave, but he was generous
	c. He was brave, but he wasn't generous
	ine(7) Abu Baker made a lot of money mean:
	a. he was poor b. he was rich d. he has money but not much.
6. \$	Suggest a title for the text:
	Part two: Vocabulary 20 marks
O.1	. Complete the following sentences with a suitable word:
Q. 1	l. Complete the following sentences with a suitable word:
	independence powerful curtains gates captain
1.	independencepowerfulcurtainsgatescaptainListen, the
1.	independencepowerfulcurtainsgatescaptainListen, the
1. 2.	independencepowerfulcurtainsgatescaptainListen, the
1. 2.	independencepowerfulcurtainsgatescaptainListen, the
1. 2. 3. 4.	independencepowerfulcurtainsgatescaptainListen, theof the plane is speaking again.There are manyaround Al-Aqsa Mosque, for example the Damascus Gate.Theseare just the right size for the window.Salah Al Din wasand brave.
1. 2. 3. 4.	independencepowerfulcurtainsgatescaptainListen, the
1. 2. 3. 4.	independencepowerfulcurtainsgatescaptainListen, theof the plane is speaking again.There are manyaround Al-Aqsa Mosque, for example the Damascus Gate.Theseare just the right size for the window.Salah Al Din wasand brave.
1. 2. 3. 4. 5.	independencepowerfulcurtainsgatescaptainListen, theof the plane is speaking again.There are manyaround Al-Aqsa Mosque, for example the Damascus Gate.Theseare just the right size for the window.Salah Al Din wasand brave.Every year we celebrate ourDay on 15November.
1. 2. 3. 4. 5.	independencepowerfulcurtainsgatescaptainListen, the
1. 2. 3. 4. 5.	independencepowerfulcurtainsgatescaptainListen, theof the plane is speaking again.There are manyaround Al-Aqsa Mosque, for example the Damascus Gate.Theseare just the right size for the window.Salah Al Din wasand brave.Every year we celebrate ourDay on 15November.
1. 2. 3. 4. 5.	independencepowerfulcurtainsgatescaptainListen, the
1. 2. 3. 4. 5.	independence powerful curtains gates captain Listen, the
1. 2. 3. 4. 5.	independence powerful curtains gates captain Listen, the of the plane is speaking again. There are many around Al-Aqsa Mosque, for example the Damascus Gate. These are just the right size for the window. Salah Al Din was and brave. Every year we celebrate our Day on 15 November. 2. Write words next to their meanings: Alone by hand thermal blanket continent expert a. using hands not machine. b. who has a lot of experiences and skills about something.
1. 2. 3. 4. 5.	independence powerful curtains gates captain Listen, the
1. 2. 3. 4. 5.	independence powerful curtains gates captain Listen, the of the plane is speaking again. There are many around Al-Aqsa Mosque, for example the Damascus Gate. These are just the right size for the window. Salah Al Din was and brave. Every year we celebrate our Day on 15 November. 2. Write words next to their meanings: Alone by hand thermal blanket continent expert a. using hands not machine. b. who has a lot of experiences and skills about something.
1. 2. 3. 4. 5. Q.2	independence powerful curtains gates captain Listen, the of the plane is speaking again. There are many around Al-Aqsa Mosque, for example the Damascus Gate. These are just the right size for the window. Salah Al Din was and brave. Every year we celebrate our November. Day on 15 November. Alone by hand thermal blanket continent expert a. using hands not machine. b. who has a lot of experiences and skills about something. c. without other people d. a blanket to keep someone warm
1. 2. 3. 4. 5. Q.2	Listen, the
1. 2. 3. 4. 5. Q.2	Listen, the
1. 2. 3. 4. 5. Q.2 Q.2 Q.2	Listen, the
1. 2. 3. 4. 5. Q.2	Listen, the
1. 2. 3. 4. 5. Q.2 Q.2 Q.2	Listen, the

d.	d. You should hand in your project by Sunday. "by" here means: (before/next/a way of				
0	travelling) Ali is so	(0)	xciting/excite/exci	tod)	
	One of them is not an adjective.		fficiently/	ieu)	
	ngerous/windy)	(C.	inciently/		
	In the past, Roman called Istanbul as				
	yzantium/Constantinople/Ankara)				
	I'll meet you1:00	(8	nt/over/in)		
Q.	4. Use the words in the boxes to make pairs o	f opposites.			
	modern remember		ing forget		
	boring	ancient			
2 -	•••••••••••••••••••••••••••••••••••••••				
	Part three: Language		20 marks		
	1. Choose the correct answer:				
1)	Samithe cou	=			
	ε	c. arrives	d. are arrived	d	
2)	Iat home today a. is b. be		میں ا		
2)	Wechicken.	c. am	d. are		
	a. doesn't love b. loving I have been learning English				
7)	a. for b. since		d. at		
5)	He				
		c. still haven't fou	nd d. still has f	ound	
	Actions	Reema	Sameera	Lana	
	1 How fast did they run?	***	****	****	
	a. Reema is as fast as Sameera.	C. Sameera is			
	b. Sameera is faster than Reema d. Lana isn't as fast as Sameera				
7)	Buildings were constructed with an excellent s	tone. The underlin	ed verb		
	active verb b. present perfect		d. passive v	verb	
-	I am going to stay in this hotel two week		_		
	in b.to	c.for	d. at		
	Rock climbing is than most sport		1.1 . 1		
a.	dangerous b. more dangerous c. m	ore dangerous	d. the most dang	gerous	

Q. 2. Compare between the following using (too and enough):



	veights / heavy for him; strong / hold them above his h	nead	
1.		2	•••••
	Q. 3. Correct the verbs in brackets.		
a.		(cook), Ah	mad opened the
b.	door When Sami	(eat) hi	s food he left the
٠.	house.	(04)	s rood, no rore the
c.	After Salah AL Din		er large parts of
	the Muslim World, he turned to Jerus	alem.	
O.	4. Change the following sentences to P	Passive Voice:	
_	Teachers teach Spanish at my school		
L	A .: 1		
D.	A rich man called Adam Bates gave of	our town the land of the park	
c.	People built the cities with stones.		• • • • • • • • • • • • • • • • • • • •
O.	5 Complete the sentences with <u>a few</u>	or a little:	
_	I have		
2 .	You have	mistakes in the test.	
3.	We stayed days in Flo	orence and visited the museums.	
	rt three speaking		5 marks
<u>3-</u>	Complete the conversation with usefu	ul questions :	
	here are you staying in Palestine?	Are you from Palestine?	How long
	e you staying?		
W	hen will they take them?	Could you complete these visitor la	anding cards?
	tendant:		
	edal : well, we are Palestinian Amer		
	tendant:edal : with our cousin's family		
	tendant:		
	edal : for four weeks.		
	tendant: Ok		9

		e a arrive, when you show the		?		
Q.	•	rect answer: e a nice flight" in this que				
a.r		b. falling intonation		d. same intonation		
	Q.3 Complete th	e following:				
1.	In words we say t	his number (4.5%) as				
2 .	The silent letters i	n (whole)				
are)					
	rt Five: Writing			20		
(do	•	led letters correctly				
(rd	aesm)					
		nce with the correct pun ne lets go this way	<u>ctuation .</u>			
1.	<u> </u>					
2.	did you enjoy you	ur flight yes very much				
	A) Re-arrange t	he following:				
		- her –send – a massage- I		r		
	2 – important – about – the – It – to – is – future – think					
3. .	Answer the follow	ving questions to write a	composition about	a future day trip for		
	ur class.					
	1. Where do you					
	2. When do you	pian to go?				

- 3. How do you plan to travel?4. What time do you plan to leave in the morning and where from?
- 5. What do you plan to do about lunch?
- 6. What time do you plan to come home at the end of the day?

School trip
We are going to for our school trip, and we are going on
, the
leaves at
for lunch. We are coming home back at.
for function we are coming nome back at
4. Write a short paragraph about (A day you will always remember) These ideas may help you: What make this day so special for you? Does this day change your life in a positive way? Who are the people that you share this memory with? Is there anything that you wish to change on that day?

Best wishes

Appendix D: Post-Test Second Section

Listening:	10 marks
Part 1 Uncle Basim: come one, everyone, let's go. This way. Rami: Did you have a good flight? Nidal: Yes, it was fine, thanks. Everything went very well. Uncle Basim: What time did you take off? Hadeel: At 10:30 yesterday morning. Rami: And you landed at 9:30. Ahmad: So were you in the air for 23 hours? That's a very long time! Nidal: No, no, the flight was thirteen hours. Rami: Don't forget the time difference, Ahmad. Ahmad: How many hours is that? Uncle Basim: Los Angeles is ten hours behind us here in Palestine.	
Part 2 Aunt Nada: Was the food all right? Hadeel: Yes, it was fine. The flight attendants were very nice to us. Rami: How many meals did you have? Nidal: Well, we had lunch and dinner yesterday Hadeel: And then we had breakfast before we landed this morning. Aunt Nada: Oh, dear! So you won't want lunch. I wanted to make a nice lunch for you! Nidal: Oh, I think we will want it, Aunt Nada! Hadeel: Food on a plane is OK, but real Palestinian food is much better Uncle Basim: What else did you do with your time on the plane? Hadeel: I watched a film, and I read my book. Aunt Nada: What about you, Nidal? Did you get very bored? Nidal: No, no. I watched two films, and I also played computer games.	
Listen to part 1 and complete the notes. 1 - Took off at:	
Listen to part 2 and answer the questions. 1 – What meals did Hadeel and Nidal have on the plane?	
2 – What did Hadeel do during the flight?	
3 – What did Nidal do?	
4 – Was the food all right?	
3. Listen. Do the questions rise or fall at the end? 1. Did you have a good flight? () 2. What time did you take off? ()	

Reading aloud: 5 marks

Abu Bakr Al-Siddiq

¹ For over 1,400 years, Muslims have remembered this man as Islam's first Caliph. The many stories clearly show that he was a great man and a great Muslim.

The future Prophet Mohammad (ﷺ) saw that Abu Bakr was a very good and honest person, and they became very good friends. Later, after Mohammad (ﷺ) had received God's Word, Abu Bakr became an early believer. Because he believed so deeply, the Prophet Mohammad (ﷺ) gave him

As a young man, Abu Bakr made a lot of money, but he gave most away, and he kept only a little for himself. He was also as brave as he was generous, as this next story shows.

Makkah's leaders hated Islam at first. Once, one of them saw the Prophet while he was visiting the Ka'ba. This man, Abu Jahl, said to his friends, 'I've been waiting to kill him for a long time, and now I'm going to do it!'

When Abu Bakr saw the danger, he ran to rescue the Prophet. But then Abu Jahl and the others attacked him instead, and he was almost killed. This meant nothing to Abu Bakr, however. When he finally opened his eyes, his first words were, 'Is the Prophet safe?'

Through the things he said and did, Abu Bakr was very important to the Prophet and to Islam. So, after the Prophet had died, he became the first Caliph, and he continued the work of taking Islam's message to the world.

Speaking: 5 marks

Students have to speak about their best friend.

the name 'Al-Siddiq'.

Who is your best friend? Tell me about her? Where did you meet her for the first time? How long have you been friend? Why do you like her? Tell me about the activities that you do together.

Appendix E: Reading Aloud Rubric

Reading Aloud Rubric

	1	2	3	4
Volume	Too soft, can't hear at all	Can hear, but not loud enough	Loud enough and we can all hear perfectly	Volume was perfect and added increases or decreases for emphasis
Clarity	Mumbled a lot. Could not understand	Mumbled a bit. Hard to understand all the words	Pronounced all the words correctly	There was an extra crispness to the pronunciation
Fluency	Choppy, needed to stop and figure out words	Stopped now and then to work on a word	Smooth like a river. Knew every word	Flowed faster or slower depending on the story's mood
Expression	Didn't change voice at all monotone	Did not change voice very much	Changed their voice to make it interesting the whole time	Sounded very professional. This reader should be on stage
Posture	Held the book in front of their face. Did not stand tall	Sometimes held book too high, sometimes stayed tall	Held the book properly and stood tall all the time	Moved comfortably during the reading

Appendix F: Speaking Rubric

Speaking Rubric

	1	2	3	4
Completing the task	Information provided was inadequate	Information provided was limited	Adequate information provided	Extensive information provided
Grammatical accuracy	Multiple mistakes that take away meaning	Frequent mistakes that make it somewhat difficult to understand	Some mistakes that do not interfere with meaning	Very accurate, few mistakes
Pronunciation	Largely incomprehensible	Somewhat difficult to understand	Easy to understand	Sounds almost like a native speaker
Fluency	Does not flow	Frequent pauses	Occasional pauses	Natural pattern of speech
Effort	Lack of effort and attention to detail	Lack of effort or attention to detail	Good effort and attention to detail	Outstanding effort and attention to detail

Appendix G: Writing Rubric

Writing Rubric

	1	2	3	4
Content	Content is not clearly conveyed	Content is clear in general, but is not fully developed, is too broad, lacks clarity.	Content is effectively conveyed, but the writing is too formulaic.	Content is creatively expressed, demonstrates the writer's attitude in a logical and detailed development.
Language and syntactic variety	Serious and frequent errors in language use and sentence structure	Multiple errors that do not obscure meaning and do obscure meaning. Notably inappropriate choice of words and syntax.	Displays facility in the use of language, though may have several errors that do not obscure meaning. Adequate, but inconsistent facility with vocabulary and syntax.	Displays consistent facility in the use of language, may have a few errors that do not obscure meaning. Demonstrates syntactic variety, appropriate word choice. May have some errors.
Coherence	There is little sense that the writing is organized	Many details are not in a logical or expected order.	Some details are in a logical or expected order.	Details are placed in a logical order, and the way they are presented effectively keeps the interest of the reader.

Grammar and spelling	There are serious and frequent errors in grammar and spelling	Writing contains multiple errors that obscure and do not obscure meaning	Writing displays adequate, but possibly inconsistent use of grammar and spelling that do not obscure meaning	Writing display consistent facility in the use of grammar and spelling, though it may have a few errors that do not obscure meaning.
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Appendix H: Some of the Teachers' Responses to the Interview Questions

Teacher 1

1- A. In short, describe your way of implementing Project-Based Learning on your students. Frankly, my way of implementing PBL is highly situational and a little bit random. It depends on the nature of the class ambiance, the objectives of the lesson and the students' aspirations. I mean I don't always follow the same way. I sometimes set groups, pairs or even individual work. In general, as PBL is a student centered method, I make my students do all the work by themselves without my intervention.

B. Do you think that you follow exactly the correct way of implementing PBL?

To be honest, I am not sure if I am implementing it correctly or not. I don't agree with the word correct in this question, I prefer using the word suitable. I think there is no "correct and definitive" way of implementing PBL.

C. How do you learn it? Depending on books, workshops, supervisors help or something else.

I have learned about it from my supervisor who gave me a brief explanation about this method.

2 – Do you find the use of PBL beneficial or not? Why?

It is very beneficial because it entourages differentiated learning. Not all students have the same learning speeds, so, by projects, students will be given the chance to participate in different ways rather than the traditional. For example, mediocre students may bring pictures or something else to complete a project. In short, PBL gives every student the chance to participate.

3 – What are the challenges that you face while implementing PBL on your students?

I've faced many challenges. First of all, some students feel that through "PBL" they are not learning anything; they prefer the traditional linear way. Also, PBL requires group work most

of the times; some students don't like to work with others. Furthermore, assessment in PBL is very challenging, especially in overcrowded classes.

4 – What are your recommendations as a teacher for the use of PBL in the Palestinian schools?

- Projects should be simple and made by students. Teachers should not ask for complicated and fancy projects.
- Teachers should be qualified to deal with such a strategy. Teachers should have a
 professional training regarding it.
- Classes should be convenient regarding numbers of students to give teachers the chance to follow the students' work.

Teacher 2

1- A. In short, describe your way of implementing Project-Based Learning on your students.

I divide my students into groups, order them to design their projects in light of specific themes, determine the due date for presentation and give students' marks for their work.

Sometimes when we don't have enough time to present the students' projects, I just ask them to submit their projects without giving them the chance to present their work and give them grades according to their projects.

B. Do you think that you follow exactly the correct way of implementing PBL?

No, I don't think I'm following exactly the correct way because of several factors:

- Implementing PBL correctly costs time and I do not have extra time.
- I have not train my students before implementing PBL.
- No one show me how to implement project based learning.
- The strike hinders me from focusing on the details while implementing PBL.
- Supervisors who clearly ask for covering as much as teachers can of the material.

C. How do you learn it? Depending on books, workshops, supervisors help or something else.

I have learnt about it from other colleges who gave me some ideas about PBL.

2 – Do you find the use of PBL beneficial or not? Why?

to the teamwork are also challenging.

Yes, I it will be very beneficial if it is implemented in a correct way. I believe that PBL can enhance group work, student-centered, and autonomous learning. PBL can be a motivational way of teaching if the students find the project interesting and not totally beyond their level.

3 – What are the challenges that you face while implementing PBL on your students?

Students' weaknesses that need extensive efforts, so should the teacher base the project on the material or students' level? Should students' projects be based on the current curriculum or what? Moreover, the insufficient resources at our school hinder teachers from implementing PBL in the desired way. Furthermore, the huge gap between students' levels and their refusal

4 – What are your recommendations as a teacher for the use of PBL in the Palestinian schools?

There should be some courses to train teachers on how to use and implement PBL.

Students should be trained to do projects gradually from the elementary stage. It shouldn't be sudden in any way because it would be for vain.

Teacher 3

1 – A. In short, describe your way of implementing Project Based Learning on your students. I think that PBL needs a lot of work and planning, so I prepare myself well and gather some ideas and questions from the curriculum which lead to some activities inside the classroom. I divide my students into groups. Then I ask each group to choose an idea. After that, I give them colored papers and ask them to develop their idea. Finally, I ask them to show their works and evaluate their outcomes. However, sometimes I ask them to submit their projects without presentations to save time.

B. Do you think that you follow exactly the correct way of implementing PBL?

Yes, I implement it correctly. I try to deal with my students' circumstances as much as I can. I try to start with questions about each idea, put a certain plan for each group, walk between the groups and watch their progress.

C. How do you learn it? Depending on books, workshops, supervisors' help or something else?

From my supervisor.

2 - Do you find the use of PBL beneficial or not? Why?

- Of course it is a beneficial way to teach and learn. It pushes students to work together by using colored papers, paints ...etc. Moreover, it encourages weak and shy students to work with their peers.
- 3 What are the challenges that you face while implementing PBL on your students?
- Some students don't take it seriously.
- Some students don't have enough vocabulary to develop their work.
- This project needs enough time.
- Lack of awards and prizes for good students.
- Group work is a challenging issue.
- 4 What are your recommendations as a teacher for the use of PBL in the Palestinian schools?
- We need enough time to apply these projects.
- I think that we can encourage our students to work by using several attractive tools.
- I think there should be awards and prizes for the students who did a great job.

Teacher 4

1 – A. In short, describe your way of implementing Project Based Learning on your students. In general, the students have to do all the works by themselves. Therefore, I just give them the chance to depend on themselves and do all the work alone. I implement project based learning on my students as the following:

9th grade: I do observe a topic that students are interested in during the unit and ask them to do a project about. Their projects are mainly 2 or 3 pages maximum that aims at adding something new to their knowledge, or it aims at filling a gap that exists in that topic.

8th grade: I usually focus on the grammatical structure. My students at this level usually have problems in the application of the grammatical structure. I notice that they could not transfer their learning to be applicable to the actual language use. Therefore, I ask them to find out how the presented structures are used in real English.

7th grade: students usually talk about the book presented topics. Their projects are a kind of illustration for the presented topics in the books.

6th grade: their projects are class made ones. They are done as cited in their books in the 8th period of each unit

B. Do you think that you follow exactly the correct way of implementing PBL?

All in all, I think I'm doing it the right way.

C. How do you learn it? Depending on books, workshops, supervisors help or something else. I have asked my supervisor about the main criteria of the projects and how I should implement it. Her answer was that every teacher can determine how to design the projects and how to implement them. Therefore, I do what I think is suitable to my students depending on my observation to the lesson.

2 – Do you find the use of PBL beneficial or not? Why?

I think that the use of PBL is beneficial only if the projects are discussed in the class. It is essential to give the students the chance to present what they have learned to their classmates. PBL becomes a mean for wasting time when the projects are done as a self-learning task.

3 – What are the challenges that you face while implementing PBL on your students? Since PBL has recently introduced to our students, I think it is difficult for them to use it as a mean for learning without being trained on how to do projects as well as how to use them for functional learning. Another thing, my students think that PBL is just gathering some information together, therefore, they think it might work to ask others to do it for them, or they think that ready-made essays from the internet is helpful.

4 – What are your recommendations as a teacher for the use of PBL in the Palestinian schools?

- There should be a kind of training for students as well as teachers to the project based learning.
- I think there should be clear cut rubrics for the projects that students are asked to do.
- I think also that projects should have more impact on students' learning. I do not think that students' should do one project for the whole semester. They should include more projects to guarantee a functional language learning.

Teacher 5

1 – A. In short, describe your way of implementing Project Based Learning on your students.

My way of implementing PBL depends on asking students to search on the internet and write a project about specific items like grammar or vocabulary in their own language and give a presentation of what they did. B. Do you think that you follow exactly the correct way of implementing PBL?

C. How do you learn it? Depending on books, workshops, supervisors help or something else.

I have learned that from my supervisor who gave me advices on how to use PBL in education.

2 – Do you find the use of PBL beneficial or not? Why?

Yes, I am implementing it in a correct way.

I did not find PBL beneficial because students copy subjects from the sources without thinking about it. Moreover, I think that it would be better for students to dedicate all the class time for doing the activities, practicing the grammatical rules explicitly and listening to their teacher's explanation than wasting their time searching for information as they do not have the ability to distinguish between what is right and what is wrong.

3 – What are the challenges that you face while implementing PBL on your students? The challenges that I face while implementing PBL lies on the fact that not all students have access to different sources and they do not know how to use these sources. In addition, students refusal to the team work is also challenging.

4 – What are your recommendations as a teacher for the use of PBL in the Palestinian schools?

if I am in a decision making position, I will prevent using such methods. I believe that most of the educators try to convince people that the traditional way of teaching is not effective. This is completely wrong as the proficiency level of student who were taught twenty years ago by using the traditional method is obviously higher than today's students who are taught by using such new methods.

Teacher 6

1 – A. In short, describe your way of implementing Project Based Learning on your students. I bring several topics which are suitable for my students' level. Ask the students to choose one of them to make their projects about. Divide my students into groups and ask them to divide responsibilities among them. They search for their information, collect and analyze it and create their final project. I give them all the supports needed while they are working. Finally, they present their projects and we evaluate it.

B. Do you think that you follow exactly the correct way of implementing PBL?

Yes, I implement it in a correct way.

C. How do you learn it? Depending on books, workshops, supervisors help or something else.

The first time I hear about PBL is by reading an official announcement offered by the ministry of education telling us that students' learning should include projects. But this announcement did not present how to employ this style. Therefore, I have read and search about it.

2 – Do you find the use of PBL beneficial or not? Why?

Yes, it is really beneficial way to teach foreign language. It helps me in discovering my students' abilities, especially the low achiever. Moreover, it motivates students and engage all the students in the learning process.

3 – What are the challenges that you face while implementing PBL on your students? Most of my students hate group work. the fact that all group members are responsible for supporting each other as the final assessment will be on the whole project makes some students feel hostile towards the teamwork and find it unfair. Moreover, my students have some creative ideas for their projects, but the insufficient resources force them to change their project to a simpler one that they can afford.

4 – What are your recommendations as a teacher for the use of PBL in the Palestinian schools?

Teachers should receive more training on how to use PBL. Students also must have classes on how to design projects and make use of different sources.

Teacher 7

1 – A. In short, describe your way of implementing Project Based Learning on your students. First of all, I divide my students into groups and provide them with a theme to make their project about. I discuss this theme with my students and state several ideas for making projects about this theme. In their group, students make an agreement about their final project and divide responsibilities among them. They search for their information, collect and analyze it and create their final project. My intervention is limited but I give them all the supports needed. Finally, each group presents their projects and the other groups assess each other work with the teacher help.

B. Do you think that you follow exactly the correct way of implementing PBL?

Yes, I think so.

C. How do you learn it? Depending on books, workshops, supervisors help or something else.

We have discussed this method in a course in the MA program.

2 – Do you find the use of PBL beneficial or not? Why?

Yes, it is really beneficial and effective way to teach English but only if it is implemented correctly.

3 – What are the challenges that you face while implementing PBL on your students? I have encountered with several challenges while implementing PBL. First of all, PBL changes the students and the teachers role in the learning process completely. This changeover makes the use of PBL a little bit challenging for both teachers and students.

Moreover, I can say that the huge number of low achievers and the insufficient time and resources are also challenging issues.

4 – What are your recommendations as a teacher for the use of PBL in the Palestinian schools?

Projects should have more impact on students' learning. Making one project for the whole semester as the Ministry of Education requires students to do is not sufficient. Including more projects is crucial to guarantee better results.

Teacher 8

1 – A. In short, describe your way of implementing Project Based Learning on your students. I ask my students to sit in a mixed ability groups. Then I give them a topic that they have to search about. We discuss together how they should make their projects about this topic. I help them by providing them with several resources that they can use to collect their information. While they are making their project I provide them with sufficient feedback to modify their project before the presentation. Then they present their projects in front of the whole class. Finally, we discuss the strengths and weaknesses points in each project and evaluate it.

B. Do you think that you follow exactly the correct way of implementing PBL?

Yes, I am implementing it correctly.

C. How do you learn it? Depending on books, workshops, supervisors help or something else.

I have read a lot about this method when the ministry of education asks us to use it in our classes.

2 – Do you find the use of PBL beneficial or not? Why?

Yes, it is really beneficial because it engages all the students in the learning process and motivates them to be better learners.

- 3 What are the challenges that you face while implementing PBL on your students?

 This method is time consuming and we really don't have extra time to implement it.

 Moreover, the insufficient resources at our schools is also a challenging issue that hinder students from making their projects in the desired way.
- 4 What are your recommendations as a teacher for the use of PBL in the Palestinian schools?

Solving the existing problems is essential before implementing any new methods. In addition, training the teachers and students is a priority to reach the desired results.

Teacher 9

1 – A. In short, describe your way of implementing Project Based Learning on your students. This method is a student centered one where students are responsible for their own learning. However, that does not mean that I am going to make them do everything by themselves. I bring several topics which are suitable for my students' level and ask them to choose one of these topic to make their projects about. After dividing the students into groups I give them the chance to decide the shape of their final project and to divide responsibilities among them. I give them sufficient time to search for their information, collect and analyze it and create their final project. They know that they can ask me when they face a problem that they cannot solve. Finally, they present their projects in the class and receive feedback from me and other students.

B. Do you think that you follow exactly the correct way of implementing PBL?

Yes, I do.

C. How do you learn it? Depending on books, workshops, supervisors help or something else.

I have learned about this method in the MA program.

2 – Do you find the use of PBL beneficial or not? Why?

Yes, it is a beneficial way for teaching and learning. It can improves students achievement and enhance their autonomous learning. It is really an enjoyable way that engages all the students in the learning process despite their level of proficiency.

3 – What are the challenges that you face while implementing PBL on your students?

The insufficient time and resources are the major challenges that encounter me while implementing PBL. Moreover, the students weakness hinder us from reaching the desired results.

4 – What are your recommendations as a teacher for the use of PBL in the Palestinian schools?

Train the teachers well and provide them with all the needed resources to come up with the desired results. In addition, implementing such a method is time consuming. Therefore, providing teachers with sufficient time to implement such a method is essential.

Teacher 10

1 – A. In short, describe your way of implementing Project Based Learning on your students.

I divide my students into groups, order them to design their projects in light of specific themes, determine the due date for presentation and give students marks for their work.

Sometimes I ask them to submit their projects without presentations to save time. My intervention is limited to give the students the chance to be independent learners.

B. Do you think that you follow exactly the correct way of implementing PBL?

Yes, I implement it correctly.

C. How do you learn it? Depending on books, workshops, supervisors help or something else.

I have learned about it in a course in the MA program.

2 – Do you find the use of PBL beneficial or not? Why?

No, I don't think it is a beneficial way to teach or learn another language. My students do not have the ability to take responsibility for their own learning. I think this method is suitable for university students and not for school students.

3 – What are the challenges that you face while implementing PBL on your students?

We do not have enough time to implement this method correctly. Even though the directors and supervisors encourage us to use PBL, they care a lot about the quantity of the material to be finished and look at it as an essential element in the teachers' assessment. Moreover, the students weakness is also a challenging issue.

4 – What are your recommendations as a teacher for the use of PBL in the Palestinian schools?

Implementing the best teaching method in bad conditions will not come up with the desired results. Therefore, finding solutions for the existing problems such as the crowded classes and the heavy curriculum is essential before implementing anything new.

Appendix I: A Sample of Students' Responses to the Interview Questions

Students 1

1 - Do you like learning English in a conventional class? Why?

Yes, I like learning English in a conventional class because I like listening to my teacher's explanation and how she simplify all the complicated points.

2 - How do you feel towards using project based learning method in learning English?

I really like learning English through PBL because it gives me the chance to stand in front of the whole class to present my work which motivates me to be better language learner and increases my self-confidence.

3 - Would you like to learn through PBL again? Why?

Yes, I would like to live the same experience again but only if the members in my group are changed as I have encountered with several problems because of their carelessness.

4 - What are the challenges that you faced while implementing PBL?

Working in groups is really hard, especially when there are some careless girls in your group. In addition, making good project costs time. We have several responsibilities and we cannot devote most of our free time just for projects.

Students 2

1 - Do you like learning English in a conventional class? Why?

Yes, I like learning English in a conventional class as my textbook provides me with information suitable to my level and my teacher explains all the complicated things. I really do not have any problem in learning in conventional class.

2 - How do you feel towards using project based learning method in learning English?

I hate this method because it forces us to work in groups. Satisfying my group members is impossible, they make me feel that my work is never good enough. Honestly, this experience does not only make me hate this method, but it also makes me hate some girls.

3 - Would you like to learn through PBL again? Why?

Of course no. it is not beneficial and I can learn better through conventional class.

4 - What are the challenges that you faced while implementing PBL?

Group work is a challenging issue. Having students who don't accept the others viewpoint makes working in groups impossible. Moreover, this method places more responsibilities on us which makes learning through this method very hard.

Students 3

1 - Do you like learning English in a conventional class? Why?

Yes, I like learning in a conventional class as the curriculum includes several enjoyable activities and my teacher simplify the materials according to our level.

2 - How do you feel towards using project based learning method in learning English?

It is not as enjoyable as I thought. Moreover, I don't think that it is beneficial. I think that learning through conventional class is satisfying, so why we should change our way of learning.

3 - Would you like to learn through PBL again? Why?

No, I don't like to live the same experience again. This method is really hard and the results of using it do not worth all that efforts.

4 - What are the challenges that you faced while implementing PBL?

I face a real problem in communicating with others, I cannot make the thing the way I wish. I compile the sentence elements in my mind and I really think that it is a good one. However, when I speak nobody understands me and the teacher restates my sentence to be understood.

Students 4

1 - Do you like learning English in a conventional class? Why?

No, I don't like learning English in a conventional class because it is very boring. The same thing in each lesson, my teacher speak and I have to lesson.

2 - How do you feel towards using project based learning method in learning English?

I love learning through PBL. I cannot express my happiness and satisfaction when I see my final project and hear my teachers and other students' positive comments. This method makes me believe more in myself.

3 - Would you like to learn through PBL again? Why?

This method places more responsibility on us; learning through conventional class is easier. However, learning through PBL is more enjoyable and I would like to participate in it again.

4 - What are the challenges that you faced while implementing PBL?

PBL is time consuming. I wish I had more than 24 hours each day. In addition, working with other students in groups is not an easy thing. I really have a problem in dealing with some girls.

Students 5

1 - Do you like learning English in a conventional class? Why?

No, I don't like learning in a conventional class as I have to keep silent most of the time. The things that I have to do in a conventional class are too limited, such as listening to my teacher explanation, writing some notes, or answering questions.

2 - How do you feel towards using project based learning method in learning English?

I like it a lot. It is really a great experience and I have learnt a lot from it.

3 - Would you like to learn through PBL again? Why?

I like learning through PBL and it would be great if we do it again. PBL is not only away of learning, it is the best way to have a lot of fun while learning.

4 - What are the challenges that you faced while implementing PBL?

I do not have enough time to make my projects. I have to study for other subjects as well and that costs time.

Students 6

1 - Do you like learning English in a conventional class? Why?

I hate learning in a conventional class. The same thing happened in each lesson. There is nothing interested in it.

2 - How do you feel towards using project based learning method in learning English?

The sense of achievement that the use of this method makes me feel is amazing. I really like learning through PBL.

3 - Would you like to learn through PBL again? Why?

Yes, I would like to live the same experience again. We have faced many challenges, but we have also learned that we should never give up. We know that learning through PBL is not easy, but the results that we gain from using it make it worth to be lived again.

4 - What are the challenges that you faced while implementing PBL?

Students' new role in the learning process is really challenging as we have to depend on ourselves in order to learn. However, it is essential to say that when we become more familiar with our new roles the degree of struggling decreases gradually.

Students 7

1 - Do you like learning English in a conventional class? Why?

No, I don't like learning in a conventional class because I cannot understand most of my teacher explanation. The curriculum is above my level and I feel shy to ask my teacher to explain the material more.

2 - How do you feel towards using project based learning method in learning English?

I like everything in this method. I like searching for information, discussing ideas, presenting my work and having a role in the assessment process. It is really a wonderful experience.

3 - Would you like to learn through PBL again? Why?

Yes, I would like to learn through PBL again. It is a beneficial way of learning, it improves me in different ways. It makes me believe more in myself and that I have the ability to be one of the great students.

4 - What are the challenges that you faced while implementing PBL?

I love learning through PBL; however, I do not have enough time to make it my way of learning. Moreover, searching for information in English is exhausting as I have to translate all the information I find in order to understand and find out if it is beneficial for my project or not.

Students 8

1 - Do you like learning English in a conventional class? Why?

No, I don't like learning in a conventional class because it is boring and make me feel stupid.

2 - How do you feel towards using project based learning method in learning English?

I like learning through PBL a lot. It is a satisfying experience that changes my negative feeling towards English.

3 - Would you like to learn through PBL again? Why?

Yes, I would like to learn through PBL again but not with the same group members. There are some girls in my group who don't take PBL seriously, which affects the whole group works in a negative way.

4 - What are the challenges that you faced while implementing PBL?

In some situations I feel that what PBL requires me to do is beyond my level. Learning through PBL is not easy at all. Moreover, I have a problem in accepting my new role and find it challenging. It is really hard to be responsible for your own learning and to look at your teacher as a facilitator and not as information provider.

Students 9

1 - Do you like learning English in a conventional class? Why?

No, I don't like learning English in a conventional class. I completely agree that the English textbook includes several kinds of activities, but most of us do not have the ability to apply these activities. Unfortunately, the English lesson seems to be boring for me as I could not understand most of it.

2 - How do you feel towards using project based learning method in learning English?

Learning through PBL is amazing and I like it a lot. It is completely a new way of learning which puts more responsibilities on us, but I like it and find it beneficial.

3 - Would you like to learn through PBL again? Why?

Yes, I would like to learn through PBL again. However, I would like to change my group members as having a girl who believes that nothing is right except for what she already does in your group is enough to make you want to change your group.

4 - What are the challenges that you faced while implementing PBL?

We don't have enough time for making projects. I know that I can make better projects if I have more time. In addition, working in groups is not an easy thing as you have to work with students who have different levels of proficiency.

Students 10

1 - Do you like learning English in a conventional class? Why?

My feeling towards the conventional class depends on the subject of the lesson. For example, I like reading comprehension lesson, but I hate writing lesson.

2 - How do you feel towards using project based learning method in learning English?

I like it, especially when my teacher and other students show their admiration for our work.

3 - Would you like to learn through PBL again? Why?

Yes, I would like to learn through PBL again because it is really fun and beneficial at the same time.

4 - What are the challenges that you faced while implementing PBL?

Accepting my new role in the learning process is a challenging issue. I used to depend on my teacher to provide me with all the information needed. However, I have to depend on myself now to search for information, collect it and analyze it. I don't hate my new role. I believe that this changeover in my role is better, but it is not an easy task.

Students 11

1 - Do you like learning English in a conventional class? Why?

My feeling towards the conventional English class depends strongly on my teacher. For example, I like the conventional class when my teacher uses some attractive strategies such as cards, photos and LCD. However, I hate it when she lectures us.

2 - How do you feel towards using project based learning method in learning English?

Even though I do not have the ability to participate in English like other students and that I always have very bad scores in my English tests, I feel, for the first time in my life, that I have a role in English lessons and that other members in my group respect and support me.

3 - Would you like to learn through PBL again? Why?

Yes, I would like to learn through PBL again. Learning through PBL is not an easy thing as it is a student centered method. However, I like learning through PBL and find it enjoyable.

4 - What are the challenges that you faced while implementing PBL?

I have faced several challenges while implementing PBL. First of all, learning through PBL is really hard and requires me to do things beyond my level. Moreover, working in groups is not useful and it may cause a kind of hatred among students. Finally, PBL is time consuming. I have spent a long time thinking about and working on my projects.

Students 12

1 - Do you like learning English in a conventional class? Why?

It really depends on the subject of the lesson. For example, I hate grammar and language lessons and I love vocabulary and reading comprehension lessons.

2 - How do you feel towards using project based learning method in learning English?

I used to hate English and look at it as the most difficult subject. However, this experience changes me and makes me believe more in myself.

3 - Would you like to learn through PBL again? Why?

Yes, it is a great experience and I would like to use it again.

4 - What are the challenges that you faced while implementing PBL?

I have a problem in accepting the new role of my teacher as a facilitator and not as a source of knowledge and solutions provider. In addition, my low level of proficiency hinder me in several situations from doing my project in the desired way.

Appendix J: Some Photos for the Students Projects



































