A CASE STUDY ON MOBILE-BLENDED COLLABORATIVE LEARNING IN AN ENGLISH AS A FOREIGN LANGUAGE (EFL) CONTEXT

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ABSTRACT

A CASE STUDY ON MOBILE-BLENDED COLLABORATIVE LEARNING IN AN ENGLISH AS A FOREIGN LANGUAGE (EFL) CONTEXT

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The ubiquitous use of mobile devices for informal learning has aroused attention in foreign language learning context recently. As learning a foreign language poses a number of challenges for the students, it has become indispensable to search for 'optimal' conditions to enhance opportunities of engaging in the target language. Within this context, the Mobile-Blended Collaborative Learning model has been integrated in and out of the classroom learning in order to enable language learners to practice English by means of collaborative, authentic language activities based on project-based learning approach. The purpose of this study was to explore the effects of using mobile instant messaging application, WhatsApp, on language proficiency of 85 EFL students during a seven-week Project Work. The participants were enrolled in upper-intermediate prep classes at a School of Foreign Languages of a Turkish private university. Data were collected through semi-structured interviews, self- and peer evaluation of group work, a rubric for assessing project work and log files of WhatsApp conversations. Results revealed that the participants were able to improve their language and communication skills, expanded their vocabulary knowledge, and recognized the English colloquial language. It was concluded that practicing English in an authentic setting facilitated the students' language learning and instant messaging in an informal platform for educational purposes had positive effects on their performance and the quality of work.

Keywords: Mobile-Blended Collaborative Learning, Project-Based Learning, Instant Feedback, Foreign Language Learning and Informal Learning

ÖZ

YABANCI DİL OLARAK İNGİLİZCE BAĞLAMINDA
MOBİL-HARMANLANMIŞ İŞBİRLİĞİNE DAYALI ÖĞRENME ÜZERİNE
BİR DURUM ÇALIŞMASI

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Sınıf dışında öğrenme amacıyla mobil araçların yaygın olarak kullanılması yabancı dil öğrenme bağlamında son zamanlarda büyük ilgi uyandırmıştır. Öğrenciler bir yabancı dili öğrenirken birtakım güçlüklerle karşılaştıkları için öğrencilerin hedef dili kullanmalarını sağlayacak fırsatları geliştirecek uygun koşulları aramak kaçınılmaz hale gelmiştir. Bu bağlamda, İngilizceyi yabancı dil olarak öğrenen öğrencilerin proje tabanlı öğrenmeyi temel alan işbirliğine dayalı özgün dil öğrenme etkinlikleriyle hedef dili kullanmalarını sağlaması için Mobil-Harmanlanmış İşbirliğine Dayalı Öğrenme modeli hem sınıf içi hem sınıf dışı öğrenme ile birleştirilmiştir. Bu çalışmada, mobil anlık mesajlaşma uygulaması WhatsApp'ın İngilizceyi yabancı dil olarak öğrenen öğrencilerin dil yeterliliklerinin gelişimi üzerindeki etkileri araştırmak hedeflenmiştir. Yedi hafta süren bu proje çalışmasına Türkiye'deki bir Yabancı Diller Yüksek Okulu Hazırlık sınıflarının orta üzeri düzeylerde okuyan 85 öğrenci katılmıştır. Nicel ve nitel yöntemler uygulanarak yarı-yapılandırılmış görüşmeler, akran değerlendirmeleri, proje değerlendirme rubriği ve WhatsApp günlük dosyaları veri toplama kaynakları olarak kullanılmıştır. Çalışmanın sonuçları, öğrencilerin dil ve iletişim becerileri geliştirebildiklerini, özellikle kelime bilgisi dağarcıklarının geliştiğini ve İngilizce konuşma dilinin farkına vardıklarını ortaya koymuştur. Sonuç olarak, sınıf dışı ortamda İngilizce çalışma yapmak dil öğrenmelerini kolaylaştırdı ve anlık mesajlaşma sisteminin eğitim amaçlı kullanılması çalışma performanslarına olumlu katkıda bulunmuştur.

Anahtar Kelimeler: Mobil-Harmanlanmış İşbirliğine Dayalı Öğrenme, Proje Tabanlı Öğrenme, Anlık Geri Bildirim, Yabancı Dil Öğrenme ve Sınıf Dışında Öğrenme

To My Dear Family

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TABLE OF CONTENTS

LIST OF TABLES

TABLES

LIST OF FIGURES

FIGURES

LIST OF ABBREVIATIONS

FL	Foreign Language
L2	Second Language
EFL	English as a Foreign Language
EAP	English for Academic Purposes
PDA	Portable Digital Assistant
BIE	Buck Institute for Education
M-LEARNING	Mobile Learning
MIM	Mobile Instant Messaging
MIS	Management Information Systems
ELL	English Language Learning or Learners
MBCL	Mobile-Based Collaborative Learning
CALL	Computer-Assisted Language Learning
MALL	Mobile-Assisted Language Learning
ICT	Information and Communication Technology
CEFR	Common European Framework of Reference
PREP SCHOOLS	English Language Preparatory Schools
PBL	Project-Based Learning
WBL	Web-Based Learning
SMS	Short Message Service
V	Vantage (Upper-Intermediate)
BL	Blended Learning
IM	Instant Messaging
HE	Higher Education
F2F	Face to Face
WA	WhatsApp
APP	Application

Chapter 1

Introduction

1.1 Overview

The increasing popularity of mobile technology devices such as mobile phones, Personal Digital Assistants (PDAs), iPods, laptop or ultra-notebook computers influences teaching and learning by providing students with more flexible environments where they can learn anywhere and any-time. The functionality of these mobile devices has expanded tremendously from solely being a device to dial numbers. They also have such opportunities as instant messaging, photo and video sharing, podcasting, browsing and blogging which have been integrated into students' daily life in recent years. Furthermore, these mobile devices can promote communication, collaboration, learning and sharing among individuals in both formal and informal settings.

A key issue, here, is that young people search for new ways of developing their knowledge and experience of mobile technologies in out-of-school settings, which is obviously distinct from how they utilize those technologies at school (Sefton-Green, Nixon, & Erstad, 2009). Furthermore, the use of mobile technologies have been influencing both modern communication ways and a foreign language learning since situations which are rooted in daily real-life vigorously affect language itself (Ogata & Yano, 2005). Through technological devices, innovation and authenticity can contribute to language learning materials. As a result, the opportunity for numerous forms of input and interaction increases. Jarvis (2006) stated that there has been a great increase in the number of English language learners (ELLs), which is notably due to the growth of the internet, and the boost in online social interaction and sources of information. This universal change based on the network of online sources has brought in novel learning environments supporting collaborative learning, which is crucial for the modern foreign language education (Chapelle, 2009). The question is how to blend formal and informal learning to facilitate effective and collaborative learning among EFL learners via mobile technology.

Mobile technology-enhanced learning activities employed by students in both in formal settings are different from those in informal settings. In school based on

formal learning, technologies are used in a systematic, planned, administered and usually specific way to execute curricular work in public spheres. On the other hand, in informal environments, technologies are socially and collaboratively used by young people in unorganized and non-administered ways to undertake individual interests in private spheres (Lai, K. W., Khaddage, F., & Knezek, G., 2013). Mobile technologies empower blending formal and informal learning by readjusting the present learning settings, which can result in improving students' learning skills and experiences inside and out of school (Faux, McFarlane, Roche, & Facer, 2006; Ooms, Linsey, Webb, & Panayiotidis, 2008).

The current advancement and popularity of wireless and mobile technologies has made mobile learning (m-learning) more significant and many recently reported educational studies which constitute the technology - enhanced learning approaches point out *m-learning* (Chu, Hwang, Tsai & Tseng, 2010). Mobile learning could have profound effect on the future teaching and learning in collaborative learning contexts (e.g., El-Hussein & Cronje, 2010; Huang, Yang, Huang, & Hsiao, 2010; Ryu & Parsons, 2012).

El-Hussein and Cronje (2010) stated that although mobile and wireless technologies have strongly influenced the lives of modern people both socially and financially, these mobile technologies have been confined to social communication. The authors further claimed that m-learning has been pertained little as a core pedagogical activity. However, mobile-based collaborative learning has the potential to increase the number and virtue of interactions through collaborative learning projects or activities (Kim, H., Lee M., & Kim, M., 2014). In addition, the learning activities attributed to collaborative mobile learning can generate more commitment and motivation compared to more traditional, face-to-face, collaborative learning activities (Facer et al., 2004). Accordingly, a significant question of what type of collaborative learning needs to be embedded in mobile learning arises. The whole process of collaborative learning resorts to an activity that triggers the learner to realize the learning outcomes throughout the process (Ryu & Parsons, 2012). Therefore, researchers endeavor to create mobile collaborative learning environments to enhance learning (Huang et al., 2010).

A report written by Kukulska-Hulme, Sharples, Milrad, Arnedillo-Sanchez and Vavoula (2009) highlighted that the recent mobile learning projects conducted by European researchers both in- and out-of-school environments have reinforced approaching the evolution of technology-enhanced learning from a different standpoint. In a sense, these m-learning projects not only build a bridge between formal and informal learning, but also incorporate personal, small-group or a wider online community learning, participation of teachers and family in various modes of interaction. Research shows that there is evidence that mobile technologies can facilitate the learning mechanism in formal and informal contexts with the support of collaborative activities (e.g., Sharples et. al., 2005; Lai, Khaddage, & Knezek, 2013). Further, *project work* integrating digital and mobile technologies is an efficient means to correlate formal and informal learning (Lai et al., 2013).

Mobile applications (or mobile apps), which are software applications installed in mobile devices such as smartphones or tablets, are well-renowned subject matter to a large student audience (Pauca & Guy, 2012). Successful integration of these mobile apps requires novel methods and models to ensure active participation, engagement, interaction and collaboration among students and teachers (Khaddage & Lattemann, 2013a). Mobile apps for teaching and learning are in their infancy, but if they are integrated effectively into learning at schools, they can clarify the learning process, promote efficient teaching and feedback (Khaddage, Lattemann, & Bray, 2011). In addition concerning the integration of mobile phones into educational settings, while communication (speaking or texting) between teachers and peers is rendered through mobile phones, feedback, which could appear as a fundamental basis for any educational activity, is also crucial (Holzinger, Nischelwitzer, & Meisenberger, 2005).

There is an agreement that feedback can have a significant influence on assisting second language (L2) learners "to confirm, disconfirm and possibly modify the hypothetical, transitional rules of their developing grammars" (Chaudron, 1988, p. 134). In particular, *immediate* or *instant feedback* might be the most efficient way to approve or reject interlanguage hypotheses. Many studies done on oral interaction or computer-based instruction pointed out the effects of immediate feedback succeeding the responses of the learner. Additionally, they recognize Computer

Assisted Language Learning (CALL) as an advantage for "immediate feedback" (Bowles, 2005; Heift & Rimrott, 2008; Rosa & Leow, 2004; Sanz, 2004).

This study is based on the Mobile-Blended Collaborative Learning (MBCL) model which conceptualizes the use of mobile technologies and applications to develop a blended and collaborative learning setting highlighting the efficiencies of informal learning setting, and consequently implementing a smooth and versatile learning environment (Khaddage, Lanham, & Zhou, 2009). Mobile technology has initiated a transformation from traditional learning based on teacher-centered classrooms to student-centered learning environments unbounded by time and location. A more balanced and flexible teaching and learning is adopted in various forms of online learning in which the most current approach is blended learning medium connecting face-to-face and online delivery mediums. Since classroom settings may become limited in terms of meeting learners' needs especially for students desiring a more informal learning, m-learning can support learners with real-time interactions amongst peers and teachers. Hence, this study focuses on collaboration in an FL learning context in a mobile-blended learning environment.

As a result, this study purports to examine how a mobile social networking application, WhatsApp, could facilitate the FL learning learners by providing instant feedback in collaborative learning process executed as an out-of-school activity. Previous studies mostly focus on two particular factors: the effectiveness and the design of mobile learning systems disregarding the learning processes (Wu, Wu, Chen, Kao Lin, & Huang, 2012). However, MBCL model puts an emphasis on informal learning process to encourage more collaboration and real-time interaction among EFL students in accordance with their needs via teamwork project.

1.2 Statement of the Problem

In most EFL settings, the first common challenge is that non-native speakers of English usually experience the lack of access to authentic English language environment. Most learners have limited exposure to the target language in real settings. Xiou and Luo (2009) stated that sole dependence on classroom instruction is not adequate for EFL learners to practice the target language. Thus, they need to seek out different opportunities to acquire awareness of the English language and gain knowledge both inside and outside the classroom context (Field, 2007). Hylan (2004)

points out: “Language learning can take place at any time and in any place, including the home and the community” (p. 180). So, out-of-class activities can facilitate language learning. In the present study, a group project work was carried out as an out-of-class activity on the purpose of fulfilling various needs and concerns of EFL learners and generating multiple authentic language inputs such as reading and vocabulary activities (Bas, 2008; Hillyard, Reppen, & Vasquez, 2007). Furthermore, as students living in a digital world become quite keen on using mobile devices, they spend more time in informal settings rather than formal settings (Looi et al., 2010) and mobile learning takes place outside traditional educational settings (Vavoula, 2004). Informal learning enables interaction, collaboration, sharing and learning among the learners in informal settings unrestricted to time and location (Looi et al., 2010). However, many teachers may not be aware of the significance of m-learning yet or do not exactly know how to utilize it outside of the physical and temporal limitations of the classroom.

Another critical factor to effective language learning is feedback, which is generally assumed as a crucial concept in most learning theories. In formal setting, learners are accustomed to the guidance and support of the teacher to make progress in their own learning, but they also learn so much outside the classroom and may need instant responses to their questions. Due to the insufficient time for feedback to each learner within the classroom setting, the learners may wait for a long time to receive feedback or forget to ask their question the next day. However, WhatsApp can provide both synchronous and asynchronous communication to send and receive instant feedback between the learners and the teacher (Ho, 2011) and can also contribute to learning beyond class hours (Bouhnik & Deshen, 2014). As a conclusion, two fundamental issues in EFL settings - lack of authentic language environment and the shortage of time for required feedback - are the focus of this study to figure out their effects on EFL learners’ language proficiency within a mobile-blended collaborative learning environment.

1.3 Purpose of the Study

The purpose of this study is to explore the effect of using WhatsApp mobile application incorporated into the EFL context as a medium of out-of-class activity on EFL prep students' language learning process in a mobile-blended collaborative learning environment. The overarching research question for this study is: *What is the effect of integrating WhatsApp mobile app into a group project work in out-of-school setting on EFL prep students' language learning process?* Sub-questions guiding this research are as follows:

1. What are the prep school students' perceptions of being involved in the project work setting powered with WhatsApp?
2. What language practices do they experience in their language learning process through WhatsApp discussions?
3. How do peer and self-assessment differ in scores on each student's contribution to group work?
4. How are evaluation scores of the project works produced by each group?

1.4 Significance of the Study

Thanks to advances in mobile technologies including the use of mobile devices, it becomes inevitable to exceed the learning environment far beyond the bounds of classroom (Liu, 2007). Educators have started to consider m-learning with the intent of surpassing the realm of computer-mediated education to learning situations away from traditional education environments (Chen et al., 2003; Uzunboylu et al., 2009). Regarding that, this study is shaped by the conceptual framework, Mobile-Blended Collaborative Learning (MBCL) model (Lai et al., 2013), which emphasizes the efficiency of informal learning involving more collaboration and learner control over the process of learning. Thus, this could be realized through face-to-face and online communication assisted via WhatsApp. The basic rationale behind using this model is to potentially overcome the drawbacks of traditional foreign language education.

This study focuses on two important issues in EFL context: setting up authentic language learning environment and giving instant feedback anytime and anywhere to EFL learners so as to facilitate their language learning process. The objective of this

research is more practical than theoretical because it seeks to examine the use of mobile phone succeeding the functionality of mobile app within informal learning settings as a means of changing or broadening viewpoints and possibly the prospective practices of EFL teachers especially in higher education.

There is a lack of research on the variation of different experiences in the literature regarding mobile-blended learning, collaborative learning, blending formal and informal learning, instant feedback and WhatsApp. Therefore, looking at such issues, the present study may suggest insights into practical implications for enriching teaching models in different contexts for higher education EFL teachers.

1.5 Operational Definitions

Mobile Learning (m-learning): This term pertains to the use of small, portable, handheld and light electronic devices consisting of mobile phones, PDAs, and tablets and they are utilized for educational activities in different environments such as classrooms, workplaces and home (Traxler & Leach, 2006).

Blended Learning (BL): It is defined as **"**combining various pedagogical approaches (e.g., constructivism, behaviorism, cognitivism) to produce an optimal learning outcome with or without instructional technology" (Driscoll, 2012, p. 54).

Project-Based Learning (PBL): It is a learning process that students are accountable for their learning and work collaboratively to resolve "authentic, curriculum-based, and often interdisciplinary" problems (Soloman, 2003, p. 10).

CALL: This acronym refers to "Computer Assisted Language Learning" which involves the integration of a computer into the language learning process.

Web 2.0: It refers to various web sites and applications through which online information can easily be created and shared with other people.

Moodle: It is a free software learning platform which is also known as Learning Management System (LMS).

Chapter 2

Review of Literature

This chapter reviews the available research on the proposed topic, four basic subjects including project-based learning, blended learning, mobile learning and recent research about the discussed areas. It also covers certain subtopics and recent studies related with these subjects.

2.1 Project-Based Learning

The basis of Project-based learning (PBL) is hardly new. Regarding the history of PBL, the principle behind this pedagogical approach can be traced back to Piaget (1952) who asserted that people learn actively by constructing the deep logical structures successively rather than the sole transition of knowledge from teacher to student. Similarly, PBL reflects the perspective of Vygotsky (1978) who suggested that learning occurs through social interaction reassuring students to cope with the sort of cognitive challenges that are above their existent levels of skill to a certain degree. According to Vygotsky's socio-cultural theory of development based on the "zone of proximal development", the teacher's role is to assist facilitate meaning construction by modelling, by asking questions, and by creating a cooperative and collaborative learning environment which provides hands-on or authentic materials which reinforce learning.

Project-based learning has been defined in many ways since PBL has been conducted in a variety of different disciplines (Welsh, 2006); therefore, there exists no single definition. Among the definitions, PBL has been referred to as a "model", "approach" or "technique." In essence, PBL is based on the notion that students learn by doing or experiencing and dealing with real world problems. Solomon (2003) stated that PBL is a learning process that students are accountable for their own learning and they work collaboratively to resolve problems which are "authentic, curriculum-based, and often interdisciplinary" (p. 10). Accordingly, students first need to plan their own learning process. Secondly, they need to determine what, where and how to gather information. The final step is to analyze and synthesize the information they found out and finally apply and demonstrate their new knowledge in the present context.

Considering no common agreement about the definition of PBL has been reached yet, Markham et al. (2009) described PBL which is that PBL embraces a prolonged questioning process surrounded by elaborate and actual questions as well as purposefully settled tasks in which students take up learning information and abilities. Through the implementation of interdisciplinary project works involving active participation of students with various presentations, PBL projects (Markham et al., 2009) include the following:

- Identifying learners' inner trigger to learn, their ability to carry out significant task, and their requirement to be paid attention regarding the student-centered learning.
- Keeping learners occupied with the main conceptions and elements of an instruction. In terms of curriculum the project work is put in the center.
- Emphasizing tempting questions and subjects which encourage learners to discover profoundly real world and essential issues.
- Necessitating the utilization of fundamental abilities and tools for the management of the project work, the autonomy of learners and learning.
- Determining tools which resolve cases, clarify difficulties, or allow information produced through examination, search or judgement.
- Incorporating numerous tools which provide instant feedback and persistent occasions to support learners to learn through their experiences.
- Employing assessments rested on the performance of learners which offer tough challenges, expect great from learners and indicate various abilities.
- Promoting learners to collaborate by means group works, presentations conducted by learners or collective assessments of the outputs of project.

In PBL, students work collaboratively, in pairs or groups, to create a product or deal with a problem by pursuing certain principles such as planning, organizing, negotiating, making decisions about such issues as performing tasks, employing strategies, finding materials and sharing duties. Through project works, students are subjected to various abilities and competencies including cooperation and collaboration, project planning, decision making, and time management (Blank, 1997; Dickinson et al., 1998). Consequently, some benchmarks of PBL can be assumed as interaction, collaboration, cooperation, group work, critical thinking, project management and problem solving.

In foreign language education, PBL is characterized by the use of authentic language (Fried-Booth, 2002), highlighting communicative competence and relevance (Hutchinson, 1991), and support of autonomy of language learner (Little, 2007). Thus, in an EFL setting PBL can be highly beneficial if students are presented with a learning environment established on the student centered activities such as group project works with the purpose of encouraging students to utilize project-management strategies, use problem-solving skills, language for negotiation and practical methods to complete the project. As a matter of fact that EFL learners are not exposed to the target language much outside their world and even in the classroom. However, by means of PBL students could take a great opportunity of working in cooperation through hands-on experience within an authentic setting (Fried-Booth, 2002). Overall, PBL can facilitate the language, content and communicative skills of students. In contrast to traditional language learning settings, students can experience the target language in an authentic learning setting which is reinforced by the implementation of a variety of project works.

2.1.1 Principal Characteristics of Project-Based Learning

According to Haines (1989), the characteristics of project work need to be interesting, productive, active, coherent, integrative, obtainable, authentic, useful, motivating and adaptable. In a NWREL PBL report, Railsback (2002) indicated some prevalent features of PBL as follows:

- Learner-centered and student-directed
- An explicit pre-, while- and post- process
- Offering meaningful content to the learner
- Authentic issues or problems
- Practice of first hand examination
- Observable product to be shared with target audience
- Providing feedback from professional resources
- Providing reasoning and self-evaluation
- Real-world assessments

It is evident that PBL has many different characteristics which put an emphasis on authentic learning supported through authentic project works. Therefore, it is essential to examine the effect of authentic learning within PBL environment.

2.1.1.1 Authentic Learning

The term authenticity has become a catchword in education. For instance, the terms "real-world application," "problem-based learning," "project-based learning," "relevant practices" and "open inquiry" can all of these terms be related to the notions of authentic learning (Schumacher & Reiners, 2013). Maina (2004), who studied faculty and graduate student perceptions of the essence of authentic learning, puts forward these components: activities represent real world occasions; learning occurs in meaningful situations, and the learner is in the center of instruction. Thus, it is recognized that authentic learning enables students to be occupied with relevant and real-world tasks.

Herrington and Herrington (2006) maintained that learners in an authentic learning setting attend to activities which challenge and motivate them as well as necessitating cooperation and assistance. In addition, Herrington et al. (2003) asserted that learners who participated in authentic learning are motivated to struggle with challenges and frustration provided that the activities correspond with what counts in reality – the meaning and relevance of discipline is given by the social structure and culture.

Authentic activities are indicated as one of the basic characteristics of PBL since students take advantage of running into real world occasions while conducting their on-going projects (Markham et al., 2003). Such a project enables students for being involved authentic situations through out-of school learning experiences in which they are less constrained by the bounds of traditional schools. As a consequence, providing authentic contexts associated with both formal and informal learning experiences could foster a sense of purpose to create an authentic product.

2.1.1.2 Roles of Teachers and Students

It is fundamental to take the roles of teachers and students into account on the subject of PBL so as to bridge the gap between the use of target language in class and in other out-of- school settings. As PBL gives students the opportunity of acquiring

real-world experiences as well as discovering the world itself and themselves, teachers play a significant role in guiding students to find out their own way (Newell, 2003). Thus, the main role of a teacher in PBL is a facilitator and an advisor in process. As a facilitator, the teacher proposes activities and students, in turn, have the opportunity of enhancing their inquiry skills, critical thinking and problem-solving skills (Newell, 2003; Fried-Booth, 2002). As an advisor, the teacher needs to develop intimacy with students and help them fulfil their learning journey (Newell, 2003).

As well as being a facilitator and an advisor, the teacher in PBL needs to be knowledgeable about the project and its content in order to be able to lead students effectively (Blumenfeld et al., 1991). Stanley (2000) stated that in the initial stages of PBL, teachers should prepare an assessment tool such as a rubric, which indicates the distinct stages of the project process, to make sure that students are aware of the expectations. In this manner, students can be more enthusiastic to progress and gain awareness of their own learning. Moreover, teachers need to assure that there are sufficient resources and assist students how to access and exert them.

On the whole, PBL requires the teacher be equipped with the necessary skills, adopt novel, passionate attitudes towards the student's learning in opposition to the roles in a traditional classroom. The role of the teacher is stage by stage framed by Haines (1989) as: initially, the teacher needs to draw attention and bring out students' opinions on such issues as thematic guideline, strategies of working, timetable, appropriate final product and resource advices; during the project, the teacher should become a "facilitator," which comprises being "a source of ideas" and "advice," a "referee" helping students overcome any conflict, "chairperson" during students' presentations to the whole class; finally, the role of the teacher is "organizer" and "evaluator" concerning the end productions.

The role of the student in PBL is also fairly important as PBL is regarded as a student-centered approach. Three principal roles of the student are: (a) as an "autonomous learner," (b) as a "teammate" or "collaborator," (c) as a "knowledge leader" (Murchu, 2005, p. 4). Clark (2006) stated that through scaffolding and help from their teachers, young learners select the topic in accordance with their interest and experiences. They determine their object of learning which promotes stimulation and motivation during the whole project process. They assign particular duties to

each group member regarding their interests, launch their projects, search for materials or resources to make use of, choose artefacts, assess and arrange their product and form artefacts. In other words, they have the authority to control their own learning from the beginning to the end of the project.

Haines (1989) also explained what students do in PBL: (a) develop tools such as grids, questionnaires, charts, etc. (design, use and evaluate them), (b) utilize information (compare, revise, analyze, transmit and sum it), (c) enhance their interpersonal skills (personal, social and communication skills), and (d) deal with a lot of language work (practice all four language skills; read, write, listen and speak).

Leguthe and Thomas (1991) argued that project work identifies the development of "educational values" based on holistic, interactive and reflective pedagogy. Such consideration of project work may reinforce the roles of both teachers and students, for example the new teacher of project work becomes a teacher of learning rather than a teacher of language. In conclusion, the roles of teachers and students have equal importance in PBL context. While the student is an active learner, an autonomous learner, a teammate and a knowledge leader; the teacher is a facilitator, an advisor, and a knowledge master.

2.1.1.3 Collaborative Learning and Group Work

A further key feature of PBL is a stress on collaboration along with group work. The concept of collaboration emphasizes the social interaction in any learning process. Although the concept of collaborative learning dates back a long time in developmental psychology, researchers in the field have not reached a common ground in the definition of collaborative learning (Dillenbourg, 1999). In this study, collaborative learning is defined: "Student activity revolves around a complex series of interactions between team members over time and draws on a range of key transferable skills such as communication, planning and team working" (Hanney & Savin-Baden, 2013, p. 8). Thus, the process of group work and the abilities and qualities it generates constitute the learning outcomes (Danford, 2006).

Collaborative learning is rooted in that learning occurs naturally in a social community in which the learners converse with one another. According to Naismith et al. (2004), learners can learn more effectively if they discourse with each other by

sharing their opinions, negotiating the meaning of the universe, giving explanations to one another, and hence, they come to a mutual understanding of the world. Moreover, the most effective learning can come out when the learners take an active role in their own learning, collaborate with each other, conduct projects, evaluate opinions, ask questions, discover information and implement new plans.

Group work can promote collaborative learning which involves small groups to enhance learning of the learners by encouraging them to collaborate with enthusiasm. The reason is that collaborative learning provides the learners with various advantages. First of all, they can devote themselves to acquiring knowledge and improving their interpersonal skills through group work (Nussbaum et al., 2009). Secondly, they can develop higher-order thinking skills such as problem solving and critical thinking by exchanging their opinions and interacting to accomplish mutual learning goals (Johnson et al., 2000). Thus, collaborative learning becomes vital in educational disciplines (Johnson et al., 2007).

Panitz (1996) described collaborative learning as the allocation of enforcement and commitment amongst the peers due to the group practices and the keystone roots in group members working in cooperation. According to Johnson and Johnson (1991) proper collaboration requires being involved in learning: (a) “communication skills”: individuals need to know how to communicate in group work; (b) “management skills”: individuals need to know how to progress and manage a group; (c) “learning conflict resolution”: the adaptability of a group represents how skillful it is at overcoming conflicts; (d) “knowing how to build and maintain a spirit of trust”: trust among teammates is crucial (p. 192).

As collaborative learning is highly student-centered in group skills, it is also reasonable to observe the efficiency of collaboration in language learning blended with project work activities. Fried-Booth (2002) put forward that collaborative group projects are beneficial for learners to improve their language skills and confidence, and proficient and talented learners have great potential to take more active role in their own learning.

It can be concluded that project activities can trigger a learning mechanism in which students work collaboratively to collect information for the project. Additionally, they practice the target language in a collaborative setting integrating

language skills (Eyring, 1997). In other words, language learners are able to encounter with the target language in real-world setting or outside the classroom by means of PBL.

2.1.2 Assessment of PBL

Assessment of PBL has been recognized as problematic compared to the assessment of traditional learning. A range of assessment is suggested to assess students in PBL such as "traditional paper-and-pencil tests to new modes of assessment: case-based assessment, self- and peer assessment, performance-based assessment and portfolio assessment" (Bergh et al., 2006, p.347). A variety of assessment applications have also potential to be conducted in various disciplines.

Markham et al. (2003) stated formative assessment is usually preferred to give feedback to students throughout the project process while summative assessment enables to indicate degree of their performance at the end of the project. Thus, assessing learning outcomes in PBL need to be executed properly by putting emphasis on their learning and performance when these types of assessment are applied. In addition to the feedback from teachers, students themselves are to become the assessors of their learning since peer assessment provides students with constant feedback while evaluating their projects and learning process (Wilson, 2001).

The whole outcomes of student learning can be assessed through a peer review form, a faculty review panel, a final paper and a final research presentation (Baker, 2006). Regarding language learning, the key assessment means for project work is to measure what students learn, the whole process heading for the end product and what the learning outcomes are (Blumenfeld et al., 1991) rather than focus on only the accuracy of grammatical structures of the target language (Hutchinson, 1996).

2.1.3 Advantages and Challenges in Implementing PBL

Although a number of advantages of project work have been touched upon in some way in the previous topics, there are many other specific benefits in implementing PBL in various educational contexts.

In the academic literature, there are some studies demonstrating enhanced academic achievement of students while few studies mark the effect of PBL at the

higher education (HE) level. One study carried out by Gültekin (2005), who examined the effect of project-based learning on learning outcomes in the fifth grade social studies lesson in a primary school in Turkey, indicated that the PBL students achieved better than the non PBL students. According to Hutchinson (1999), project work functions as a procedure of transforming common objectives into a reasonable in-class activity on the grounds that PBL enables students to apply their knowledge of the subject in the real world.

PBL offers students to gain a wide range of skills beyond traditional academic subject knowledge, such as team work, communication skills, critical thinking, time management, contextual analysis, self-evaluation, interpersonal skills, and problem-solving skills. Furthermore, PBL engages students to acquire knowledge and competences with a prolonged questioning process which is embodied by complex, real world questions and attentively planned products and tasks (Moursund, 1999).

PBL allows students to take the responsibility of their own learning and choose topics that are relevant and interesting for them through project works. By involving actively in learning process, students are motivated to learn more. As a matter of fact that motivation is one of the principal features of PBL. Regarding the learning outcomes, students are required to take active roles in their learning, thus motivation could play a crucial role to encourage them more. In addition, students learn a lot if "fun" integrated into their learning. Therefore, students appreciate the joy of learning and novelty which is beyond the limitations of the traditional classroom setting.

In spite of the fact that PBL has a number of advantages, there are also certain difficulties associated with PBL. For instance, group work can be a notable challenge confronted by students expected to work in collaboration. One study (Meehan & Thomas, 2006) showed that, in Vietnam, students who took over environmental management projects predicated team work as being the most difficult part of their project work. Similarly, Stauffacher et al. (2006) pointed out that the whole process of group work was seen as being a great hardship by the majority of students.

Pawson et al. (2006) stated that critical factors interfering with efficient collaboration result from the lack of training and perception of the essence of collaboration, in particular among successful students preferring to provide assurance in high ranking institutions. On the whole, drawbacks related to group work are

associated with lack of prior experience and larger group sizes, which engender problems in respect to interaction and distribution of tasks (Joyce, 2013). According to Gülbahar and Tinmaz (2006), students involved in a project work reported that they experienced great difficulty managing time well and concern for submitting their project by the deadline owing to being too occupied with doing their project during the semester. Thus, they could not stay motivated during the project.

The literature also suggests the implementation of PBL is challenging for academic staff in terms of adjusting themselves to novel teaching methods and facilitation of group work. As Green (1998) stated from the point of the instructor, the challenge underlies not in conducting the real project, but in managing to take for granted the role of facilitator and mentor contrary to solely a transmitter of knowledge including the whole responses. Furthermore, it was found that teachers in PBL face heavy workloads in comparison with traditional methods incorporating structured lesson plans (Curtis, 2002). The ultimate concern for teachers is that it can be difficult to manage large number of classes working in groups and providing effective and regular feedback to students.

2.1.4 Project-Based Learning in the EFL Classroom

Promoting students to involve in project-work may help students both learn the subject-matter and use the target language and improve social skills which are required to undertake a project task successfully. Working on course-related projects in small groups can be a key way for language teachers to help EFL students to practice both the target language and teamwork skills as well as compensating for the lack of applicability of the target language in real life situations. Hence, integrating PBL into English language learning or instruction contribute to improving learners' target language, reinforcing learners' autonomy, learner centeredness, learner motivation and holistic skills (Sheppard & Stoller, 1995).

The readiness and curiosity of students to handle a problem or constitute a product tangible and crucial to their everyday lives, which is unconfined to a traditional structured-curriculum, can differentiate PBL from usual teaching and learning methods applied in EFL. According to "The Buck Institute for Education" (BIE), an American research and development organization, PBL approaches facilitate students to gain an awareness about how school bridges the gap with the

real world through making learning compatible and purposeful ("BIE," 2009). Thus, learning becomes more meaningful and consistent if it occurs in authentic situations where knowledge is incorporated into its application in a social setting.

In a three-week project work carried out by Beckett and Slater (2005) 57 upper-intermediate EFL students in higher education participated following a project-based plan to evaluate and pursue their language learning in a language program which was content-based. The result of this study suggested that language learning by means of projects had positive effect on them. The result was important as Beckett (2002) noted integrating PBL into the current teaching might not be always acknowledged by the whole second language learners since it is not evident that they are learning through the project. Thus by making interviews and collecting reflection data the researchers found that the majority of the students could observe the positive effect of content-based English on their language improvement. On the other hand, it is not definite that students would take the advantage of a project in the same way (Beckett, 2002; Beckett & Slater, 2005).

In foreign language settings, many benefits of PBL have been specified. First, the process heading for the end-product of project work gives students opportunities to boost their confidence and autonomy (Fried-Booth, 2002). Second, students tend to show high self-respect and concrete approach towards learning (Stoller, 2006). Specifically, when they participate actively in the project planning such as determining the roles, choosing the topic, etc. their autonomy gets developed (Skehan, 1998). Furthermore, students can enhance their interpersonal and collaborative skills as well as group cohesiveness (Coleman, 1992).

Project-based learning enables instructors to teach the four basic language skills and give both instructors and students opportunity to what project to undertake and how to implement it. There is a critical point here is that students are to be able to gain control over their choices about the project, not bounded with the full control of projects by teachers. This factor of self-efficacy may help enhance the motivation of students (Alan & Stoller, 2005).

Levine (2004) put forward that students' language skills improve through project work. This might be because they involve in meaningful interaction to carry out authentic activities, experience the opportunity of practicing language in an

authentic environment (Haines, 1989). Brown et al. (1989) defined the term of authentic activity as an activity prepared to promote students' thinking and problem solving skills which are essential in out-of-school contexts and to encourage learning to learn. Correspondingly, students need to learn how to plan their own learning process as well as considering where and how to access necessary information. In designing a project work the main role of teacher moves from the teachers to students and from individual work to teamwork or group work.

Brumfit (1984) argued that project-based instruction in L2 education is useful since the students are provided with the opportunity to improve "accuracy" and "fluency" by means of putting stress on the combined project works which arise from the speaking requirements of learners concerning the scope of the project. In a project carried out by Gardner (1995), the purpose of the project work was to offer real causes to the first year arts faculty undergraduate students at the University of Hong Kong to practice the language and the language skills instructed on their English course. The students were expected to make a video documentary about an "issue of concern" to them and finally make an oral presentation in the target language to share the information they collected. The students were given an expert lecture by a film director on film-making techniques and the whole lecture was carried out in English without any supplementary notes in their native language. Later, the students were asked to comment on the content of the lecture and consider about how to apply it in the project. The finding of the project indicated that the students were able to improve their listening comprehension and note-taking skills during the lectures as well as writing skills which were especially through the written project report substituting for the essay.

In a similar project conducted by Hilton-Jones (1988) a group of teenagers from West Germany were taught successfully a six-week English course in project-based context in the UK. The syllabus of the course was aimed at displaying the possibility of how to involve language learners in an English-speaking environment. The students were required to submit one-written mini project per week and each had the same course content which was the local shopping center the students would create themselves, but the project topics were determined by the students. As a result, the course was found successful since the students had many opportunities to exercise reading, writing, listening and speaking skills in English in a real-world

environment and in turn, realized their language learning needs. In addition, the end-of-questionnaires showed that the students felt motivated and independent thanks to their "research trips" to the environment in which English was spoken.

In PBL context, providing formative and summative feedback between teachers and students is fundamental to be able to observe the success of students (Stoller, 2006). In addition, during the ongoing learning process, students need to receive feedback from an acknowledgeable person so as to monitor and assess their progress of language competency. Stanley (2000) stated that it is beneficial for students to receive feedback throughout the lifecycle of the project, particularly while presenting the ultimate outcomes in the target language. As Stanley (2000) emphasized, therefore, this motivates students to learn and use the target language because they see it not as a waste of time but worth of effort.

As a conclusion, PBL in an EFL context plays a significant role as an effective instructional approach to make language learning meaningful and essential to students as well as offering them many opportunities to leverage vital life skills in students. Moreover, being engaged in authentic language and subjected to real-life contexts students can recall what they learn for a long time and set up links and employ their knowledge to other authentic issues (Curtis, 2002). In other words, PBL can merge practicing the target language in the classroom with practicing it in authentic settings outside the classroom.

2.2 Blended Learning

In the literature, there have been various definitions of blended learning asserted. Driscoll (2002) signified one of the keystone definitions of blended learning as "combining various pedagogical approaches (e.g., constructivism, behaviorism, cognitivism) to produce an optimal learning outcome with or without instructional technology" (p. 54).

Regarding the function of blended courses in both formal and informal learning settings, first it is necessary to give the definitions of these two learning concepts as follows: Formal learning is defined as learning that is structured by an institution, happens in such places as schools, classrooms and courses, and culminated through grades, degrees, diplomas and certificates received by learners, while informal

learning is defined as learning that is in control of the learner and occurs through observation, asking questions, interacting with others or reflecting on daily occasions (Cross, 2007; Selwyn, 2007). In addition to that, some example key terms of informal learning involve objects, content, methods and emergence of acquisition, time, assessment of outcomes and practices, which are identified by learners' self-interests. On the other hand, the blend of formal and informal learning is not new in the literature, but through the current emergence of innovative technologies, this combination gains momentum and popularity in instruction. Following that, a commonly used definition of blended learning in higher education context is that the combined integration of traditional F2F instruction with online methods referring to Web-based methods (Oliver & Trigwell, 2005).

The term of blended learning is generally applied to the merging of online and face-to-face delivered experiences or instruction; thereby the learner has 'blended' learning experiences rather than unrelated experiences within distinct modes. In this structure, students begin to work in a classroom setting or cultivate their work in online mode and then go back to the classroom ending with a circle of interaction; as a conclusion, integrated and connected learning comes out with "blended" experiences (McGee, 2014). According to Heinze and Procter (2004), blended learning is implemented through the successful mixture of various delivery modes, teaching models, learning styles and is attributed to explicit interaction amongst all communities with a course. This definition seems more extensive as including the aspects of teaching and learning styles.

Graham (2006) suggested six principal factors for the design of blended learning: "(a) the role of live interaction, (b) the role of learner choice, (c) models for support and training, (d) finding balance between innovation and production, (e) cultural adaptation, and (f) dealing with the digital divide" (p. 14). In a blended course delivery, the instructional integration of technology is a significant point in terms of its academic success in general. Pedagogy is one of the chief components of the instructional design in regard to guide the students; hence, the whole actions of students in the classroom and online settings are incorporated within this context to facilitate learning. McGee and Reis (2012) asserted that it is essential to comprehend the pedagogy of blended course design so as to generate effective practices and stated the key elements of a blended design as follows: In a blended course design

both students and instructors collaborate in combined modes of delivery, which are mediated through F2F and technology, in order to achieve intended learning outcomes which are strengthened with proper tasks, assignments and evaluations, and which build course settings in a sense significant to the student. From this explanation, two modes, face-to-face and technology-assisted, play a crucial role in guiding the future of the learning process. Both modes can suggest many advantages such as enabling a wide range of communication devices, models, designs which provide the practice of various language learning methodologies and the creation of different communicative environments (Neumeier, 2005). Although there are various definitions and explanations of blended learning, Driscoll (2002) summarized four fundamental assumptions or concepts of a blended learning design as follows:

- Combining facilities of Web-based technology including multimedia tools, instruction based on self-based, cooperative learning and virtual classrooms in order to achieve an academic purpose.
- Combining a variety of pedagogical theories such as behaviorism, constructivism and cognitivism in order to generate an effective learning outcome either through instructional technology or none.
- Merging any kind of instructional technology, such as video, audio stream, and online courses, through the traditional F2F instruction.
- Merging instructional technology through real world activities so as to produce a compatible outcome of both working and learning.

Based on the explanations above, it is potentially recognized that integration of computer and technologies and Web technologies such as Web 2.0 applications into education has influenced the modes of course delivery dramatically. More specifically, blended courses have been fostered in order to utterly penetrate to both online and traditional learning environments, which points out the consideration of blending formal and informal learning. In broad terms, the dimension of pedagogy is an important issue in the practice of blended learning because it facilitates flexibility of learning in different modes, enhanced interactions and opportunity to learn beyond the classroom, besides alleviating time constraint in traditional learning setting. Nevertheless, there is still a necessity to explain the theoretical framework of blended learning in order to provide better understanding of the subject matter.

2.2.1 Theoretical Foundation of Blended Learning

As reported by the Danish theorist Gynther (2005) the concept of blended learning was initially interpreted in the American literature in the meaning of a combination of traditional face-to-face teaching and technology-based teaching utilizing a variety of means for technology to sustain a broad array of pedagogical methods. Graham (2006) remarked that blended learning makes progress to create up-to-date formats blending the best qualities of traditional instruction and online learning by the virtue of on-going progress of digital technology. In this respect, the term blended learning refers to a range of instructional approaches to fulfil the pedagogical needs of students related to their learning styles and desires. For this reason, it can also be used as a synonym of "hybrid instruction."

Regarding the literature, there is not one commonly agreed-upon learning theory to pursue the applications of educational technologies or blended learning approaches. However, in the study, the blended learning model has a certain theoretical foundation mentioning three established theories including behaviorism, cognitivism and constructivism as they draw up predominant theoretical framework in the field of traditional education and are applied to develop instruction models for learning in distant and online education (Mayer, 1998).

In constructivist pedagogy, the learners are at the center of their learning process and teachers have a role of giving support and guidance (Alexander & Boud, 2001). According to Mayer (1998) the role of the learner shifted from a receiver of information to a constructor of information, namely, an autonomous learner using metacognitive skills to managing his or her own cognitive processes while the teacher becomes a facilitator pushing learners to explore strategies for themselves and to contextualize knowledge by dealing with real life problems. Concerning this alternation, constructivist teaching settings have become preferable for education. Regarding the constructivist pedagogy, there are a variety of principles in terms of the design of a constructive learning environment. According to Savery and Duffy (1995) there are eight instructional principles of a constructive learning environment.

- Integrating the whole learning activities into a more extended case or task.
- Encouraging learners to build accountability for the case or task.
- Setting up a real world activity or task.

- Constructing the learning settings in order to display the dilemma of the setting in which learners manage to make progress by the end of the process.
- Enabling learners the authority of their own learning process employed to put forward a solution.
- Constructing the learning setting to encourage and challenge the thinking processes of learners.
- Promoting assessing opinions against other opinions and other situations.
- Giving learners the opportunity to consider over the subject they learned and their learning process.

In addition to the established learning theories including behaviorism, cognitivism and constructivism, there is another effective theory of learning which is called connectivism. Siemens (2005) stated connectivism as a "learning theory for the digital age" substituting for behaviorism, cognitivism and constructivism. Connectivist learning highlights setting and sustaining networked connections which are recent and flexible to be employed current and rising problems (Anderson & Dron, 2011). Further, Siemens (2005) asserted connectivism also deals with the difficulties encountered by many institutions in knowledge management tasks. In order to be categorized as learning, knowledge embedded in a database needs to be "connected with the right people in the right context" and the loop knowledge progress in the way of "personal to network to organization" (p. 7).

In brief, the theory of blended learning does not depend on one learning theory, but is rather an approach benefited within distinct pedagogical theories. It is recognized that there is a close connection between constructivist learning setting and distance or online learning setting as well as connectivism. The above mentioned principles can also be applied to blended courses as long as they are properly planned and designed accordingly.

2.2.2 Approaches to Blended Learning

Although blended learning is generally acknowledged as one approach to combine traditional face-to-face and technology-based learning and be applied to different pedagogical approaches, there are several distinct kinds of approaches to blend these two delivery modes, face-to-face and online. The learners usually regard the face-to-face courses which are efficiently merged with online learning

technologies and methods as important advancements compared to traditional learning; however, some social factors affect the procedure of this movement (Hiltz & Murray, 2005).

Bersin (2004) suggested two solid approaches, “program flow” and “core-and-spoke”, to blended learning, and states that the objective of blended learning is to incorporate F2F and technology-based learning into a unified combination so that teaching can be optimized in terms of authentic needs. Firstly, technology supplies conventional teacher-centered programs and secondly, it can supply technology-based programs which are lack of social process, motivation and enthusiasm students need from the teacher. Concerning these two models offered by Bersin:

The “program flow” model: It is a step-by-step curriculum which incorporates different mediums into a chronological program in which the stages rest on each other and in the end, the whole learning are measured through an exercise or assessment (p. 85).

The “core-and-spoke” model: It is an essential training approach (“onsite classroom training or web-based courseware”) along with other materials, interplays, resources and evaluations as “supporting materials, optional or mandatory materials that surround and complement the primary approach” (p. 85).

Regarding the approaches suggested by Bersin (2004), the first approach provides students with the opportunity of engaging more and arranging their own learning which results in a great amount of responsibility and a high attainment level. In this approach, students are able to organize the training in accordance with their current schedule and they do not give it up without completing it by the end; as for teachers, they monitor the progress of students and thus, identify any potential problems. Berlin highlights that this approach is considerably appropriate for classroom teaching. Concerning the second approach, it utilizes only one course following one medium either electronic or live, ensuring another medium or learning activities as supplementary material. Students are autonomous as they can determine whether to benefit from these optional materials and also they do not have to end the course simultaneously.

According to Valiathan (2002), the blended learning approach is separated into three parts: (a) “Skill-driven learning” model, which blends self-paced learning with teacher guidance in order to enhance particular knowledge and skills. As an example, lab-oriented courses in which particular professional knowledge is introduced and executed. The roles of the instructor are observing the student progress, assessing online task, organizing the online participants through emails or face-to-face meetings. (b) “Attitude-driven learning” model, which merges different occasions and delivery mode to develop certain behaviors. It combines traditional F2F learning with online collaborative learning occasions and is applied to introduce content learners need to experience new behaviors like negotiation skills. (c) “Competency-driven learning” model, which mixes performance aid tools with knowledge management resources to improve workplace abilities. Learners internalize knowledge through observation and interaction with experts in the related field.

In a nutshell, there are different approaches or models of implementing blending learning into teaching although they can be applied distinctively due to specific treatments or preferences of the instructors. The approaches generally count on one medium or several mediums. They are also built on self-paced learning along with the guidance of the teacher or facilitator. It offers the opportunity of completing the training with either optional or obligatory materials to measure overall learning.

2.2.3 Examples of Blended Learning Implementations

Ellis et al. (2006) reported a phenomenographic study focusing on students’ learning experiences by means of online and classroom discussion. The scope of research was a second-year undergraduate course in psychology for social work where discussion activities were developed by the instructor to start in face-to-face mode and then to carry on in online mode. Through open-ended questionnaires and semi-structured interviews, students’ comprehension of learning, intentions and attitudes towards learning through discussion was investigated. Respecting the data analysis in qualitative method, many different conceptions, intentions and attitudes were recognized. It was found that students learning by making connections and students embracing a deep approach were successful in the course. In addition to that, the result indicated that there was not any significant difference between deep and surface approaches to classroom discussion and course grades.

Another research in health education by Davies et al. (2005) investigated students' experience of enhancing their neurological experimental and analytical abilities in BSc Physiotherapy by blending traditional classroom practices and computer-based activities at the University of Birmingham. In the School of Health Sciences, novel teaching and learning materials were built up employing Web course tools supplemented by a variety of video clips of patients with neurological disorders. Through these supplementary materials, the students had the opportunity of examining "real patients"; therefore this helped associate their theoretical conception of these disorders with their practical experience in the clinical context.

A further study in social sciences and humanities education by Webb et al. (2005) examined four different semester-long treatments mixed with face-to-face and online discussion in order to lecture a graduate Management Information Systems (MIS) survey course. According to the findings, first students could be provided with the alternative to attend in outstanding courses implementing the case-based pedagogy in an online learning setting. Secondly, as students performed well in a traditional classroom environment, they could also engage in better at numerous levels of learning outcomes in an online and traditional classroom environment. The authors argued that what leverages learning outcomes was not the existence of technology, but it was the learning model that adjusts to the assistive technologies.

Taradi et al. (2005) reported a project which supplied an undergraduate second-year elective course in acid-base physiology with educational services. By employing Web course tools courseware, a well-equipped student-centered Web setting was set up to reinforce PBL and encourage students work in a small collaborative groups dealing with problem-solving activities to enhance their subject-matter comprehension. The overall purpose of the study was to determine the impact of blended WBL-PBL collaborative learning setting on student learning outcomes. Thus, the students' test scores and satisfaction survey results were compared based on the final acid-based physiology exam. The result was that the students in a blended WBL-PBL-based test group got higher scores than the students in a traditional face-to-face PBL-based group. The keystone of the project was that the integration of technology into the blended WBL-PBL collaborative setting well affected the student development.

The ultimate example project including language learning described by Harker and Koutsantoni (2005) was carried out in the context of a web-based language learning program of English for Academic Purposes (EAP) for British students. A 9-week program consisting of two distinct modes -blended and distance learning- was designed for the students. Blended learning was found more effective in terms of student retention whereas the achievement levels of the students were the same. Furthermore, considering formative and summative feedbacks from the subjects, in the web-based EAP program the majority of the students were content for involving in such a project.

In conclusion, taking account of the above examples of blended learning implementations in various fields, there are a number of different means to incorporate blended learning within educational institutions. The fundamental focal point of using this blended approach is to make sure to consider the learning outcomes at first and the necessary components of a successful blended course as well as the possibility of using different blends.

2.2.4 Blended Learning in Foreign Language Learning

Language learning is one of the greatest concerns for students viewing language learning journey as a complicated and challenging endeavor. In order to accomplish the required proficiency in a foreign language, students need to be exposed to new and effective learning methods with instructional technologies that facilitate learning and teaching activities to meet individual needs. On this basis, blended learning has become one of the most common significant recent advancements in education (Thorne, 2003).

In the blended language learning setting both teachers and students assume different roles; EFL teachers act as a facilitator who supports students to move forward through various stages during the foreign language learning while students become more autonomous learners taking responsibility of their own learning. The EFL teacher is to arrange all technological resources methodologically to make them operate smoothly for students in their learning process. Teaching blended courses calls for specific considerations such as students' requirements and preferences, their FL level and educational background (Alpala & Florez, 2011) thus necessitating an explicit model of blended learning in an EFL context.

Khan (2005) suggested a Blended Learning Model which is also called an octagonal framework of blended learning design and involves eight dimensions: institutional, technological, pedagogical, interface design, evaluation, management, resource support and ethical dimensions.

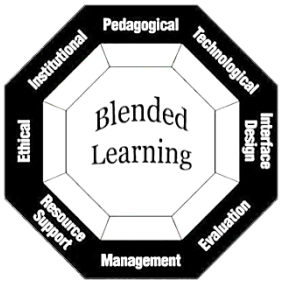

Figure 1. Blended Learning Model (Khan, 2005).

Briefly stated, the institutional element is the first dimension to consider as it is associated with the institutional policies on the curriculum, the arrangement of materials and the financial issues. EFL teachers need not only to have an easy access to technological resources, but also to be provided with necessary training to adjust the tools properly related to the needs of the courses. The second element is the technological one in which teachers design both traditional classroom and online activities. The third element is the pedagogical one in which there are some significant implications that are classified under five headings by Dudeney and Hockly (2007): "the delivery mode, task design, materials, learners' roles, tutors, assessment and evaluation" (pp.138-139). The fourth element is the interface design in which EFL teachers can develop various online and classroom activities by determining the interface design. The fifth element is management in which the system is required to work properly to train students to practice it. Finally, the other three elements are also important to take into consideration when designing blended courses in a FL learning context.

Banados (2006) reported a study in which 39 EFL university students were provided with a course in a blended setting on the purpose of improving their integrated language skills. The analysis of the data collected through diagnostic tests and a perception questionnaire indicated that blended language learning contributed substantially to the language skills of the students and the students showed great satisfaction with the English course focusing on communication. The findings also

suggested that blended format could be effective for language teaching in environments confronted by limitation of time.

According a study conducted by Stracke (2007) the experiences of students in a blended language learning setting were investigated in a German higher education context. The findings from the qualitative method involving 190 surveys and 32 interviews demonstrated that the students maintained a positive approach to blended learning. In a similar study by Klemsen and Seong (2012) the satisfaction of 19 university students in blended learning settings were examined and through questionnaires the data were collected. The results of the study showed that blended learning had positive impacts on the students' satisfaction. A further study (Liang & Bonk, 2009) was made to train thirty-five engineering students in a Freshman English class at a university in Taiwan in order for academic writing, reading and speaking. While they were taught by means of a traditional curriculum consisting of course books and exams, they designed a website with additional useful reading and writing topics for their academic language development.

Banados (2006) carried out another study involving native speakers of English at Universidad de Cencepcion, Chile. In the study, a blended learning pedagogical model was executed containing the students' work with English Online, online monitoring, face-to-face classes. The results from the pilot group indicated lack of understanding about how these elements were integrated and the students were in favor of face-to-face classes rather than online classes. Besides English, they needed to learn ICT course.

Yamauchi (2009) reported research about how a multi-skills course named "Computer communication" was taught by a Japanese University instructor. It involved 19 students assumed to learn presentation and research methods via English, internet and computers. Built on the blended learning model, the course objective was to assist the students utilize technology and study how to arrange information and search for efficient ways to verbalize meaning in English. The author mentioned the improvements of the students in many technology integrated activities, but did not explain their performance in English.

As signified in the studies, blended learning could be applied as an instructional model as well as a pedagogical model in the EFL classrooms.

Furthermore, as indicated in the above studies, students often have positive attitudes towards blended language learning. It is also essential to consider that students may need guidance and support from teachers. Thus, the principles of blended learning model can help teachers facilitate students' learning process.

2.3 Mobile Learning

The term *mobile learning* pertains to the use of small, portable, handheld and light electronic devices consisting of mobile phones, PDAs, and tablet computers and they are utilized for educational activities in different environments such as classrooms, workplaces and home (Traxler & Leach, 2006). The review of studies to conceptualize mobile learning showed that it is defined in a number of different ways by different researchers.

Some researchers define it in terms of mobile technology and devices, thus developed techno-oriented definitions. Some define it in terms of the mobility of devices and the mobility of learners. For instance, Kukulska-Hulme et al. (2005) define wireless and mobile learning as "learning delivered, enhanced or supported mainly or solely by wireless mobile devices and their technologies" (p. 1). Lehner and Nösekabel (2002) define mobile education as any affordance or service which provides individuals with common knowledge through electronic sources and the pedagogical content which facilitates the comprehension of the information irrespective time and place. Both definitions put an emphasis on the learning and experiences of the learner; however, there is a consensus among the researchers that such definitions are too narrow since the focus is mostly on the mobile technology rather than learning itself.

Regarding this issue Sharples et al. (2009) stated that the essence of the learning cannot be well understood; additionally the broader context of the learning as a part of a more mobile lifestyle is disregarded if the mobile technology is specifically underlined. Furthermore, they suggested that the theory of mobile learning focuses on two essential purposes: "context" and "mobility" and explores how learning goes ahead of time, location, subject and technology regardless of the notion that learning is restricted to a fixed environment such as a classroom. Kukulska-Hulme (2009) pointed out that mobile technology has a relationship with being mobile physically inside and outside, from formal to informal environments,

permitting the students to guide a way, thus this is what turns m-learning into a challenging matter. Although mobile learning is handled much more for the implementation in informal settings urged by individual learners as well as their needs and interests (Jones, Scanlon & Clough, 2013), mobile learning driven by an instructor has been researched relatively less (Gikas & Grant, 2013). Concerning the correlation between formal and informal settings, Melanie et al. (2009) remarked that thanks to mobile devices, students are able to spare more time to learning out-of-class, both indoors and outdoors, which brings about "a shift of frontiers between formal and informal learning" (p. 87) as it is represented in Figure 2.

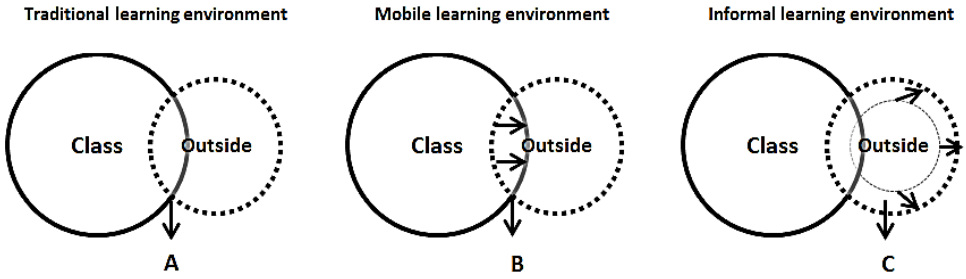

Figure 2. A Shift in the Frontier between Formal and Informal Learning with Mobile Devices (Melanie et al., 2009, p. 87).

As illustrated in Figure 2 firstly, the "traditional learning environment" (zone A) indicates formal classroom tasks assigned by the teacher to be carried out outside the classroom; secondly, "mobile learning environment" (zone B) describes a number of activities that can be performed outside through mobile devices. In addition, teachers can supply many other supplementary activities from real world as well as formal assignments; and thirdly, the "informal learning environment" (zone C) represents the facility enabled by handheld devices which might lead to self-enhancement of students to learn more.

2.3.1 Theories of Mobile Learning

Researchers interested in m-learning might need a theory of mobile learning and a clear definition of m-learning owing to the strength of theory to "define a research agenda" or generate beneficial judgements and generalizations (Traxler, 2009). Therefore, concerning the use of technology for educational purposes, teaching and learning methods applied by educators may require a theory in the background to find out how to teach and learn in an effective way. In a sense, there

appears to be a strong connection between pedagogical theories and learning theories, because of that the way to apply mobile technologies for learning is based on the learning theory. Herrington and Herrington (2007) put an emphasis on the significance of the learning theories in m-learning as indicating that embracing more current learning theories would be able to make use of the facilities of the technologies more efficiently.

Many researchers have recognized the association between the existing learning theories and m-learning theories. For instance, Naismith et al. (2004) contrasted learning theories such as behaviorism, constructivism, situated learning, collaborative learning, informal and lifelong learning against m-learning theories. Moreover, Keskin and Metcalf (2011) put forward such theories as: behaviorism, cognitivism, constructivism, situated learning, problem-based learning, context awareness learning, socio-cultural learning, collaborative learning, conversational learning, lifelong learning, informal learning, activity theory, connectivism and location-based learning.

As a consequence, encountering with a number of distinct learning theories makes it inevitable to promote different viewpoints to m-learning. Traxler (2009) pointed out that mobile learning as lacking a cohesive theory and framework might face certain challenges, but also it can take advantage of this situation. They are teaching theories built on the presumption that a classroom is where learning occurs and is facilitated by a trained teacher. The critical point is that any theory of mobile learning must embody the greater part of learning occurring outside the classroom and individually launched and constructed as well as involving the developments of learning (Sharples et al., 2004). Concerning the pedagogical perspectives of mobile learning, NESTA (the National Endowment for Science, Technology and the Arts) Futurelab (2004) reported literature review in mobile technologies and learning and revealed some pedagogical models associated with m-learning.

In behaviorist learning paradigm, learning is considered to be efficiently enabled by reinforcing a connection between a specific stimulus and a response. Applying this to m-learning can develop the process of behavior learning. By means of mobile devices, certain practices within the cycle of behaviorism can be made, for example, introducing teaching materials, content or particular questions (stimulus),

receiving answers from learners (response) and providing effective feedback (reinforcement) (Naismith et al., 2004).

In constructivist learning paradigm, learners are involved in an active process of learning by constructing new ideas related to their present and past knowledge (Bruner, 1966). Thus, learners need an environment which enables them to construct knowledge, actively attending in the learning process and using appropriate tools to apply to their knowledge. At this point, mobile devices offer learners with an opportunity of participating within a realistic context, and reaching any assistive tools (Naismith et al., 2004).

Situated learning paradigm suggests that cognition and learning are situated and activity and comprehension occur before conceptualization. Situated learning activities encourage learning within authentic contexts and learners need to be involved in the community of practice (Naismith et al., 2004). This authentic context can be embraced in learning environment through mobile technology. As mobile devices appear in various contexts, they are more appropriate to context-aware applications. As an example, the museum and art sector has taken the lead towards the way of context-aware mobile computing (Naismith et al., 2004).

As mentioned above, there are two other models that are linked to the situated learning: problem-based learning and context-awareness learning. The aim of problem-based learning (Koschmann et al., 1996) is to improve students' critical thinking skills through an ill-defined problem as a prompt and this reflects what they would run into as a professional. This learning type is applicable to mobile learning. Students are supported to locate the parts of knowledge they need to comprehend the problem during the whole process of seeking a problem. Afterwards, students collect all these learning cases together with data, hypotheses, and plans for the prospective questioning and utilize the collected information to make a plan for the future recap of problem creation, solution, reflection and abstraction. As for the second model, context awareness (Naismith et al., 2004) is defined as collecting information from the environment to observe the situation related the user and the device. Context-aware mobile devices allow learners to keep their attention on the world and help them when they need.

In the sociocultural learning paradigm, learning occurs in a social context (Rogers, 2002) and collaborative group work and interaction among peers can play a significant role in finding out a learner's own conceptions (Vygotsky, 1978). Mobile learning can support this process by promoting the quick access to each user anytime and anywhere, casting out content, information, experience and conversation; thereby learners can create "communities of practice" (Wenger, McDermott & Synder, 2002), additionally informal discussion groups in order to enhance their learning process. Regarding collaborative learning, mobile technologies can make great contributions to collaboration among learners due to the functions and extensive usage area of mobile devices (Naismith et al., 2004). These functions of mobile devices include communicating with other devices, sharing data, files and messages, connecting to a joint network, being used in a group environment and developing many opportunities for collaboration.

In the informal and lifelong learning paradigm, Tough (1971) stated that learning occurs anytime and is affected both by the occasions we experienced and our environment; informal learning might be deliberate, as an example through solid, important and intentional learning projects. The research on informal learning indicates that the majority of informal learning occurs beyond formal education (Tough, 1971; Livingstone, 2001). In this context, the integration of technology need to be combined with daily life as learning is combined with daily life. Through mobile technologies many activities related to informal learning can be promoted and in addition to that, the qualities of mobile devices such as portability and practical usage contribute a lot for making them demandable for informal learning.

2.3.2 Mobile-Technology Assisted Project-Based Learning

Recently the extended use of mobile devices in schools has seemed to generate an increase in mobile learning as a major subject for the researchers in education. The research concernment is stimulated through the on-going advances of technology, the extensive usage of cost-effective mobile devices and their great appeal to adults, teenagers and children. These technological and social variations going along with the recent ubiquitous use of mobile devices has also been influenced by the generally accepted assumption that learning is never-ending and occurs anywhere and anytime (Gee, 2007). Theoretical approaches identify that

learning is not restricted to formal settings dependent on curriculum; rather, learning in informal settings has gained momentum.

According to Sharples, Corlett and Westmancott (2002) learning in schools or formal education has mostly centralized on classroom learning, facilitated by an instructor who introduces the course materials in an abstract "out-of-context" format, but rather promoting meaningful learning experiences in outdoor contexts. Consequently, mobile learning has been offered for various learning objectives enabling a wide and coherent context for authentic interaction with the material (Rogers et al., 2005). Alternatively, project-based learning activities associated with mobile learning has been viewed a significant teaching and learning approach in order to provide both in school and out-of-school learning experiences. As Blumenfeld et al. (1991) stated the goal towards the completion of a project work provides students with many opportunities to enhance self-confidence and independence and to work in groups in a real-world setting by cooperating over a task which is not externally imposed.

The use of technology is also mentioned as an important feature of project-based learning. There seems to be a common agreement that project work and the use of technology, in particular mobile technology, complement each other as well as serving as a tool for cooperation, collaboration, interaction and communication. Based on the current widespread Internet networks and Web-based mobile devices, the use of technology has already been taken for granted by students and the property of being able to use it in authentic settings is what captivates the interests of students. Vavoula et al. (2009) indicated that previous studies have built on the methodologies applied to preceding studies discussing the use of multimedia. For instance, Markett et al. (2006) carried out a study about the use of short message service (SMS) in order to reinforce interactivity between students and teachers in classroom environment. In addition, Sharples (2000) investigated how mobile technology is being utilized to encourage lifelong learning. Regarding the literature review in the context of PBL approach, there are a number of studies done in connection with the use of mobile phones; however, limited number studies exist on the point of the assessment of how to integrate mobile phones effectively into teaching and learning process related to PBL.

2.3.3 Mobile-Blended Collaborative Learning (MBCL) Model

The MBCL model was suggested by Lai, Khaddage & Knezek (2013) as a first stage progressing to conceptualize the utilization of mobile technologies and applications in order to combine formal and informal learning (see Figure 3). This model belonged to a blended learning model by Khaddage et al. (2009) signifies the affordances of mobile technologies as to promoting a blended and collaborative learning setting by putting an emphasis on the advantages of informal learning to minimize the disadvantages of formal learning, thus creating "a more balanced and flexible learning environment" (Lai, et al., 2013, pp. 415-416).

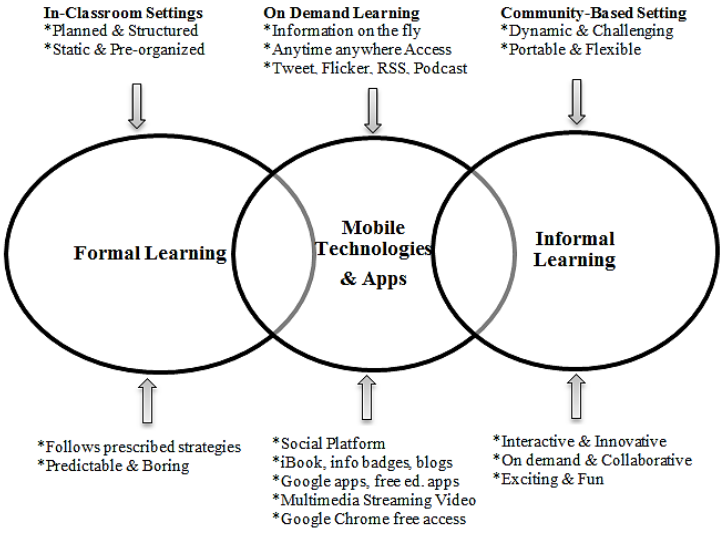

Figure 3. Mobile-Blended Collaborative Learning Model (Lai et al., 2013, p. 418).

Lai et al. (2013) stated the use of mobile devices provides many advantages such as collaboration between peers and teachers face-to-face in the classroom, getting access to resources and lesson content from a distance by means of a Wi-Fi network in order to hold picture and text or videotape presentations and make online contact with students in different classes or people in other communities. Therefore, this connection between distinct learning settings ensures mobility and adaptability of learning and enhances the learning experiences.

Consequently, one question arises as to how m-learning mediated by applications would be applied in practice and how formal and informal learning could be blended, by taking the great number of current mobile apps into consideration. In the MBCL model, there are three essential app classes which have

been predicated as convenient for the mixture of formal and informal learning (Khaddage et al., 2011). A concise description of these categories as follows:

- "Tools for collaboration" (p.419) (e.g. Google Apps) provide the opportunity of sharing files and docs amongst teachers and students both within out-of-school hours and in class.
- "Tools for coordination" (p. 419) (e.g. Twitter) can be beneficial to notify students about deadlines of assignment, class scheme and changes.
- "Tools for communication" (p. 419) (e.g. Facebook) can be used for real-time (synchronous) and non-real time (asynchronous) communications.

In addition to the tools above, mobile instant message (MIM), which is a cross-platform social-media tool, can be involved in the first and third category considering that recent years have witnessed a rapidly increasing trend of using the new generation mobile IM apps on the smartphones. WhatsApp provides users to send and receive a variety of media such as images, videos, and audio and text messages synchronously to either individuals or groups of people. Furthermore, the majority of HE institutions are voluntary to adopt the use of mobile devices enabling text and IM for educational purposes (Jeong, 2007; Kennedy et al., 2008). According to Motiwalla (2007) conducting research on the use of IM for educational purposes, the demand and interest for mobile devices is rapidly increasing among students and most university students take the advantage of texting via m-learning instruments. These three categories of mobile application tools can be implemented to combine formal and informal learning. When utilized for learning activities designed in terms of well-structured pedagogies, these mobile apps and tools can offer fairly interactive informal and precise community-based learning activities (Khaddage et al., 2011).

2.3.4 PBL in Mobile-Blended Collaborative Learning Environment

As stated in the previous sections, project-based learning has increasingly been promoted by technology and this brings up a great contribution to fostering real world experiences beyond the classroom. From this perspective, bridging the gap between technology-based knowledge construction and the needs and interests of students rather than merely instructing technical information abstracted from pedagogical or curricular objectives need to be highlighted (Kanaya, 2005; Tangdhanakanond, Pitiyanuwat, & Archwamety, 2006).

In a mobile-blended collaborative learning setting, students are required to be exposed to authentic scenarios in which they can actively participate. In this sense, project-based learning supported with digital and mobile technologies is acknowledged as an effective way to combine both traditional face-to-face learning with outdoor or informal learning (Lai et al., 2013). While engaging with real-world activities or projects, students may need scaffolding from teachers and this is also necessary to encourage students to focus on the task, the setting and the community of learners. Through the apprenticeship process, students are urged to work in cooperation and be involved in collective attempts; similarly they keep going from a novice to an active contributor (Hung et al., 2005).

Mentz and Goosen (2007) indicated that collaboration through mobile technology contributed many advantages to the students such as exchanging ideas, sharing clues to solve problems, resolving any problem faced and handling each other's mistakes. On the other hand, in contexts where the population of students is huge, the distances are more than traditional classrooms as well as lack of teacher availability, effective scaffolding gets essential. Therefore, through numerous opportunities and affordances of mobile technology for collaboration students will be able to leverage their learning and efficiency while working on a project in groups in a MBCL environment.

2.3.5 Implementation of M-Learning in an EFL Classroom

In the current continuously evolving mobile world, portable technologies have extended the opportunities for making teaching and learning susceptible across diverse contexts and physical settings. The advent of social media, the augmentation of mobile apps, software programs and associated technologies as well as the worldwide Internet access have all enriched the experiences of m-learning, though brought forth several challenges. However, for language learners a paradigm shift has emerged in which learners make full use of these m-learning opportunities to substitute for traditional language teaching and learning ways (Beatty, 2013). In addition, "audio translation apps, augmented reality and just-in-time" learning approaches enable many novel facilities against those with "neither access nor time" to learn a foreign language (Beatty, 2013, p. 2). Chinnery (2006) stated the primary initiatives of m-learning in language learning context as vocabulary practice,

translation, quizzes, voice recording, podcasts, videos and access to live tutors. Thus, m-learning seems to offer ample new channels to students for language proficiency.

In a paradigm shift, mobile learning has turned out – and to be continued – a process unbound to classroom learning. What the underlying cause for such a shift is slightly recent manners amongst language learners, especially so called "digital natives" born with mobile learning technologies and instinctively contacting with them (Puybaraud & Hahn, 2012).

M-learning for language learning which is also termed as MALL – Mobile-Assisted Language Learning – it is partly a new research area compared to CALL and e-learning. Furthermore, MALL does not have one single coherent theoretical framework as seen in CALL (Hockly, 2013). In the meantime, there have been numerous efforts to incorporate mobile technologies into the existing classroom setting, but the 'mobile' feature of m-learning implies that there might be novel learning opportunities in out-of-class environments (Beatty, 2013).

A study conducted by Hwang and Chen (2013) looked at how known situated settings could enhance language learning, such as studying vocabulary under "food" topic while having lunch at school. In a familiar context, students could listen to records repeatedly which provided many opportunities to make more practice and communicate with their friends in the target language. In addition, students were able to make their learning constant from school to home and learning occurred simultaneously in their everyday lives.

According to Traxler (2013) by identifying and allying with global mobile technologies language learning is likely to be more "authentic, efficient, relevant and effective" (p. 2) suggesting that these technologies can be assumed as:

- an important delivery mechanism, with unexploited affordances such as image-capture, speech recognition, and location-awareness, which builds on ten years of pilots, projects, and interventions (p. 2).
- an important modifier on the nature and extent of which language functions need to be learned, practiced, retrieved, rehearsed, and memorized, or can be outsourced to personal mobile devices as extensions of human cognition, senses, and memory (p. 2).

- an important determinant of linguistic practices and the nature of discourses across the community, especially amongst less advantaged sectors with less access to conventional ICTs, Information and Communication Technologies, the rather opaque term for today's digital technologies (p. 2).

Concerning language skills, many common activities such as vocabulary and grammar practice are quite appropriate for mobile access and needed to be cultivated; however, the exact affordances of mobile devices for language learning also include consideration about the present attitudes and abilities of both students and teachers (Kukulska-Hulme, 2013). Based on the observations from the studies in EFL context, it is possible to understand the impact of the use of mobile technologies on attitudes towards language learning.

On the basis of a study involving 45 students from eight distinct countries, Hsu (2013) asserted that the students having diverse cultural backgrounds adopted different attitudes towards mobile-supported language learning. Many students were in doubt about how possible it would be to practice all language skills via mobile technology. This was concluded to result from varied experiences and expectations of the students as well as not having any opportunity to experience otherwise yet.

Another recent research investigated the attitudes of 345 students in higher education in Sweden and China (Viberg & Grönlund, 2013). The findings indicated that students exhibited positive attitudes toward the opportunity to individualize their learning, have a real-world experience, such as solving problems they faced, involving in social communities and creating their own learning context, share information and work in collaboration with peers, teachers and other experts, but the impact of cultural differences on attitudes was not recognized in the study.

In a further study reported by Song and Fox (2008), English language learners were found successful at utilizing mobile devices to enhance their learning consistently in out-of-class setting on the purpose of achieving a mutual long-term goal to extend their vocabulary knowledge in English. However, it is necessary to note that those students were independent learners and adopted positive attitudes toward mobile learning. Furthermore, a current study (Chen et al., 2013) showed that e-books EFL students in tertiary level had a positive effect on their reading attitudes and comprehension as well as vocabulary learning.

Finally, Hockly (2013) conducted a classroom-based action research with two successive groups of international EFL learners from a private language school in Cambridge, UK. The first group involved very low-level learners while the second one involved low-intermediate level learners. Each group underwent four and a half hours instruction from two teachers during a period of two weeks. The overall aim of the study was to "generate theory from practice" with the intent of developing a practical framework to plan and implement communicative tasks using mobile devices in the language class. Most students were found to be satisfied with utilizing mobile devices and desired to keep learning in this manner. Based on the findings, six parameters were devised for the design of mobile-based communicative tasks:

- hardware (device affordances including features – connectivity capabilities)
- mobility (devices, learners or learning experience)
- technological complexity (learners' technological competence)
- linguistic and communicative competence
- content, tutorial, creation or communication MALL
- educational context (learners' expectations and learning styles) (p. 9).

From these parameters, "technological complexity" and "linguistic competence" signify that when assigning or designing a task to perform or designing a mobile-based activity, teachers take the complexity of technology and language into consideration to facilitate the learning process and make the core elements of learning clear for students.

2.4 Recent Research

As discussed in the previous reviews of literature, mobile learning with the use of wireless mobile technology provides the opportunity of accessing information and any learning resources or materials from anywhere and at any time. As a result, learners can benefit from mobile technology whenever they would like to learn and in whichever contexts they are in without wasting time; thereby, they have more control over their learning goals. In essence, this situation brings up the consideration of formal and informal learning through the use of mobile technologies. In this respect, Sharples, Taylor and Vavoula (2005) argued that the existing learning theories are not adequate to conceptualize mobile learning since these theories are

based on traditional classroom learning regardless of outside the classroom learning- and do not even take the mobility aspect of learners into account. Starting from this point of view, there are three significant elements of mobile learning: first, learners are on the move either physically or in terms of time; secondly, a great amount of learning occurs out-of-school or informal learning settings and thirdly, the ubiquitous nature of learning.

Regarding these two fundamental aspects – formal and informal learning – of mobile learning, two case studies (Jones et al., 2013) about supporting inquiry learning in informal and semiformal settings with mobile devices were conducted so as to figure out more about learner control and the effect of technology on promoting the inquiries of learners. The first case study regarded the use of web-based software to promote science inquiry learning by over 500 secondary students, aged 12-16 in semiformal settings such as classroom, a nature reserve, field trips and the students' homes, whilst the second case study explained informal learning of adult learners making use of their own mobile devices to learn about landscape. In the first case study, the analysis of data including field notes, video, audio and transcriptions was made through qualitative methods and based on thematic coding emerging two themes focusing on: "using mobile devices in situ and supporting choice and learner control" (p. 24). In the second one, the findings from a web survey of 659 subjects showed how participants used Web 2.0 mobile technologies to keep and share location-based information and dealt with authentic inquiry-based learning. The findings indicated the software and technology were able to support (a) the restricted number of questions the students selected, (b) the students studying with no scaffolding from their teacher in an informal setting, and (c) having the opportunity of determining their question was meaningful to the students: they appreciated being in charge of their learning process.

Another study (Pimmer et al., 2014) was carried out in nurse education in the face of the proliferation of mobile digital technology and the growing interest in mobile learning. The majority of the research in this field focused on limited projects in developed countries without considering far-away and lack of resource areas in informal learning contexts in less developed countries and how mobile technologies were utilized there. The aim of the study was to make up for this gap by examining how nurses use mobile phones as educational tools in remote areas. As for the setting

and methods of the study, in South Africa 16 nurses participated in an advanced midwifery training course and semi-structured interviews were made with the facilitators and clinical managers about the use of mobile technology for educational purposes. Five main themes were emerged: "authentic problem solving, realization of unpredictable teaching situations, reflective practice, emotional support and belongings and lifelong learning" (p. 1402). The findings showed that in outside of formal classroom settings, the social communication functions and apps of mobile devices enabled "peer-to-peer co-construction and exchange of knowledge and emotional support" (p. 1404); additionally the convergence of mobile phones and social media promoted socio-cultural participation and developed professional relationships. Finally, several suggestions were proposed about how these informal learning settings could contribute to mobile learning to make it advance in more systematic structures.

Clough et al. (2009) reported a study investigating the informal learning practices of mobile device enthusiasts who utilized the functionality of a PDA and Smartphone. Especially PDA and Smartphone users were chosen as the sample and active web forum users were employed as participants. In order to understand how the users used their mobile devices to enhance informal learning a web-based survey method was applied with structured questions. Out of over 200 responses to the survey, 53 percent notified they used mobile device to support informal learning. No big difference was found between PDA and Smartphone users. The findings demonstrated the users made use of mobile devices for a variety of informal learning activities. The "portability, storage capacity and computing power" (p.109) of mobile devices had impact on their decision.

Considering the recent studies mentioned above, various functions and innovations embedded in mobile devices may play a role in making learners demand access to information anytime and anywhere, which in turn supports their informal learning. Moreover, just-in-time learning may enable high level learning, effective collaboration and authentic learning environment.

In the respect of mobile technology driven blended learning, the use of mobile devices for informal learning has aroused attention in many research fields though there are limited empirical studies incorporating both mobile and blended learning in

the same context. However, in terms of the research on mobile devices supported informal learning, currently museum learning has become a significant research topic in the field of informal learning (Hou et al., 2014). This has been integrated into a blended museum learning environment as a mobile-guided activity. The reason for making reference to museum learning in a blended mobile learning setting is to signify informal learning provided via mobile technology and to exemplify blended learning employing a virtual learning activity.

A study conducted by Hou et al. (2014) explored a blended mobile museum learning environment in order to investigate the effectiveness of learners' learning and the behavioral patterns by employing three blended museum learning modes. The participants of the study involved 58 college students. The experiment put emphasis on the examination of blended learning and museum learning in an informal learning context; signified monitoring and finding out the blended learning behaviors of learners in an authentic setting in an attempt to allow them freedom to experience authentic learning without any time constraint. The mobile learning group performed much better than the traditional learning group and the paper-based learning group as well as having higher rate of their participation. The findings indicated that the blended mobile museum learning might assist learners to concentrate on the interactions between on-site visiting and the mobile learning systems and that mobile learning gives learners more time to learn on the website.

Regarding the effectiveness of mobile technologies, a study by Barhoumi (2015) was carried out to promote a blended learning course called "Scientific Research Methods" in Information Science. More specifically, the focus of the study was on evaluating the effects of mobile learning activities via WhatsApp which was prompted by activity theory on learners' knowledge management. The study was based on an "experimental approach-based comparison" (p. 221) between two groups consisting of one experimental group with 34 students and a control group with 34 students. The experimental group was involved in both face-to-face and online training as follows: two-hour in-class learning and one-hour of online learning activities supported through WhatsApp instant messaging per week. The control group was involved in complete in-class learning without any mobile app mediation. The WhatsApp conversations in the experimental group were administered by the instructor. Both groups attended face-to-face classroom hours to discuss the course

content. *t*-test was used to compare the means of the experimental and control groups. The results showed there were positive effects on the blended course experiment composing 70% of traditional classroom learning and 30% of online – WhatsApp discussions. In addition, the analysis of attitudinal data indicated that the students adopted positive attitudes towards engaging in WhatsApp learning activities; consequently, contrary to the control group in the experimental group, the learning process had certain positive outcomes such as facilitating learning, scaffolding the students to resolve any learning hardships, and sharing and reinforcing knowledge.

Yen and Lee (2011) held out a blended learning environment which combined mobile learning, web-based learning and classroom teaching in their study. The purpose of the study was to find out problem solving patterns and their impact on the learning achievement. The quasi-experimental method was used and the cluster and content analysis were merged, which resulted in three distinct groups: "the hybrid-oriented group, the technology-oriented group and the efficiency-oriented group" (p.138). Based on such data sources as self-assessment by students, weekly interviews, logs and achievement test, it was indicated that the students in the efficiency-oriented group were more successful than the other groups on problem solving performance as it was more task-oriented compared to others. In addition, it was signified that the students were encouraged to interact more and gain higher achievement outcomes in problem-solving process via classroom group discussions. Therefore, it is broadly evident that mobile-blended learning environment has a positive impact on the learning process by encouraging more collaboration among the learners, exchanging ideas, increasing motivation and most importantly enabling constant interaction between the learners and what they are learning by developing positive attitudes towards informal mobile learning activities.

Considering the affordances of mobile technology, it becomes possible to provide "instant feedback" for educational purposes. Reviewing the literature about this issue, the concepts 'immediate feedback' and 'instant feedback' are used interchangeably; in addition, there are some other terms such as 'rapid' or 'prompt' feedback; however, there is not any consistency in the use of these terms in the literature. To illustrate one current research on immediate feedback, two studies (Muis et al., 2015) were executed to investigate the perceptions of kindergarten

students on the use of technology in the classroom and the effects of receiving immediate feedback versus no feedback during the learning process on their attitudes, feelings, interest and learning outcomes in their literacy skills improvement. Through a variety of tasks, the students benefited from different tablet apps with and without feedback formats. In the first study, 31 students were interviewed and assessed over two sessions while in the second one 33 students were interviewed and assessed over two sessions. The analysis of the data indicated that the students were satisfied with receiving positive feedback while not enjoying getting negative feedback on their incorrect answers. As a result of the analysis, technology-mediated feedback in the first study had lower levels of satisfaction while having higher levels of achievement; as for the second study technology-mediated feedback produced more boredom and less interest compared to no feedback study, but feedback turned out less boredom and higher levels of achievement.

Another study (Çiçek et al., 2013) was conducted at a state university in Turkey in order to explore a mobile phone Short Message Service (SMS) - based immediate feedback system and explain the ideas of instructors. In the study, data were collected through semi-structured interviews with four faculty members from different departments. The significance of the study was to assist to eliminate any barrier in designing a cell-phone based immediate feedback system and suggest pedagogical principles. The major findings including both advantages and limitations were revealed as follows: Advantages were (a) "anonymity": the anonymity of the system motivated students to get interested in activity which was mentioned by one of the instructors, (b) "availability": availability was recognized as a benefit of cell-phone SMS-based immediate feedback systems and it was stressed that thanks to this system, "anywhere" and "anytime" interaction was enabled, (c) "crowded classrooms": two instructors stated the system was suitable especially for crowded classrooms, additionally it was fast and functional. The limitations of the system were explained under these topics: "time consuming," "design issues" and "novelty effect" (p. 3). Consequently, the finding of the study indicated this system could encourage students to participate in the learning process for lecture sessions.

2.5 Summary

First of all, a broad range of literature about PBL was provided embodying (a) principal characteristics of PBL: authentic learning, roles of teachers and students, learner autonomy, and collaborative learning and group work, (b) assessment of PBL (c) advantages and challenges in implementing PBL and (d) PBL in the EFL classroom. Secondly, blended learning was discussed in terms of its theoretical background, approaches, some example implementations and blended learning in an EFL context. Thirdly, mobile learning was discussed touching upon (a) theories of m-learning, (b) mobile technology assisted learning revolving around such basic concepts as PBL, collaborative learning and blended learning, and (c) the application of m-learning in the EFL classroom. Lastly, recent research was discussed including empirical studies which were relevant to the study.

Regarding the literature that examined the implementation of PBL in an EFL context, it was indicated that PBL has a great potential to enhance the language proficiency of EFL learners as well as their social and cooperative skills by providing the learners with the opportunity of working on real-life subjects in an authentic environment, which is often limited in a traditional learning environment. Although the studies in PBL could not explain more details about the effects of PBL on language skills, the findings of the reviewed project works demonstrated that the students were able to practice four core language skills through integrated sub-activities such as note-taking in the target language while listening, writing a final report on the project, going through research trips about the content of the project topics and communicating with the native speakers.

By reviewing the literature about project-based learning, it was found that there is not any empirical study which emphasizes the learning process provided with various project works, in particular in foreign language learning context, mediated with mobile devices, especially mobile phones. However, research about the related subject had already been mentioned under the main heading of PBL.

As the present study was based on “Mobile-Blended Collaborative Learning” model, project-based learning was the underlying approach behind the research. This chapter also reviewed the recent research that investigated the use of mobile technology in various disciplines, in particular in EFL settings. The studies showed

that the students benefited from mobile devices in a variety of settings (formal and informal) since mobile technology provides learning and access to information anytime and anywhere to facilitate processes such as project work, collaborative learning activities and in-class activities. Furthermore, there are numerous ways to make use of mobile technology to support blended learning. As an example, WhatsApp has potential to develop a blended learning course in terms of enabling high level learning. In this context, one study examining the effects of receiving feedback via mobile technology versus no feedback indicated that the students' perception was positive in favor of the technology-mediated feedback.

Most of the reviewed empirical studies related to m-learning generally focused on the perceptions and attitudes of students towards the educational uses of mobile technology and failed to provide more detailed analysis of processes the students got through; therefore the actual use of mobile technology in formal and informal settings was not fully realized. Notwithstanding, the studies conducted in mobile-blended learning settings indicated that there was positive impact on students' learning progress by ensuring consistent interaction among the students and between the teacher and the students.

Chapter 3

Methodology

3.1 Introduction

The purpose of the study was to examine how the use of a mobile instant messaging application, WhatsApp, providing instant feedback affects the language proficiency of the EFL students while carrying out their project work in a mobile-blended collaborative learning setting. The key research question which was sought is as follows: *What is the effect of integrating WhatsApp mobile app into a group project work in out-of-school setting on EFL prep students' language learning process?* Sub-questions guiding this research are as follows:

1. What are the prep school students' perceptions of being involved in the project work setting powered with WhatsApp?
2. What language practices do they experience in their language learning process through WhatsApp discussions?
3. How do peer and self-assessment differ in scores on each student's contribution to group work?
4. How are evaluation scores of the project works produced by each group?

In what follows, the overall purpose of this study, the research design, the participants, the instruments which were used to collect both quantitative and qualitative data, the procedures of data collection and analysis and limitations of the study are explained in detail.

3.2 Research Design

In this study, a mixed method case study (Yin, 2009) was used to gather data for an overall interpretation and investigate the data within a specific context. Yin (1984) defines the case study research method as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (p. 23). The aim of the study was to explore the effects of WhatsApp on the language proficiency of the EFL students in a MBCL

setting. Therefore, the above review of the literature clearly points out that the mixed method case study was a proper research design for this study.

A case study was carried out based on its appropriateness and effectiveness for this particular study. Case study is a "strategy of inquiry in which the researcher explores in depth a program, event, activity, or one or more individuals" (Creswell, 2009, p. 13). According to Yin (2009) a strength of case study is the capability of investigating extensively, a case or a system within its real-life context in order to outline what happened and why. On account of achieving this, case studies enable data that is often gathered through various sources of information including both quantitative and qualitative data sources such as interviews, observations, documents and audio-visual materials (Creswell, 2013). The object of collecting data based on a variety of sources is to develop the theory suggesting the qualities of the case and to promote the validity to the arguments made by the researcher or the participants in the case (Stake, 2005).

On the basis of the research design, the quantitative data of the study were collected through a peer evaluation form which was developed by the researcher to make the students evaluate themselves and their team members' contribution to the final product and a scoring rubric designed by the researcher to assess the project work of the students. As for the qualitative data, the research data were collected through semi-structured interviews, focus groups aiming for exploring the students' perceptions deeply and WhatsApp log files.

3.3 Setting and Participants

This study was carried out in the spring term of the 2014-15 academic year at a Turkish private university, which is located in Istanbul, Turkey. The university is both Turkish and English medium university, but the one-year preparatory English program is obligatory for all of the undergraduate students who are not able to achieve the required English proficiency level.

The School of Foreign Languages offers intensive English preparatory program for undergraduates for the purpose of preparing them for their education in their departments where the medium of instruction is English. The intensive English program is based on modular system. An academic year in the English prep program

consists of four modules, two modules in the Fall Semester and the other two in the Spring Semester; each module lasts for eight weeks. Weekly quizzes and final exams at the end of each module are held. The students are required to pass at the Intermediate level (B1) to continue their education further.

In each class, there are 15-20 EFL students taking 20 hours of compulsory instruction per week; 12 hours of which focus on following a weekly schedule incorporating all core language skills, and eight hours of which is made up of integrated skills course, four hours of reading and writing, and four hours of listening and speaking instruction per week. Moodle is used as an online learning space in English courses, serving certain functions such as sharing answer key of weekly quizzes and final exams, providing supplementary materials for grammar, reading and listening as well as communicative and interactive vocabulary activities. The instructors also obtain the weekly schedule and follow announcements on Moodle.

The participants of this study were the five of the upper-intermediate level classes, including 42 females and 43 males, 85 Turkish young adult students in total, with mean ages from 18 to 23 years. Of these participants, 20 are from English Language and Literature, 20 from Translation and Interpreting, 7 from Mechanical Engineering, 7 from Architecture, 5 from Industrial Engineering, 5 from Civil Engineering, 5 from Banking and Finance, 4 from Business, 4 from New Media, 3 from International Relations, 2 Interior Designer, 2 from Sociology and 1 from Computer Engineering Departments. Upon completing the prep school successfully, they are expected to continue their education in their own departments the next year.

The present study population comprised of the higher education students from usually high-income families. They were assumed as experienced users of current mobile technologies, especially Web 2.0 technologies or social media apps mediated via smartphones through which the students were accustomed to communicating in text-based instant messaging online chat platforms in their native language. Hence, they can perform a variety of tasks either intentionally or unintentionally both in formal and informal settings.

3.3.1. Sampling

Morrison (1993) asserted that the quality of a research is not only ascertained by the convenience of methodologies and instruments employed, but also with the appropriateness of the sampling strategy that has been adopted by the researcher. In the study, purposeful sampling method (Creswell, 2013) was used in the selection of the participants on the grounds of first, eliciting the potential of the students at upper-intermediate level of English as to undertaking a project work as an out-of school activity and second, assuming that they had an appropriate level of English to make use of their knowledge and experiences effectively in authentic settings and lastly, as the study adopted participatory action research method (Swantz, 2008), the partnerships enhanced between the researcher and the students. In addition to being knowledgeable and experienced with the phenomenon of interest (Creswell & Plano Clark, 2011) the students were volunteer to participate in such a project and had the capability of sharing experiences, opinions in an articulate and expressive manner (Bernard, 2002; Spradley, 1979) to answer the research questions.

3.4 Material (Project Work)

The project work was conducted among five upper-intermediate level EFL classes involving overall 85 pre-university level EFL students who were assigned to create a class magazine as an out-of-school activity with the use of mobile phone to accomplish their task in a MBCL environment. The students were asked to actively take part in the project and were provided with all required information which was outlined elaborately in a separate project handout (see Appendix A) distributed to each participant. The fundamental objective of the present project work was to provide the students with the opportunity of experiencing project-based, authentic, contextualized, meaningful, engaging and collaborative mobile-blended learning. As a result, this would enable them to use the target language for a real purpose and help leverage their language proficiency as well as encouraging them to apply their linguistic and social skills in various contexts. In order to accomplish these objectives, the students were expected to involve in such an authentic task of developing a class magazine in collaboration with their team-mates throughout the 7-week duration of the module.

On the whole, there were 22 WhatsApp chat groups and in each group there were four or five students. In order to avoid any ambiguity, each group was coded with their class and group number as following: V1-G1, V1-G2, V2-G5, V3-G3, V4-G2, V5-G4 and so on. V stood for "Vantage" corresponding to "B2 level-upper intermediate" and G as "group". The students' group members were determined by the students themselves voluntarily by allowing them for some time to make their final decision and inform their instructor about the related issue. Furthermore, each group was asked to execute a group contract by designating a group leader who would facilitate to remain goal-oriented and work in cooperation toward group cohesiveness and success as well as the group goals and assigning the roles of each member equally. In WhatsApp chat platform, the students were guaranteed their confidentiality of mobile phone numbers and were instructed about the procedures of the use of WhatsApp as following: (a) the admin of each group is the teacher, (b) there will be four groups of at least three or four students from each class and one group leader, (c) all of the students will be on the job, (d) the students are free to share their opinion provided that they stay on topic, (e) any questions about the project can be asked to the admin anytime, (f) the group chatting will be in English, and (g) the students are expected not to leave the group.

The EFL course book of the students was integrated into the project work requiring the students to benefit from the proposed three units which would increase the comprehension of the contents of each unit and suggest various alternative topics, which were listed in the student handout, to make use of them in the magazine. As for the instructional plan of the module, three instruction sessions including both in-class, face to face and online instruction mediated through WhatsApp were conducted by separating the 7-week-project duration (see Table 1) into appropriate sessions. The first session comprising two initial weeks of the module was carried out to cover thoroughly the predetermined units in the course book and facilitate the comprehension of each unit in the classroom. The second session comprising the third week of the module was focused on examining a variety of actual magazines so as to recognize the essential elements of a typical magazine through in class discussions. The third session incorporating four-week group work was allocated all of the groups to develop and design their magazine. The final session was executed for the assessment of the project work of each group.

Table 1

Overall Plan of the Project Work

A. OVERVIEW

Students are expected to create a class magazine in collaboration with their group friends by integrating the related units in the course book. Through collaboration in the design and development of the class magazine they can also improve their comprehension of the content area of each unit as well as developing a better comprehension of informal learning setting as a source of information and cooperation.

a. Prerequisite Skills and Knowledge

EFL Upper intermediate students represent a great achievement in having moved from a beginner to a competent user of the language. They have extensive experience learning in classroom contexts and are familiar with different procedures and activities. Regarding that, they need to be encouraged extensive, out-of-class reading, writing and listening activities by identifying distinct sources of texts. In addition, they are required to strengthen their team-work or collaboration skills.

b. Outcomes. At the end of this module, the students will be able to:

- build an understanding of magazines by examining different magazines for their target audience.
- design and create a class magazine appealing to the target audience.
- apply their skills to compose texts for interpretation, understanding and pleasure by using a wide range of procedures, strategies and knowledge in different media.
- analyze and evaluate the factors of varying text structures and language features according to the purpose of the text or article.
- conduct extensive research in analyzing and conveying information from print/non-print sources.
- reflect on their learning in unit and assess their collaborative skills for learning.

c. Materials and Technology

- Computer and Mobile phone (smartphone) with Internet access
- Preparation tools (optional - Microsoft Word/Publisher, PowerPoint, Mobile Apps, etc.

B. INSTRUCTIONAL PLAN

Session 1: Covering Three Units (Week 1 & 2)

- During two initial weeks of the module, handle the determined units (1, 2 and 3) according to the weekly pacing. Make sure about the well comprehension of units by the students by applying various activities into the related parts of skills.

Session 2: Examining Real Magazines (Week 2)

- Show one age-appropriate magazine having a specific genre to the classroom to examine. Ask students to examine the cover and try to guess the possible content pages which are involved in the magazine. Displaying both print-out and online versions of magazines can be highly effective.
- Display the table of contents and ask them to check the articles out and explore the contents of the articles aligned with any pictures and headlines through in-class discussions.
- Inform the class to find appropriate pictures matching with the content of the magazine.
- Touch upon the ways of designing a magazine in terms of cover, layouts, fonts, images etc.
- Divide the class into four groups including at least four students.
- Give each group a different magazine. Ask them to examine the magazine regarding the aforementioned issues.
- Provide time for each group to share their interpretation with the whole class.

Session 3: Creating a Class Magazine (Week 3 & 6)

- Ask students to review the units they have already studied and look through the subjects, titles, articles and pictures to activate their memory.
- Tell students they will work in collaboration with their groups and need to incorporate the main points handled (partially possible) in the unit.
- For any potential question, they will communicate with the instructor and the group members through a WhatsApp group.

Session 4: Assessment (Week 7)

- The students are asked to complete a confidential Peer Evaluation form for all members of the project group so as to evaluate themselves and their peers' performance during the project work.
- The students, as a group, are required to make an oral presentation to introduce their printed version magazine within the allocated duration of 10-15 minutes.
- All of the magazines are evaluated by two instructors according to an analytic scoring rubric.

3.5 Sources of Data

In this study, the data were gathered from four different sources: peer evaluation form for group work and project scoring rubric in the quantitative phase; log files of WhatsApp chats and interviews in the qualitative phase. Of these instruments, except for log files, the other instruments were created by the researcher and the process used to prepare the related items and questions are described in detail. For this study, data collection procedure and instruments have been confirmed by the School of Foreign Languages Department at the university.

First of all, "peer evaluation form for group work" was developed to offer the students the opportunity of evaluating their own and team-mates' performance and provide feedback to each other (Van den Berg, et al., 2006) during the project work. The peer evaluation form consists of two different parts; including 10 criteria for using a 5-point Likert scale in the first part and two multiple choice questions with five items especially for self-evaluation of the students in the second part. As reported by Liu et al. (2002) peer evaluation reinforces personal accountability and encourages the learners to reflect on their work together (Topping et al., 2000). The peer evaluation form (see Appendix B) included the following items: (a) took an active role during the project process; (b) voluntarily accepted the tasks which were determined as a group; (c) contributed effectively to the group discussion and asked relevant questions; (d) shared opinions for the design and preparation of the magazine; (e) researched topics well and suggested resources; (f) cooperated with the group members constructively; (g) helped other group members with their tasks when they needed it; (h) worked successfully to achieve common goals; (i) completed the works at agreed-upon deadline and (j) on the whole, she or he was a good groupmate. These items were prepared based on several key elements of PBL such as "cooperation and collaboration, project planning, decision making and time management" (Blank, 1997; Dickinson et al., 1998). On the evaluation form, the criteria of evaluation were measured through a 5-point Likert scale, whose options were "strongly agree (1), agree (2), neutral (3), disagree (4) and strongly disagree (5)." In addition to that, two additional multiple choice questions, which are "What contribution did you make to the project?" and "Which skills did you use to develop the magazine?" were asked to the students to choose one or more options according to their reflection on their own performance. The content validity of the peer

evaluation form was based on opinions of the thesis advisor and a 6-year experienced EFL teacher. Finally, the peer evaluations were kept confidential; none of the students knew the results.

Secondly, an analytic (descriptive) scoring rubric was used as an assessment tool in the study in order to identify the students' competencies in each step of the project work and thus, to score their overall performance in detail. An analytic scoring rubric (see Appendix C) was designed by taking account of learning outcomes and the skills, knowledge and understanding the researcher expected from the students while working on the project. The reason for choosing such kind of rubric was to identify and assess the components of the completed task, to provide the students with sufficient feedback on their performance and to obtain formative feedback. In an analytic rubric, first the instructor scores each criteria of the product separately and then sums up each score to reach a final score (Nitko, 2001). The rubric represented five main domains related to the project work and composed of 4-point scales to score the 22 class magazines created by 22 groups out of five upper-intermediate classes. The criteria of the rubric comprised of such topics as planning and preparation, design, content, collaboration, delivery and presentation as well as several sub-topics for each one. The dimensions of each criterion were described from the very least level to the highest level of performance. The descriptions of the dimensions were scaled through labels as following: "needs improvement (1), satisfactory (2), good (3) and excellent (4)" and for each label specific performance criteria being observed were indicated. Finally, thanks to the consultation with the thesis advisor, the content validity was established.

Thirdly, both focus groups and individual interviews were conducted to add in-depth richer insights into the study. Semi-structured or open-ended questions (see Appendix D) were asked to the participants to elicit their opinions. Patton (2002) pointed out "the purpose of open-ended questions is not to put things in someone's mind, but to access the perspectives of the person being interviewed" (p. 278). Regarding that, the interview questions were interrelated with the research questions in order to ensure that the data obtained from the interviews would generate findings for the research questions. The interview guide comprised 15 semi-structured questions for individual interviews and 10 for the focus groups. The questions were based on several key words and issues, such as instant feedback, group work, out-of-

school activity, WhatsApp and collaboration related to the research questions. Additional questions were also prepared to ensure the flow of the interviews. The questions were arranged in order of the more general questions about one specific topic to the specific questions about this topic (Steward et al., 2007). For certain broad questions, some sorts of probes were prepared to keep the researcher alert to any unexpected data to emerge and maintain smooth interview session as well as decreasing the interviewer's effects on responses to the questions. Finally, the questions were consulted with the thesis advisor to put them into final form. Furthermore, so as to verify the content validity of the questions, an experienced EFL teacher was asked to revise them in terms of clarity and intelligibility of the questions and also any necessary changes, including grammar, sentence structure, spelling, and word choice were made in the ultimate phase.

Lastly, log files obtained from WhatsApp group chats were generated by the system software which is installed in the participants' mobile phones and they showed all conversations among the students and the administrator in informal settings. These files were gathered from the system via email and also any attached documents, audio files and images were stored. Thus, there were 22 WhatsApp groups, corresponding to 22 qualitative log files to analyze.

3.6 Data Collection Procedures

In this section, the procedures of data collection are mentioned in terms of the data sources of the research including peer evaluation form, rubric for assessment, semi-structured interviews and log files obtained from WhatsApp.

3.6.1 Peer Evaluation Form

83 EFL students participated in the peer evaluation process during the data collection with the purpose of evaluating the quality of their project work of their team-mates and give feedback to one another. At the first phase, out of 85 students 76 students completed the peer evaluation form for themselves and each member of their group without any problem or misunderstanding of the wording and meaning. Due to being absent from the school on the day the evaluation session was carried out, the rest of the participants were able to complete the form the other day. For some classes, the classroom teachers were requested to provide the form to the

students prior to lesson and in general, the students completed the form using a paper and pencil format under the supervision of their class teacher within 10 or 15 minutes. Consequently, all of the participants that were administered the peer evaluation form filled out and submitted it on time. In order to maintain the validity of the evaluation, the names of the evaluator and of the other students kept confidential (Dochy et al., 1999).

3.6.2 Project Rubric

By the end of the 7-week project process, all 22 groups submitted their project by hand with their team-mates within the deadline. As the deadline of the project was informed to the students prior to the project process by means of both a written handout given to each student and several warning messages sent from WhatsApp, all of the groups managed to deliver their product on time without any problem. As for assessing the end-products, two different sheets were provided to two rubric evaluators including the researcher; one assessing rubric on which the criteria, level of performance labelled as adjectives, scores for each level and descriptors of performance were indicated, and five separate scoring or grading sheets on which the names of students in each group according to their class were listed to grade the product of each group. Apart from the researcher, the other evaluator was selected among the experienced EFL instructors in the same university. Finally, both evaluators scored the performance and product of the students as independent of each other in order to abstain from any influence on the grading result.

3.6.3 Interviews

The interviews were held face-to-face in mother tongue (Turkish) of the participants in two distinct methods, namely with two focus groups, the former including 16 individuals and the latter 15 individuals, and 10 one-on-one interviews. As for the selection of the interviewees, purposeful sampling approach was conducted by selecting the participants who were assumed to have a good grasp of project process and, thus would be able to respond the questions well. In addition, especially at least two voluntary students from each class were chosen for the interview procedure. The interview procedures were strictly followed based on the model of Creswell (2013) for an interview protocol (see Appendix E). The components of this interview protocol consisted of the title of the project, the date,

time and place of the interview; the names of the interviewer and the interviewee; a brief description of the project and so on.

The approach of the interview was based on "standardized open-ended interview" which emphasizes that since the interviewees answer the questions with their own words, opinions and perception, the data collected based on these answers become open-ended at present, but the exact wording or order of these questions is adjusted in advance (Patton, 2002). This means that the interviewer pursues a strict guide in which there is no flexibility in the sequence of the questions; in other words, the interview questions are written in advance by following the exact wording and order of questions and then asked the same open-ended questions to each interviewee in the same order.

Based on the literature above, the interview questions were addressed to each participant in the same sequence both in focus groups and one-on-one interview sessions. Each individual interview lasted 10-15 minutes while focus groups lasted about 30-40 minutes. Concerning the recording procedure, the one-on-one interviews were audiotaped and the focus groups were videotaped. The researcher played as a facilitator or moderator and at the beginning of each session, asked some warm-up questions to put the interviewees at ease and then carried on the flow of interview.

3.6.4 Log Files

The WhatsApp chat log files were obtained by means of the database system of the smartphone, following these subsequent steps: going to the WA main screen, clicking on options > settings > chat history > select chat history, selecting the desired chat to email, and finally the chat history appears to be attached to the email as a .txt file; in addition, any extra files such as images and documents can be added automatically. However, this process can change according to the use of different software programs on the mobile device. All groups were administered by the teacher during the whole project process. The students were required to chat in the target language as it was the focal aspect of the study and were not allowed to exit the group for any reason. In conclusion, the students had the opportunity to chat with each other and receive instant feedback from the teacher anytime and anywhere without any interruption.

3.7 Data Analysis Procedures

This section discusses the analysis of the research data which were collected through peer evaluation form, project scoring rubric, focus group and individual interviews, and log files. For analyzing quantitative data, IBM SPSS Statistics 20.0 software was employed in the study.

3.7.1 Peer Evaluation Form Analysis

The peer evaluation form asking for each participant to evaluate themselves and their peers included ten criteria requiring each student involved in the project to indicate the extent to which they agreed or disagreed on the specified criteria both about themselves and their team-mates by using a 5-point Likert scale in the first part. As for the analysis, Pearson correlation analysis was conducted to examine the correlations between the values given to each participant and determine if there was statistically significant relationship between these values. In addition, for the second part including two multiple choice questions offering more than one option to choose, frequency analysis was applied.

3.7.2 Project Rubric Analysis

The analytic scoring rubric was the further data to analyze in the quantitative inquiry. For quantitative assessment of the rubric as an assessment tool for the final products of group work, inter-rater agreement analysis (Weber, 1990) was employed and two raters were participated in grading the rubric. As a matter of fact that Pearson correlation was found appropriate to examine and interpret the correlation between the two continuous variables in the data (Büyüköztürk, 2005). Once the scores from the rubric were written out into spreadsheets and loaded into SPSS, Pearson correlation coefficient analysis was applied to evaluate the inter-rater reliability of two raters.

3.7.3 Interviews Analysis

In the analysis of the interviews, each of 10 audio recorded one-on-one interviews and each of two video-recorded focus group interviews were carefully listened and watched without being transcribed in the first step. Then, those interviews were transcribed verbatim. The transcripts of all of the interviews were

analyzed through content analysis approach in which the findings were indicated based on the raw data collected from the participants through the direct quotations.

The researcher pursued the main steps of the content analysis: coding, emerging themes or categories, arranging the data related to codes and themes and identifying them and finally interpreting the findings (Strauss & Corbin, 1998). Regarding that first, in vivo and descriptive codes in the margins of the transcripts were identified. The process went through inductive qualitative analysis which "involves discovery of patterns, themes and categories in one's data and findings emerge out of the data through the analyst's interactions with the data" (Patton, 2002, p. 453). After this first-step coding, the researcher assembled these recurring codes or words into major categories to find out the emerging themes at last. As an ultimate phase, upon finding common themes, eight emergent themes were generated regarding 15 interview questions by using in-depth analysis of the interview data.

3.7.4 Log Files Analysis

The log files were analyzed by employing content analysis to examine the WhatsApp chats the students made in formal and informal settings which provided a clear understanding of the processes they went through while undertaking the project work. Consequently, this would assist to explore the impact on their language improvements and the effects of mobile instant feedback on the project process.

The benchmark of the study focused on the EFL learners' language proficiency which broadly refers to "general knowledge, competence, or ability in the use of a language" (Bachman, 1990, p. 16). Thus, it can be concluded that being proficient signifies "having sufficient command of the language for a particular purpose" (Hughes, 2003, p. 11). According to "The Common European Framework of Reference" (CEFR) upper intermediate learners have a great capacity to use the target language in order to express themselves and construct their own meanings instead of solely creating sentences reflecting or practicing their knowledge. In this study, the student assumed as a competent user of the target language, were obliged to negotiate with each group member outside of the scheduled class-time so as to divide the responsibilities and tasks, gather relevant content-related information from various sources and reorganize the information in accordance with the genre and target audience of the magazine and deal with the design aspects of their product.

Taking all these fundamental components of the project work into account, it was recognized that expanding and consolidating the students' vocabulary knowledge by acclimatizing them into the real-life experience, in which they were acquainted with the use of particular vocabulary items or formation and functional language highlighting its appropriacy in a range of situations, was the most prominent measure of their progress in English throughout the project on the grounds of their remarks in the interview and their mobile mediated conversations.

3.8 Trustworthiness

The trustworthiness of a study relies on the procedures pursued to ensure validity and reliability. While the reliability of a qualitative study can be measured by its "trustworthiness" (Stiles, 1993), quantitative study depends on norms of reliability and validity in order to evaluate the effectiveness of a study. As coined by Lincoln and Guba (1985), this term is used to signify four elements including: (a) credibility, (b) transferability, (c) dependability, and (d) confirmability. Different methods were utilized in order to assure the trustworthiness in the study (Table 2).

Table 2
Trustworthiness of the Study

Strategy	Criteria	Applicability
Credibility	Prolonged and varied field experience	●The researcher established rapport with the participants by undertaking a 7-week project work and engaging in interaction before/during the interviews.
	Interview Technique	●The researcher conducted focus group and individual interviews with the participants using an interview guide including semi-structured questions. All interviews were recorded in audio and video format.
	Triangulation	●Multiple data sources were collected: in-depth semi-structured individual interview and focus groups, and methodological triangulation was conducted.
Transferability	Dense description	●Purposive sampling technique was applied. ●The characteristics of the sample were described.
Dependability	Code-recode procedure	● All the methodological fields were outlined and discussed by the researcher. Also, the transcripts of all interviews were coded-recoded in the analysis of data.
	Peer examination	● Consultation from another expert in the field was received while preparing the interview questions and other instruments developed by the researcher.
Confirmability	Triangulation	●Multiple data sources were collected: in-depth semi-structured individual interviews, focus groups. ●Methodological triangulation was conducted.

With respect to the strategy of "credibility", three basic methods were employed as they are indicated in the table 2 prolonged and varied field experience ensured that the students involved in the project well-understood the process by keeping in touch with the instructor consistently in the mobile-blended learning setting. The constant interaction between the students and the instructor, which was supported with face-to-face and online modes, strengthened the trust between them. Based on the interview technique, focus group and one-on-one semi-structured interviews were carried out taking at least 10-15 minutes for individual interviews which were audio recorded and 30-40 minutes for the videotaped focus groups.

As for triangulation, it was provided by the convergence of multiple data sources and methodologies, since it embodies "rigor, breadth and depth to any investigation" (Denzin & Lincoln, 1994, p. 2). Data triangulation was provided by the use of multiple sources of data such as interviews, focus groups, peer evaluation form and rubric. Methods of triangulation was employed to explore the impacts of mobile app usage to conduct a project work in an informal setting by combining qualitative data gathered through qualitative approaches with quantitative data gathered through quantitative approaches (Patton, 2002). Regarding the strategy of "transferability" Bitsch (2005) stated that the "researcher facilitates the transferability judgement by a potential user through 'thick description' and purposeful sampling" (p. 85). In the study, a dense description of the methods employed to develop the data instruments was given, additionally the setting, the background information about the population and the sampling method.

The concept of "dependability" was stated by Bitsch (2005) as "the stability of findings over time" (p. 86). Dependability in the study was provided through code-recode procedure, where the researcher coded the qualitative data twice so as to gain a deep understanding of the data, and peer examination in which the researcher consulted with an expert and colleagues in the field whether the semi-structured interview questions were appropriate and feedback on the interview transcripts were received to increase the credibility of the data. "Confirmability" is "concerned with establishing that data and interpretations of the findings are not figments' of the inquirer's imagination, but are clearly derived from the data" (Tobin & Begley, 2004, p. 392). Confirmability was also achieved through triangulation as discussed in the previous strategy of credibility.

3.9 Limitations

There are several limitations to the study. The study was carried out with the participants of upper-intermediate level EFL learners in a private university. The findings from the study could have been limited to this level of students in an English class in terms of investigating the impacts of mobile app usage on language proficiency in a MBCL environment.

Another limitation of this study was that although the students were required to actively participate in the conversations in their WhatsApp group, having a larger number and wider variety of students could have generated different views either positive or negative on the usage of such a mobile app. Furthermore, the privacy issues associated with the use of WhatsApp could bring about concern for the students due to the presence of the teacher in the group and also the chat history being read through by the teacher. Therefore, this could result in the participants' resistance against the implementation of mobile device into the project work.

A further limitation was in terms of the trustworthiness of the study. As stated in the related section, the transcripts of the interviews were coded and recoded by the researcher rather than multiple researchers. Finally, the sampling size for the focus group interviews could be less than 16 students in order to enable everybody to give voice within a plenty of time.

Chapter 4

Results

4.1 Qualitative Results

4.1.1 Interviews

In this study, one-on-one and focus group interviews were conducted among the EFL participants in order to provide more insights into the purpose of the study. In respect of the in-depth analysis of the convergence of focus group and individual interviews succeeding the profound review of each of the interview transcripts, eight main emergent themes were generated based upon the overall 15 semi-structured interview questions. These themes were (a) the management process of the project work, (b) the reinforcement of various skills development, (c) the facilitation of interpersonal learning, (d) the group cooperation in formal and informal settings, (e) the employment of goal-oriented strategies, (f) the convenience of communicating through WhatsApp, (g) the efficiency of instant feedback and (h) the interrelated skills contribution to language proficiency. Out of the responses of each participant of the interview, several particular quotes (see Appendix F) from different participants are indicated for each theme so as to justify these emergent themes.

Theme one: *The Management Process of the Project Work*. Certain key points were touched upon by the students such as working out the scope of the project at first and taking initial steps towards carrying out the project work which included determining duties and responsibilities among group members, deciding on genre and selecting topics. In addition to that, the students initiated the further process of working on the content of the magazine, conducting the design plan and making background reading and research about the determined topics or subjects. To illustrate the above mentioned issues, three students reported as follows:

"We didn't talk … in the first week because we couldn't understand the project. The only thing we did was to go over the topics and units. ... In the second week we were able to decide on topics…." (Female Student 1 - Class 3)

"First we determined our group members, then we tried to decide on the subject of our magazine … related to the main subject each of us chose our own topic … finally we shared the tasks during the process." (Male Student 2 - Class 2)

"For about two weeks we tried to make a plan about how to start our project. Then examining the units and topics we desired to deal with some of our favorite topics… We shared the tasks together by negotiating…" (Female Student 3 - Class 1)

"We started to talk to each other after the WhatsApp group was opened. Actually I had to decide on the group members and played as a group leader. I chose the topics and then distributed everyone their tasks…" (Female Student 4 - Class 4)

Regarding the response of the first student, it is obvious that the group experienced lack of comprehension of the object of the project at the beginning. According to the remarks of some students, several other challenges also came out in terms of the management of the project work; for example, poor time management and difficulty dealing with technical part of the project work as well as being unable to execute the project process properly.

"I would like to gain control over the project from the beginning and started working earlier… because we couldn't search our topics enough … maybe it could have been a bit more professional." (Male Student 5 - Class 5)

"… What I found bothering me was time management. I wanted to have one more week to achieve my goal and feel satisfied…" (Female Student 6 - Class 4)

"The most difficult part… was to design its layout similar to the real magazine format. I am not so interested in technology and also not so good at it …" (Female Student 7 - Class 1)

Theme Two: *The Reinforcement of Various Skills Development*. The students were able to bring their skills forward while working on the project with their teammates. Although the students were assumed to have already acquired certain skills such as language skills, computer skills and communication skills, by the virtue of cooperative working relationships among group members, they had the opportunity to experience new skills and realize their potential, in that the group work in the authentic learning environment enabled them to encounter with a number of blended skills consisting of research skill, critical thinking skill, project management skill, and transferable and interpersonal skills. Based upon that, some students reported as follows:

"… I learnt how to make a group work, collaborate with people … produce something collectively. ... the spirit of team work initiated in our minds and helped me to bring a new perspective …" (Male Student 8 - Class 2)

"The most important thing I learned was to become patient. … the project contributed me to improve my relationships with people … thanks to the project I made many friends and felt more in peace in class." (Female Student 9 - Class 3)

"... I tried to manage the coordination among group members and ... asked them whether they were carrying out their own task properly to submit our project on time. ... learned how to manage time effectively." (Male Student 10 - Class 4)

"I learned how to collaborate with people ... good knowledge of my subject matter. Next time if I deal with something like that, I will feel more confident about how to take action and plan it from the beginning." (Female Student 11 - Class 5)

Theme Three: *The Facilitation of Interpersonal Learning*. Working in groups especially in out-of-school hours appeared to have positive impact on the students' interpersonal or social learning by providing more interaction among the students, giving them the sense of responsibility for performing a task in collaboration, encouraging active participation and exposing them to gain real-world experiences in the target language. Related to the following comments of the students, being aware of their final work to be assessed by their teachers at the end of the process influenced their performance positively as well.

"The sense of responsibility triggered me too much because you were not at school but you had to do something related to the school and also it was not an ordinary homework, so we all took it very serious…" (Female Student 12 - Class 2)

"It was a good experience; I knew my friends much better during the process and developed many different ideas while working together out-of-school hours." (Female Student 13 - Class 3)

"I have not had any experience to search for something in English so far… So it was an interesting study for me..." (Male Student 14 - Class 4)

"The first and most important thing I have learned is to understand well the object of a project and work collaboratively with people… and I hope this will facilitate the prospective …" (Male Student 15 - Class 5)

Theme Four: *The Group Cooperation in Formal and Informal Settings*. Since the students were expected to get actively involved in collaborating with each other in a mobile-blended learning environment, they utilized the opportunities of making consistent online and face-to-face communication by meeting outside or at school and contacting with their group members and the instructor anytime and anywhere via WhatsApp. To illustrate these explanations, the comments of some students were indicated as follows:

"Outside the school we arranged our own tasks together. Individually we were always in contact with each other in our WhatsApp group, for example regularly everyone joined the conversation, asked questions…" (Male Student 16 - Class 3)

"Mostly we communicated through WhatsApp … in the first meeting we met in the house of one of the group friends' and discussed about the details of the project. Then, we moved on our conversation on WhatsApp..." (Female Student 17 - Class 2)

"We couldn't stay at school after our lesson was over, but I invited my group friends to my home to work together … everyone presented their work to make sure about if there was any mistake or lack of..." (Male Student 18 - Class 1)

"We couldn't have any chance to meet in somewhere to talk about the project because of the school hours … in the evenings communicated a lot about the details and discussed them via WhatsApp..." (Male Student 19 - Class 5)

Theme Five: *The Employment of Goal-oriented Strategies. S*everal basic issues were mentioned by the groups in association with such highlighted principles about the procedure of creating a magazine as planning, designing, determining the content and collaborating in group work. Therefore, the students were required to apply certain strategies which would facilitate their group work process and based upon their remarks, it was found out that some commonly utilized strategies were brainstorming, choosing favorite topics, searching for authentic magazines, consulting to knowledgeable people in the field, making exchange of ideas and benefiting from technology to some extent. Regarding these explanations above, some students reported as follows:

"Especially we made brainstorming while determining our unit and topics by looking for real magazines and checking what they included ... tried to discover some different ways so that we could create some original and professional product…" (Female Student 20 - Class 1)

"… I benefited from the internet a lot in my search for information and images about my topics. I also checked out some real magazines to get a general idea about the design and layout of magazines." (Female Student 21 - Class 3)

"Technically there was not so much thing to do for me. Generally I tried to benefit from many resources like Wikipedia, blogs, various websites, etc. as much as possible…" (Male Student 22 - Class 5)

"*We asked everyone's opinions at school or via email. In addition to that I checked the works of other groups to make sure whether our magazine was lack of anything and accordingly I made some changes."* (Female Student 23 - Class 2)

"…before taking an action in practice we met up and started off by a short brainstorming. I even got advice from my parents about what kinds of things to include in the content of my topic…" (Male Student 24 - Class 4)

Theme Six: *The Convenience of Communicating through WhatsApp*. A number of advantages of using WhatsApp as a collaboration and communication tool were asserted. Most distinguishing among these advantages were providing constant

contact anytime and anywhere between group members and the instructor, maintaining quick and clear decision making process, enabling synchronous communication and having timesaving feature. To support these points, some comments are indicated as follows:

"It was very practical; otherwise we had to send messages to each other individually; it would take so much time. However, in WhatsApp everyone was involved in the group and could see all sent messages, discuss about…" (Female Student 25 - Class 3)

"It was useful; I shared what I thought about the project with you and my friends immediately ... when an idea came to my mind, I'd forget it later but via WhatsApp I could convey my messages on time…" (Male Student 26 - Class 2)

"It was the best way to collaborate … because everybody uses it in their daily life, anytime-anywhere, so it makes it more practical to contact with people without waiting for a message to send or respond..." (Female Student 27 - Class 4)

"*I directly expressed my ideas without considering so much via WhatsApp. Texting in English was another advantage... increased the efficiency of the work … also encouraged us to work more self-confidently.*" (Female Student 28 - Class 5)

Theme Seven: *The Efficiency of Instant Feedback*. The students seemed to feel satisfied and consider positive about receiving instant feedback via mobile phone during the project work. With respect to the prevalent positive effects of instant feedback on group work, certain notable effects were specified including promoting effective exchange of opinions, asking questions anytime and anywhere, alleviating any potential concern beforehand and helping manage time wisely.

"The best advantage was out teacher was in the WA group. As we felt like a fish out of water, having no idea about how to create a magazine, we had an opportunity to ask questions to her anytime…" (Female Student 29 - Class 4)

"It gave me an opportunity not to make a lot of mistakes … to become aware of my mistakes and correct them then ... We always asked questions to our teacher as well as taking her advice at some critical points..." (Female Student 30 - Class 5)

"… mostly it is difficult to find an answer to the questions immediately at school, but … using it … made me so pleasant and also I didn't get stuck in anywhere; almost everything flowed smoothly." (Male Student 31 - Class 1)

Theme Eight: *The Interrelated Skills Contribution to Language Proficiency*. Being subjected to working in an authentic learning environment the students were able to gain the opportunity of using the target language for the benefit of carrying out their project successfully and improving their language skills and practicing more in English. Furthermore, the students experienced utilizing English for real world

purposes such as doing research in English, discovering colloquial English words and phrases while texting on WhatsApp, making background reading from various articles or materials, writing paragraphs or essays on their subjects, compiling the information and resources they found out, expressing their opinions, engaging group discussions and benefiting from a variety of audio and visual materials. Therefore, the impact of implementing project work among EFL learners on their language improvements was reflected highly positive based on the remarks of the students.

> Especially I had a chance to experience daily English. As the language or grammar of the course books is not similar to the ones in articles in which you are able to find many different components of language, reading articles helped me a lot. …but in an article you can see everything from formal to informal language… (Female Student 32 - Class 1)
>
> … I read various reading materials from different resources and then based on them I wrote an essay about my research subject, but it was a bit long and complex, so I applied to some websites to get concise information to just mention important details of the subject. Then, I had to write another essay… (Male Student 33 - Class 3)
>
> … I improved my English in terms of speaking skill by communicating via WA. I did a lot of research about my topic, "domestic violence", and so far I've not had any experience to do such in English, but via the project it contributed positively to my English. I read many articles about this topic on the internet and then organized them. (Female Student 34 - Class 5)

4.1.2 Log Files

The log files which were derived from WhatsApp chat platform were examined to construct a solid understanding of the students' performance in the foreign language context by taking part in an informal learning setting. Therefore, on the basis of the profound content analysis of log files, two types of lexical collocations, which are combinations of words, were identified in the collection of instant messaging conversations: verb and preposition and verb and noun collocations. Examples from the verb and preposition collocations included "concentrate on, enquire about, write down, get along with, put forward, insist on, belong to, run out, figure out, search for, decide on, throw away, get on with, deal with, cut out" and from the verb and noun collocations included "arrange meeting, take as a mission, catch points, make progress, make up one's mind, make improvement, make a decision, make arrangement, make interview, make research, make discussion, use imagination, give attention, deliver project, confuse one's mind, pay attention." To

illustrate these collocations, some students' sentences taken from their conversations in the WhatsApp group are indicated in the table 3.

Table 3
Sample Sentences with Collocations from Log Files

Student	Collocation	Quotes
S1	write down	*"Could you write down your email addresses so I can send you something?"*
S2	catch point	*"I think we will able to catch important points about daily habits."*
S3	make up one's mind	*"I haven't made up my mind about the cover writings."*
S4	make improvement	*"Have you made any improvement on your project?"*
S5	make interview	*"We are planning to make interviews with tradesman."*
S6	give attention	*"We have to give more attention cuz we only have 3 weeks."*
S7	figure out	*"Domestic violence very common in Turkey so I am sure I will figure it out easily."*
S8	belong to	*"… and want to write some opinions which belong to authorized people."*
S9	make progress	*"Yes, I checked it out, but we've not made any progress yet."*
S10	make arrangement	*"Due to weather conditions, we couldn't make any arrangement."*
S11	run out	*"Time is running out."*

Although some students made some sort of grammatical mistakes while texting in the target language, in general they were able to use those collocations properly. On the other hand, it was noticed that the most common error in the usage of collocations was made in the choice between "do search" or "do research" and "make research" or "make search." For example, "I think we should do search before start." "Who will make researches about places where we go?" and "We can make research about feelings, the things what makes us…"

In addition to the broad use of lexical collocations, certain types of texting slang words were identified in the conversations: phonetic replacements, abbreviations and acronyms. Phonetic replacements, which refer to relocating one or more phoneme in words by a range of letters, were employed including "u," for "you," "ur," for "your," and "urs," for "yours." Another type of slang words comprised abbreviations, shortened words, such as "pls" for "please," "thx" for "thanks," "btw" for "between," "pic" for "picture," "cuz" for "because," "info" for

"information," "oki" for "okay," "wanna" for "want to," "gonna" for "going to," and "kinda" for "kind of." Finally, the acronyms were also common in the IM conversations such as "Me2" for "me too," "GL" for "good luck," and "TY" for "thank you."

4.2 Quantitative Results

4.2.1 Peer Evaluation Form

Through a peer evaluation form, the participants (*N*=83) assessed their own performance and their peers' during the project process and their assessment scores were calculated through Pearson correlation coefficient. Regarding the outcomes of Pearson correlation coefficients between self and peer ratings (see Table 4), it can be concluded on the whole, when evaluating themselves, most of the students awarded themselves high scores and when evaluating their group members' contributions, they seemed to award high grades.

Table 4
Pearson Correlation Matrix between Self and Peer Ratings in Student Group Work (N=83)

	Peer 1	Peer 2	Peer 3
Self 1	-.086	.375	.115
P1		.110	.685*
P2			.239
Self 2	.581*	.613*	.386
P1		.768**	.645*
P2			.601*
Self 3	-.204	.211	.139
P1		.582*	.662*
P2			.970**
Self 4	.583*	.657*	.695*
P1		.642*	.762**
P2			.729**
Self 5	.724*	-.035	.423
P1		.319	.744*
P2			.519*

Note. P = Peer, * $p < .05$, ** $p < .01$

In the first peer assessment, the correlation was significant between P1 and P3 and $r = .685$, $p < .05$ while there were weak correlations between the other peers. The correlations between self- and peer ratings, while there were weak correlations between P2 and P3 ratings, and self-ratings, the correlation was strong and not significant between self- and P1 ratings $r = -.086$, $p < .05$. In the second one, there were mostly strong correlations between self- and peer ratings, with the exception of the correlation between P3 ratings and self-ratings. In the third one, there was a very strong correlation between P2 and P3 ratings and even, it was the highest coefficient obtained $r = .970$, $p < .01$. The correlation was weak but significant between self- and P1 ratings $r = -.204$, $p < .05$. In the fourth one, it showed significant correlation between self- and peer ratings as well as within peer ratings. Lastly, in the fifth one, while the correlation was moderate and not significant between self- and P2 ratings $r = -.035$, $p < .05$ and the correlation was moderate between P3 and P1, the correlation was strong within P2 and P3 and P1 and P3.

4.2.2 Project Rubric

In regard to the assessment of the project final products, class magazines, generated with the active participant of 22 groups within five classes, two raters graded each magazine individually through an analytic rubric and based on the total scores from each five criteria, collective marking, in which every team member received the same mark, was employed. In order to assess the consistency of the scores (see Table 5) of the two assessors, inter-rater reliability was conducted using Pearson's correlation coefficient and significance statistics at the two tailed levels.

Table 5
Scores Given by Two Raters to Each Group

Groups	Rater 1	Rater 2	Groups	Rater 1	Rater 2
1	18	16	**12**	10	18
2	18	16	**13**	11	12
3	15	15	**14**	8	11
4	15	15	**15**	7	16
5	11	13	**16**	5	10
6	18	14	**17**	13	16
7	15	13	**18**	9	12
8	19	11	**19**	15	14
9	17	16	**20**	18	16
10	18	18	**21**	20	18
11	17	17	**22**	9	16

As clearly seen in the table 5, there were five outliers with some great differences, which were more than 5, between two scores given to these groups: 8, 12, 15, 16 and 22. Based on the results of these present scores, the correlation was strong and significant between the scores of the first and second rater. However, by removing these five outliers in the data, the correlation was highly strong and significant between the two continuous variables $r = 0.855$, $p < .01$.

Chapter 5

Discussions and Conclusions

This study aimed to investigate the effect of using instant messaging application enabling instant feedback throughout the process of project work on the EFL prep school students' language improvement in a mobile-blended learning setting. In order to find out the effect of the use of mobile IM application, semi-structured interviews were conducted among the EFL students at the private English Preparatory School. Furthermore, log files of WhatsApp, peer evaluation forms and rubric for assessing project work were employed as data sources to answer the research questions pertaining to both quantitative and qualitative approaches. The results of the interviews and other data sources revealed that (a) the students had positive opinion towards leveraging their English through project-based learning by taking part in out of school learning environment and (b) providing mobile-mediated instant feedback during the project process contributed greatly to effective communication and collaboration among the students and the teacher. The findings of the study are discussed in detail in this section.

5.1 Discussion of Findings for Research Questions

The key research question examined the effect of integrating WhatsApp mobile app into a group project work in out-of-school setting on the EFL prep students' language learning process. Four sub research questions were formulated to investigate the related issues in the primary research question. Regarding the first sub research question, in concern with the individual and focus group interviews, a variety of positive opinions were articulated by different students about their English language improvement. From their remarks in the interview, there appeared the integration of mobile-blended technology associated with the PBL into their traditional classroom instruction, which is mostly prescriptive and coupled with the complexity of learning English with the lack of authentic practices, encouraged the students to embrace opportunities of using English outside the classroom.

Most of the EFL learners mostly dwelt upon the scarcity of being exposed to communicative learning practices in formal education; thus they appreciated having being introduced an informal environment in which they met the actual use of the

target language reinforced with a number of different resources and tools in varied contexts. Employing a wide range of strategies related to one of the emergent themes "the employment of goal-oriented strategies" as they searched for information, read and wrote through various types of real-life materials seemed to have positive impact on their learning process. Contrary to the constraints of "fixed" classroom hours, they took the advantage of interacting with their classmates both in face-to-face and online modes, providing a more flexible learning setting, substantially highlighting the effectiveness of WhatsApp social networking system.

Concerning the second sub research question, having the experience of texting in the target language by making discussions and conversations the students usually paid attention to write their sentences accurately and choose appropriate words regarding the standard writing conventions; however, as a matter of fact that the students were not restrained from the use of text messaging language including abbreviations or contractions, emoticons, omission of punctuation, non-standard expressions and spellings as the focus was on efficiency: getting one's message on time and effectively as possible. Moreover, rather than encountering any negative impact on writing skills of the students, text messaging seemed to have positive impact on their written communication skills. As asserted by Crystal (2008), texting enhances the literacy of the student other than damaging it; thereby, the role of instant messaging in literacy would not be underestimated on the point of student writing skills. Based on the log files, it was noticed that many students attempted to write a bit longer by using various conjunctions or time linkers:

"I will write soon, I have to go now but when I come back I'll start to work on it." (Female Student 1 - Class 2)

"I am not interested to being a leader but if there isn't any volunteer, I can take the crown." (Male Student 2 - Class 5)

"We should choose family because we can write a lot of things about it and we can find a lot of news all around the world about family." (Male Student 3 - Class 3)

"My creativity isn't much good to create something but at least we can choose a subject we can start to do something." (Female Student 4 - Class 1)

In addition, instant messaging enabled the students to encounter with the spoken or colloquial language, expand their vocabulary knowledge and practice English in different contexts; most importantly, the students were allowed to make

connection between language as usage and language use (Widdowson, 1978). Through communicating in an informal setting, the students not only reinforced what they had already known about the basics in English, but also they were able to differentiate between "slang, texting lingo and correct English" (Russell, 2010, p. 223). To illustrate these points, many students reported in favor of learning new words while texting to her or his group friends, for example an English proverb "at the eleventh hour" which was used in the context of managing to complete the project before the deadline; another example from topic-based words they encountered while searching for information for their magazines and those topics included sports, environment, music, cinema, social issues such as family, domestic violence, poverty, beginnings in life and comic relief. In essence, based on the reports of the students, the emergent theme "the interrelated skills contribution to language proficiency" supported the justification suggested in the study. Furthermore, in the m-learning setting, the students practiced spoken and written language as well as visual language comprising of emoticons, symbols, images in order to achieve certain tasks such as the exchange of information, active participation in discussions, and collaboration among group members. Concerning to the subject, in a research study examining the use of instant messaging for educational purposes, it is asserted that the number of students supporting and favoring the use of mobile devices is enormous and the majority of university students take advantage of 'texting' via mobile learning devices (Motiwalla, 2007). In a study carried out among Spanish students to investigate the use of WhatsApp in English language activities, it was concluded that the students got highly motivated and keen on reading in a foreign language (Plana et al., 2013). However, in a further study in Kuwait it was found that the use of WhatsApp had a negative effect on the writing skills of the students in the EFL context (Salem, 2013).

Within this context, it was suggested that text messaging language was the preferred medium of communication among the students though it could generate some changes in terms of the basic mechanics of writing such as grammar, punctuation, spelling and word formation. Moreover, contrary to the widespread concern about the negative impact of text messaging on student writing skills, it played as a motivating and inspiring mechanism for encouraging the students to engage in reading, writing, communicating and collaborating in the target language

and to practice the language in an authentic setting as well as its positive impact on the students' performance and quality of work.

The research question was also relevant to another theme "the facilitation of interpersonal learning" which signified that the students became aware of the essentiality of developing cultural understanding and group cohesiveness by cooperating with other students who had diverse personal learning preferences, who had their own strengths and weaknesses, who were from different backgrounds, and who had different purposes for learning English.

According to a current study (Shah, 2014), individuals who made a common cause with other individuals in a group work had the potential to activate mechanism to settle any conflict or disagreement and internalize explanations asserted by their colleagues through "cooperative information seeking." In order to construct such a group environment, individuals are required to enhance information exchange among group members (Hirst et al., 2009) rather than solely belonging to a group. Regarding that, the students reported that they negotiated, made exchange of ideas, pursued a mutual goal, planning and managing multiple issues, communicating information and ideas effectively to complete their project work. However, due to lack of experience of working collaboratively to achieve a common goal, some students mentioned having experienced difficulty going along with accepting every decision or opinion, maintaining consistent interaction with their peers, but they also reported that they managed to come to terms on the issue at the end. With regard to this, Jenkins et al. (2009) pointed out that 'networking' enables an individual to seek, compound and transfer information; 'negotiation' enables an individual to discover around different community of people, recognize and treat with respect a variety of different point of views, and absorb and pursue diverse norms.

Moreover, they participated in rating each of their group member's contribution to the success or failure of their group, including themselves. However, results from the third sub-question indicated that the correlations between self- and peer ratings, some self-ratings correlated poorly with peer ratings or vice versa and indicated no consistent frame of being higher or lower that the others' assessment. The underlying reasons for such poor correlations could be associated with having different opinions or approaches towards the evaluations of the performance of each

group member in terms of the sense of team spirit, the willingness of each peer to collaborate, the satisfaction with the quality of work they produced and the active participation in discussions as well as being cooperative and friendly to each other regarding the individual differences in personality. Based on the observations during the project work, some team members behaved as free riders, not actively getting involved in the group work and leaving most of the work to other team members. In addition, few students reported as being not satisfied with working together with some of their friends in the same group. Thus, they appeared not so voluntary to take active roles in the project and expected from the group members to compensate for their lack of effort. Concerning the individual and collective contribution of each peer to their group work, some groups experienced negative effects on their group achievement, for example decreasing motivation to complete the project. As a result, through peer evaluation the hardworking students caught the opportunity of dealing with such free riding issues by giving low scores to their peers although every group member received the same score based on the assessment of their final product.

On the other hand, it could be resulted from the employment and application of the peer evaluations forms. According to literature on the related issue, it was suggested that holistic assessment approaches, in which one score is given to a group member for all of his or her contribution, are more effective than categorical approaches, where overall contributions are classified into a variety of categories and then summated (Lejk & Wyvill, 2001). In the study, categorical approach was applied in the peer evaluations, thus it might be another factor in this context. In a study (Ivanova & Rascevska, 2012) it was shown that the individuals were in tendency to assess themselves and with those they worked closely much higher than they assessed others and that more ‘knowledgeable’ individuals rated themselves lower than less ‘knowledgeable’ individuals rated themselves; as a result of that, there appeared no consistent conclusions about self-ratings. In a review of previous studies, for instance, in a medicine study it was found that there were poor correlations between self-, peer and faculty assessments of students (Kegel-Flom, 1975). In a further study, it was found poor correlations among geography students (Mowl & Pain, 1995). However, in a recent study (Mehrdad et al., 2012) about clinical evaluation of students, it was concluded that there was a significant

correlation between peer and self-evaluation, but no significant correlation between peer and self-evaluation with teacher-evaluation.

Further, related to the last sub research question, results from the evaluation scores of the project works demonstrated that there was a strong correlation between the scores given by two instructors. This ensured that the raters shared common ground when grading the final products of each group except for five products to which they gave highly different scores from each other. It appeared that the raters did not agree on some criteria in the assessment of several project works. On the other hand, there was a close relationship between the self- and peer assessment and the raters' assessment in terms of the quality of project works, the contribution of each group to the project and the overall group performance. This was also supported with the reports of the students during the interview.

As for the effects of receiving mobile instant feedback via WhatsApp within an informal setting on collaborative learning process, two of the themes which are "the convenience of communicating through WhatsApp" and "the efficiency of instant feedback" were ascertained as closely associated with the related issue. The students reported a range of advantages of receiving 'instant feedback' while working on their group work, for example making clear quick decisions, providing continuous communication, asking questions anytime, boosting self-confidence, conducting simultaneous group discussions, resolving any problem easily, receiving timely response to any potential hardship and benefiting from its timesaving factor. Thus, these advantages are in accordance with the social development literature highlighting the strength of social interactions developing the effectiveness of learning (Vygotsky, 1978) and Gillingham and Topper (1999) also emphasized the effectiveness of instant messaging on the learning process through collaborative learning or social interactions. Furthermore, analyzing previous research concerning the use of instant messaging in various platforms between faculty and students, some of the notable findings are indicated as follows: reinforcing the improvement of learning (Smit, 2012); encouraging the students to participate actively in their studies (Cifuentes & Lents, 2011) and removing any social obstacles between teacher and the students (Doering et al., 2008).

From the remarks of the students, it appeared that the most notable benefit of using WhatsApp was as to 'time management' which provided great convenience to communicate anytime and anywhere and facilitated the collaborative group work. In essence, the constant social interactions among the groups influenced the project process positively and eliminated the barrier between the formal setting of the classroom system and informal setting of the social networking system. In a study examining the classroom communication between the high school students and the teachers using WhatsApp, the academic advantages of WhatsApp were indicated by the participants as follows: "the accessibility of learning materials," "teacher availability," and "the continuation of learning beyond class hours" (Bouhnik & Deshen, 2014, p. 217). However, whilst most of the students expressed as their being satisfied about regularly maintaining their conversations in the mobile platform, few students touched upon the present situation from a different perspective and reported that it had a negative impact on their conversation amongst their peers. As an example, one student remarked "…*it might kill sincerity among the groups as the teacher was also involved in each group*…" because some groups may have pretended to work hard but in reality they did not. Due to such issues as fairness and equity in the group work, the students' perception of group members might have been adversely affected as well.

This may also suggest that while the popularity and support of the use of WhatsApp within the students was substantially high in terms of social purposes, using instant messaging for educational purposes could bring about a shift in perception or behavior on the part of some students who were in tendency to use such a communication platform solely for social purposes. On the other hand, providing instant feedback enabled to build intimate student-teacher and student-student relationships throughout the project work. As a result of that, the students receiving immediate feedback from their teacher were considerably motivated to actively participate in the group work (Allen et al., 2006). A study conducted in a South African university investigated the use of WhatsApp and the findings indicated that the students gave positive feedback and reported that it enabled an easier channel to communicate with their teachers and their classmates; additionally it provided an effective discourse on the related subjects in an informal setting in which the students were able to learn thoroughly and had fun during the learning process (Bere, 2013).

In the current case study, the students were given the opportunity to take responsibility of their own learning and subjected to authentic activity, out-of-school activity, in which they worked collaboratively in order to carry out their group work successfully, in company with the persistent instant feedback and support from the teacher throughout the ongoing purposeful group conversations. Furthermore, the students provided feedback to themselves and their peers; thus they became aware of how much contribution was made by each peer to the fulfilment of their group work. In a study (Hrastinski et al., 2014) it was indicated that the high school students given academic support in math through IM service managed to ask their questions to their teacher after school hours and the teacher could support their learning process by catering for their needs. In another similar study, it was found that the students in higher education benefited from an internal SMS system their school created to communicate during and after the lesson hours and as a result, they were inclined to ask more questions and participate in lessons more through IM system (Scornavacca et al., 2009).

As a consequence of the analysis of various data sources, the outcomes of the results showed that the students were willing to adopt novel learning practices, beyond the boundaries of formal education and had positive opinions about embracing PBL supported with mobile technology for improving their language skills. Although at the beginning the students had difficulty initiating their group work owing to the lack of experience of how to manage a project work and work in collaboration with their teammates as well as having not enough confidence to use English for real-world tasks, as they progressed they were able to overcome their concern and increased their self-confidence by the extensive guidance and scaffolding from their teacher and their cooperative group members. Moreover, the students took an active role in employing their English in different situations such as searching for information and news around the world, texting in English and recognizing informal English and reading English forums, and they were able to make their own decisions in almost every phase of the project; therefore, this might be a driving force them to progress smoothly to a large extent in their group work. As emphasized by Stoller (2006), PBL provides positive outcomes for second and EFL learners in respect to “language skills, ability to function in groups, self-confidence, and decision-making abilities” (p. 34).

Overall, the findings of the study are consistent with the study conducted by Young et al. (2010) in which it was shown that benefiting from text messaging was successful in terms of asking rapid and simple questions rather than arranging individual meetings. In addition, the findings of another study (Hill et al., 2007) asserted that the students were satisfied with the use of mobile phone for the purpose of communicating with their teacher and a further study (Kennedy et al., 2008) indicated that the students were willing to use such social networking tools as instant messaging and texting for their academic studies. Taking all into consideration, it could be suggested that mobile-blended learning model accompanied with PBL could be implemented into the current teaching instruction in the EFL context.

5.2 Theoretical Implications

The focus of this study was to provide insight into the significance of enhancing the language proficiency of EFL students by bridging the gap between formal educational practices and informal mobile technological practices and consequently, facilitating language learning process of the students. The implementation of PBL in a mobile-blended learning setting into the classroom setting offered opportunities to experience real-word activities which aided to cross the boundaries of classrooms in terms of time and place. The previous research argues that "authentic activity" can be one element in the matter of helping the students develop their language skills (Fragoulis, 2009). For this reason, some alternative language learning practices or methods can be employed to promote more student-centered language learning which encourages the students to take charge of their own learning and engage in various language tasks to improve their skills; additionally to put an emphasis on inspiring the notion that learning is a continuous journey, not restricted to the classroom.

With reference to the findings of the study, it could be proposed that meaningful engagement with the target language should be provided with the blend of formal and informal learning activities through mobile applications because such mobile applications have potential to facilitate learning and support the learning process of the students by continuous feedback or scaffolding from the instructors and the peers. As indicated in the study, the students found the use of mobile application for educational purposes effective in informal setting and they

experienced using the target language immersed in authentic resources and meaningful communication.

A study (Clough et al., 2008) showed that informal learning by means of portable devices, especially mobile devices, can reinforce both "opportunistic informal learning" and "collaborative informal learning" amongst the students. Therefore, successful integration of mobile learning with authentic production or collaborative activities could be achieved by administrators and instructors in the foreign language learning curriculum. At this point, the results of the study could suggest an implication for complementing formal learning with intentional informal learning by benefiting from mobile technologies and offering more group work tasks among the EFL learners in order to provide consistent and effective learning settings as well as more 'practice-based" language experiences.

5.3 Conclusions

As discussed earlier, the previous reviews on mobile technologies and learning are mostly related to the use of these technologies in several particular curriculum areas. More specifically, upon tracing back to the literature on the issue of conducting PBL in a mobile-blended learning environment, there appeared barely satisfactory empirical studies, even no studies encountered in the scope of foreign language learning. Therefore, the results of this study could be beneficial for guiding prospective research studies in the current area and making contribution to the discussions of mobile learning.

Concerning the findings of the study, it was indicated that the students had the opportunity to be exposed to the target language through an authentic group work project; thus in particular, they enhanced their vocabulary knowledge, including various topic-based words and lexical collocations, and distinguished between formal and informal language via instant text messaging system during the process of creating their magazines. This finding is consistent with the study by Baron (2008) as follows: the student texting on a regular basis showed a great number of words and this might result in a positive impact on their reading progress. This is also supported with the remarks of the students in the interview, and accordingly the related theme "the interrelated skills contribution to language proficiency was generated.

In respect of the outcomes of the interviews, most of the students noted that they felt comfortable while texting with each other and the instructor, and considered text messaging and instant feedback as the most practical, easy and time-saving way to carry out such a project in collaboration successfully. Furthermore, the students appreciated being able to communicate with their peers and teacher anytime and anywhere in order to ask questions, share ideas and arrange group work and consult easily to resolve any problem quickly by the virtue of the technological advantage of mobile phone which provides both synchronous and asynchronous communication.

In conclusion, the findings of the present research indicated that the EFL students favored improving their integrated language skills by involving in a variety of learning experiences which provided meaningful interaction for real world purposes. In addition, nearly all of the students had positive attitudes towards participating in synchronous conversations with their peers and teacher for academic purposes. Besides language skills, the students developed their interpersonal and collaborative skills and this finding is also in line with other studies (Coleman, 1992). However, the lack of literature about the subject of providing instant feedback mediated via a mobile application in an out-of-class learning activity has enabled the rationale for this study. For this reason, it could be suggested that a well-designed language course supported with mobile technologies can encourage more effective and collaborative learning not only in the classroom but also outside the classroom considering the needs and learning outcomes of students at the English prep schools.

5.4 Recommendations

Considering the results of the present study, several suggestions for future research are proposed in the related field. The first suggestion for future research is that as noted earlier, one of the limitations of the study is that it was conducted among Turkish EFL learners at the upper-intermediate level in which most of the students had extensive background experience in classroom contexts. This restricted the number and diversity of participants and in turn, the generalizability of the research findings. To extend the findings of the study, a wider range of participants having diverse linguistic levels should be involved in a prospective study.

As for the second suggestion for future research, the scope of the project work can be extended in terms of size of class, content of the project, formation of groups

(random or strategic), allocation of duration and scheduling, process and product outcomes and allocation of grade within the group. In terms of the management of the groups, it is essential to take into account of such issues as volunteerism of each student to involve in the project and approve chatting with their peers in a mobile platform, making sure they would maintain collaboration throughout the project and equally taking responsibility for completing the work. Furthermore, three coordination phases including pre-process, in-process and post-process (Fiore et al., 2003) in the measurement of interactions among the peers in each group can be examined to develop in-depth understanding of the process of group work and any variation in interactions concerning group cohesion.

Regarding the last suggestion for future research, this study should be replicated in other courses with more diverse populations in a mobile-blended learning setting in order to assess whether the results are consistent. Moreover, further studies could investigate the social aspects of learning, motivation and attitudes of learners and instructors towards the use of mobile instant messaging system in an informal setting for educational purposes.

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APPENDIX A: Project Work Handout for the Students

PROJECT: "CREATING A CLASS MAGAZINE"

OVERVIEW:

Dear All, you are going to design, develop and publish a class magazine for a particular audience over the next couple of weeks during this module. Each group will work collaboratively with the group members using an online workspace, which is the mobile application "*WhatsApp*", to plan and compose a variety of contemporary media, images, articles, and other essential materials, for the class magazine. You will choose one topic or theme from the first three units of your textbook and try to make use of the content area of the unit. As a whole, this process will involve research, analysis, discussion, cooperation and learning about language forms and features and structures of texts or articles appropriate to a range of purposes, audiences and contexts.

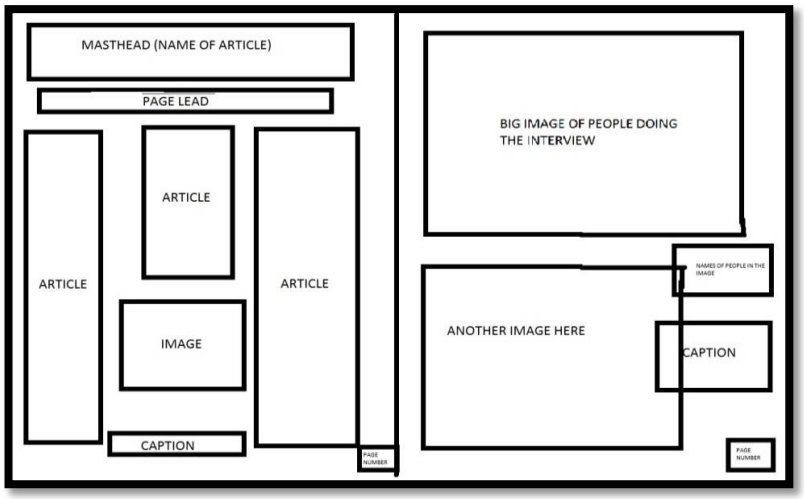
DURATION: 7 Weeks (The whole module)

Week 1 & 2	Weeks 3 – 6	Week 7
Handling the first three units in the course book by the teacher	Development of class magazine by each group	Publishing, presentation, evaluation and reflection of the magazine

PLANNING:

- Make decisions as a group and record your choices:
    1. Which units are you going to work on?
    2. What genre of magazine will it be?
    3. Who are your target audience? Age / Gender / Occupation / Interest etc.
- Design a creative and appropriate magazine "**cover**" which appeals to its readers.
- Plan the magazine "**content**"
- Plan "**layout**"
- Plan "**language"**
    a. Will you use technical words specific to one topic area?
    b. Will you cover the vocabulary well in the unit?
    c. Will you choose your words, phrases and structures according to your target audience?
- Who will do which work? Each group member must <u>actively participate!</u>
  Note:*STICK TO THE DEADLINE!!!

SAMPLE MAGAZINE LAYOUT



A. Potential topics to be covered with "Unit 1" include:

- Beginnings in life
- Ideal flatmates
- Speed flat mating
- Relationships
- Daily habits
- Future plans
- Personality
- Feelings
- Adverts
- Polite enquiries

B. Potential topics to be covered with "Unit 2" include:

- Issues
- Comic Relief
- Social issues: pollution, drought, homelessness, health, famine, environment, money, divorce, drug abuse, family, domestic violence, obesity, poverty, debt, etc.
- Surveillance technology
- Complaint & Opinions
- The happiness formula

C. Potential topics to be covered with "Unit 3" include:

- Downtime
- Dangerous games
- Behaviours
- Past habits
- Find your niche
- Locations
- Holiday
- Travellers
- Game shows
- Great experiences

MOBILE PHONE USAGE PROCEDURE:

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1. Communication between students - students and students - the teacher will be provided via "*WhatsApp*".
2. The admin of each of the groups will be the teacher.
3. All students will be 'on the job', taking an active role during the project process.
4. There will be at least four groups and one group leader will be chosen as responsible of the group.
5. The teacher will help the students, especially when they are stuck; therefore, first the students must take part in the conversation and come up with some new ideas.
6. Please avoid using group chat to converse with only one participant.
7. Share your opinions only about the project – **Stay on topic**!
8. Try to contribute to the conversation rather than just lurking in the background and watching what is going on around and saying nothing.
9. Do not hesitate to ask your questions anytime.
10. You are expected not to quit the group.

APPENDIX B: Peer Evaluation Form

Group Code: _____
Write the name of each of your group members in a separate column. For yourself and your groupmates, indicate the extent to which you agree or disagree with the criteria on the left, using a scale of 1-5 below:

1= Strongly Agree 2 = Agree 3= Neutral 4= Disagree 5= Strongly Disagree

Criteria	Yourself:	Groupmate:	Groupmate:	Groupmate:	Groupmate:
Took an active role during the project process.					
Voluntarily accepted the tasks which were determined as a group.					
Contributed effectively to the group discussion and asked relevant questions.					
Shared opinions for the design and preparation of the magazine.					
Researched topics well and suggested resources.					
Cooperated with the group members constructively.					
Helped other group members with their tasks when they needed it.					
Worked successfully to achieve common goals.					
Completed the works at agreed-upon deadline.					
On the whole, she or he was a good groupmate.					
TOTAL					

♦Please answer these two questions below:

1. **What contribution did you make to the project? (You can choose more than one item.)**
   a. Planning (target audience, choice of unit, deciding on genre and task distribution)
   b. Design (cover, layout, finding images and creativity/originality)
   c. Content (topic choice, headlines, searching for articles, texts, etc.)
   d. Collaboration (participating in conversation, sharing ideas, asking questions, etc.)
   e. Delivery (bringing all works together and publishing)
2. **Which skills did you use to create the magazine? (You can choose more than one item.)**
   a. Problem solving skills (finding solutions to the problems you faced during the process)
   b. Computer/Technical skills (designing the cover and layout)
   c. Language skills (reading, writing, speaking and listening)
   d. Project management skills (negotiating, planning and task distribution)
   e. Communication and collaboration skills (sharing opinions, helping others, asking for feedback)

APPENDIX C: Project Rubric

Scoring & Criteria	Needs Improvement (1 pt)	Satisfactory (2 pts)	Good (3 pts)	Excellent (4 pts)
Planning/Preparation • Choice of unit • Genre of magazine • Target audience • Task sharing	No integration into a determined unit; genre is not clear; inappropriate for the target audience and no distribution of tasks among each member of the group.	The unit was integrated inconsistently and not well-matched with the genre; a bit appropriate for the target audience and the distribution of tasks among members was not satisfactory.	The unit was integrated well and matched with the genre; appropriate for the target audience and the distribution of tasks among members was satisfactory.	The unit was integrated consistently and perfectly matched with the genre; fairly appropriate for the target audience and the distribution of tasks among members was done properly.
Design • Cover • Layout • Images • Originality/ Creativity	The cover and layout are poorly designed; visuals like pictures, graphics, etc. do not fit theme or purpose of magazine; on the whole it is far from creativity.	The cover is acceptably charming and the arrangement of visuals into the layout would be better.	The magazine design is charming in terms of cover and layout; it displays originality and creativity.	The magazine design is exceptionally charming; common layout elements like columns are used effectively and it is fairly creative.
Content • Topics • Headlines • Articles, ideas, texts, knowledge, etc.	Students did not choose topics related to the unit; did not review or research any articles; it does not include relevant materials or images.	Few topics were researched, but the articles are somewhat interesting to readers, but headlines are not catchy; it includes somewhat relevant materials and images.	Various topics were researched and the articles were organized; headlines are clear and catchy; it includes some relevant materials and images.	All topics were well researched and the articles are interesting to readers; headlines capture attention of readers and it includes all relevant materials and images.
Collaboration • Cooperation • Conversation • Sharing ideas and responsibilities	Students did not collaborate with each other; did not participate in the conversations; did not contribute to the group tasks and shared ideas or discussed.	Some students did not want to collaborate with others and participate in the conversations; some contributed much but some did not do and share anything.	Students collaborated with each other, asked questions and helped one another; everybody contributed to the group tasks and shared different ideas.	Everyone worked together using their abilities and knowledge; tasks were shared fairly; they did a great job, talked all the time and shared their work for group feedback.
Delivery/Presentation • Publishing • Meeting the deadline • Reflection	The format is imprecise and illegible. The texts include a lot of errors in grammar, mechanics and spelling; images or graphics are not clear. The group did not use time wisely and publish it on time.	The format is a little imprecise and illegible. The texts include some errors in grammar, mechanics and spelling; visuals are somewhat appropriate. The group was unable to submit it on time.	The format is adequate, somewhat legible and neat. The texts contain minor grammar, mechanics and spelling errors. Visuals are appropriate to the articles. The group published it on time.	The format is very neat and appropriate. It includes no errors in grammar, mechanics and spelling. Visuals are perfect. The group used time wisely each week and published it properly on time.

APPENDIX D: Interview Questions

FOCUS GROUP INTERVIEW QUESTIONS

1. What process did you get through at the beginning of the project as a group?
   a. How did you choose your group leader at first?
   b. How did you distribute the tasks among the group members?
   c. Were all roles and tasks clear enough for everyone?
   d. Were all group members able to start taking action on time?
   e. What did you find hard and how did you deal with it?
2. How did you cooperate with each other to get the project done in school and outside?
3. How did you find the experience of working in the group out of school hours?
4. What strategies did you use to achieve your group goal? (sharing tasks, meeting, brainstorming, asking for advice, searching for information, etc.)
5. What impacts did WhatsApp group have on your project work?
6. When you had any question, you could ask your teacher or each other via WhatsApp, so what do you think about receiving 'instant feedback' online?
7. What obstacle(s) did you face during your conversation with one another on WhatsApp? Were you able to convey your ideas clearly via this medium?
8. What experiences did you gain while searching for materials (articles, topics, pictures, etc.) in English? What were the benefits in terms of language skills (R, W, L, S and Vocabulary)?
9. What 'major problems' did you encounter in the project in general? How did you overcome them?
10. What would you do differently if you were given a chance to do the project again?

INDIVIDUAL INTERVIEW QUESTIONS

1. What process did you get through at the beginning of the project regarding group leadership, task distribution, responsibility, etc.?
2. What was your task in the group? How did you contribute to the group work?
3. What skills did you bring to the project?
4. How did you use technology to develop your project?
5. How did you cooperate with your group friends to get the project done in school and outside?
6. How did you find the experience of working in the group out of school hours?
7. What strategies did you use to achieve your group goal? (sharing tasks, meeting, brainstorming, asking for advice, searching for information, etc.)
8. How did you find communicating with your group friends for the project on WhatsApp?
9. When you had any question, you could ask your teacher or group friends via WhatsApp, so what do you think about receiving 'instant feedback' online?
10. What obstacle(s) did you face during your conversation with one another on WhatsApp? Were you able to convey your ideas clearly via this medium?
11. How did the project help you in your learning English?
12. What were the benefits of the project in terms of language skills (R, W, L, S and Vocabulary)?
13. What are the important things "you" learned while working on the project?
14. What was the most challenging part of this project for you? What did you do at the end?
15. What would you do differently if you were given a chance to do the project again?

APPENDIX E: Interview Protocol

Interview Protocol for Project Work		
Interviewer:		
Interviewee:		
Date:	**Time:**	**Place:**
Interviewer Introduction		
Start Recording		
The purpose of this study: Regarding the project work process, the students were expected to express their opinions about each question.		
Interviewee Information:		
Questions: 1. 2. 3. 4. 5. 6. 7. 8. 9. 10.		
Thank you for your participation!		

APPENDIX F: Transcripts of the Interviews

İlk bir hafta herhangi bir konuşma yapmadık; çünkü biz de tam olarak ne olduğunu anlayamamıştık. Tek yapabildiğimiz bize verilen kâğıttan konuları incelemek, üniteleri incelemek oldu. En sonunda bir hafta içinde bir konuya karar verebildik ve görev dağılımlarını ilk hafta lider olarak seçilen kişi yapmaya başladı. Görev dağılımlarından sonra herkes kendi araştırmalarına başladı, ama biz biraz geç başladık grup olarak çalışmaya; o yüzden oldukça aksadı, herhangi bir bağlantı kurmadık ilk bir hafta sürecinde; ama bir haftadan sonra görev dağılımlarıyla konularımızı seçmeyi yaptık, hepsini ayarladık. (Student 1- Class 3)

İlk önce arkadaşlarımla beraber grup oluşturduk. Daha sonra bu grupla konumuza karar vermeye çalıştık. "Çevre" konusunu ele aldık. Bundan yola çıkarak herkes kendisine bir konu aldı. Örneğin biri küresel ısınma, biri hayvanların çevreye katkısı vb. konuları aldı. (Student 2 - Class 2)

İlk bir iki hafta nasıl yapalım tarzında konuşmalar yaptık. Sonra dergilere bakıp bizim için hangisi daha iyi olabilir, hangi konuya daha hâkim olabiliriz, hangisinde kendimizi daha güzel bir şekilde ifade edebiliriz, oldu. Herkes konu seçimine kendi karar verdi, araştırma yaptı. (Student 3 - Class 1)

Siz gerekli bilgileri verdikten sonra zaten direk WA grubu açıldı ve orada konuşmalar başladı. Aslında gruptaki kişileri de ben kendim topladım, yani ben seçtim. Grup kurulduktan sonra grup liderliği zaten benim üstüme kaldı, kimse almak istemedi. Görev paylaşımlarını da ben yaptım, konuyu da ben seçtim, arkadaşlara olup olmayacağını sordum. Sonra görev paylaşımları yapıp yazdım, grupta paylaştım. İtiraz olan var mı diye sordum, kimse evet demedi. (Student 4 - Class 4)

Kesinlikle en baştan kontrolü ele almak isterdim ve daha erken başlamak isterdim. Çünkü biz yeterli bir araştırma yapamadık, üstüne düşemedik fazla. Biraz daha vaktimiz olsaydı şu an elimizdekinden çok daha güzel bir şey çıkarırdık. Bu yaptığımız kötü demiyorum ama değiştirmeyi isteyeceğim şeyler ne kişiler olurdu, ne de başka bir şey. Direk olarak ben bu konuda bilgiliyim demek olurdu, ben bu konuda bilgili olduğum için bana izin verin grup dağılımlarını yapalım olurdu. (Student 5 - Class 5)

Dürüst olmak gerekirse eğer bir konuda fazla detaycıysanız ve mükemmeliyetçiyseniz bu gruptaki herkesten de aynı şeyi bekliyorsunuz. Ve bunu tek kişiden bile almazsanız çok fazla hayal kırıklığına uğruyorsunuz. Ben bir tek zaman konusunda çok sıkıntı yaşadım. Elimizde biraz daha zaman olsa, sadece bir hafta daha olsaydı yaptığımız şeyi daha güzel ortaya çıkarmak isterdim. Baskısı vb. pek alışkın olmadığımız için hepimiz son anda yetiştirdik, tam istediğimizi yapamadık. Zamanı çok iyi kullanmam gerektiğini ve son ana bırakmamam gerektiğini düşünüyorum. (Student 6 - Class 4)

Benim için en zor şey o dergi formatındaki tasarımı yapmaktı; çünkü teknoloji ile çok fazla aram yok, photoshop falan hayatımda hiç kullanmadım diyebilirim. O yüzden benim için en zor şey buydu. Bunları en başta bir arkadaşımız üstlenmişti, o da gidince iyice çaresiz kaldım, yapamayacağımı düşünmüştüm. Sonra diğer arkadaşımız bu konuda kendisinin yapabileceğini söyledi. O aldı bu işi ve bu şekilde halletmiş olduk. (Student 7 - Class 1)

Arkadaşlarınla sürekli irtibat halinde olman gerektiği için kaynaşıyorsun, ister istemez soru soruyorsun. Eksikleri düzeltiyorsun, tabii bazen problemler çıkabiliyor. Sonuçta bizi bir arada tutan şey takım çalışması oluyor. Öncelikle bir söz vardır ya "birini tanımak için onunla tatile git", bizde de "birini tanımak için onunla proje yap" diyebiliriz. Böyle denmez aslında ama kim daha sorumluluk alıyor, arkadaş ilişkileri nasıl bunu daha iyi anladım. Yani sorun yok, genel olarak kişileri tanımamda yardımcı oldu. İngilizce hakkında konuşursak, dediğim gibi bilmediğiniz bir yönünüzü keşfediyorsunuz, ilginizi başka yöne çekebiliyor. (Student 8 - Class 2)

Bana kattığı en önemli şey sabırlı olmayı öğrendim. Herkesin kendi görüşü var ve buna saygı duymayı öğrenmek, buna saygı duymaya çalışmak gerçekten benim için zordu. Onun dışında insanlarla iletişimim daha iyi oldu, çünkü bireysel olarak kendimi biliyorum, insanlarla iletişimim çok güçlü değil. O yüzden insanlarla konuşurken şimdi rahatladım ve bu sırada sınıftan arkadaş da edindim. (Student 9 - Class 3)

Sonuçta grup lideri bendim, sürekli herkesi takip ettim bir şeyi zamanında yetiştirmek için. Her şey benim elimde olan bir şey değildi, bir kişi bile bunu yapmasa zamanında yetiştiremeseydik geç kalacaktık ve kabul edilmeyecekti. Ama ben bunları sürekli takip ettim, zaman yönetimini öğrendim açıkçası, bu sadece benim elimde olan bir şey değildi. (Student 10 - Class 4)

İşbirliğini öğretti. Bu aldığım konu hakkında çok şey öğrendim açıkçası. Arkadaşlarımla beraber bir konu olduğunda nasıl harekete geçmem gerektiğini, bu dergi olayında neleri baştan sona doğru neleri yapacağımı öğrendim. Daha iyi oldu benim için. (Student 11 - Class 5)

Sorumluluk duygusu itiyordu en çok, okulda değilsin ama okula bağımlı olarak yapman gereken bir şey var ve bu normalde ödev olmadığı için hepimiz daha çok ciddiye aldık, çünkü hepimiz bundan puan alacağız. O yüzden daha çok sorumluluk duygusu bizi itti. Benim için en önemli şey bu oldu, sorumluluk duygusuyla yapmaya çalışmak çabalamak oldu. Sonuçta bir çaba harcadık ortaya iyi bir şeyler çıkartabilmek için. İyi olarak değerlendirdim bu deneyimi. (Student 12 - Class 2)

Bence güzel bir tecrübe oldu, bu süreçte arkadaşlarımı daha iyi tanıdım. Okul dışı saatlerde bir araya gelince birbirimizden çok şey öğrendik. Hem arkadaşlarla işbirliği nasıl olur, bölüme geçmeden fikrim oldu. (Student 13 - Class 3)

Daha önce dergi yapmamıştım, bunu nasıl şekillendiririm nasıl ilginç şeyler bulabilirim diye konu olarak en ilgi çeken şeyleri bulmaya çalıştım. Böyle bir şeyi daha önce yapmamıştım. Ve bunu İngilizce yapmak cidden önemliydi ve ilk kez İngilizce araştırma yapıyordum. Şu an daha deneyimliyim bu konuda diyebilirim. (Student 14 - Class 4)

Öncelikle olaylı kavramaya çalışmak var, olayı kavrayamamak var. İnsanlarla işbirliği yapmanın ne kadar önemli olduğunu da anladım. Muhtemelen olayı kavramaya çalışmadığımız için biraz geç oldu projeyi bitirmemiz. Bundan sonra projelerle de yakından ilgili olacağım için bu süreyi kısa tutmaya çalışacağım. Son güne bırakmamak önemliymiş, çünkü tam olarak her şeyi çıkarıp vermenin rahatlığıyla son güne bırakmanın acelesi ve yorgunluğu aynı olmuyor tabii. Ona daha çok dikkat etmek gerekiyormuş. (Student 15 - Class 5)

Okul dışında hepimiz kendi aramızda işlerimizi hallettik. Şöyle ki gruptan çok fazla konuşmadık, ama bireysel olarak sürekli iletişim halindeydik ve herkes birbiriyle iletişim sağladı, sorular soruluyordu sürekli olarak, düzenli konuşmalar yapılıyordu; ama okul içinde daha aktiftik, çünkü okul içinde birbirimizle iletişim kurabiliyorduk. Okul dışında pek aktifliğimiz olmasa da okul içinde her şey düzgün rayında gidiyordu. (Student 16 - Class 3)

Grup işbirliğini genelde WhatsApp aracılığıyla yaptık, arkadaşları pek tanımıyordum zaten, sonra tanıştık. Bir arkadaşın evine gittik, orada başladık proje ile ilgili detaylara. Sonra şu gün buluşacağız dedik, orada fikir birliği yaptık, akşam da hep beraber bilgisayar başında oturduk yazdık. (Student 17- Class 2)

Okul içinde, okulda kalıp çalışalım gibi bir şey olmadı ama bir kere benim evimde buluştuk. Bilgisayarda birlikte bir şeyler yazdık, hepimiz nasıl olmuş, eksik, hata var mı diye kontrol ettik. Onun dışında, herkesin uygun olduğu bir gün bulmaya çalıştık, öyle abartılı planlanmış buluşmalar olmadı. O gün kime uygunsa katıldı ve çalıştık. (Student 18 - Class 1)

Okul lise ortamı gibi olmadığı için 1-5 arası burada olduğumuz ve evlerimiz de çok uzak olduğu için dışarıda oturup bir şeyler yapma şansımız çok olmadı. Başka bir yerde daha ayrıntılı olarak akşamları şunu böyle bunu şöyle yapacağız diye konuştuk, sadece hafta sonları ara biraz zaman girdi, tam olarak ifade edemedik. (Student 19 - Class 5)

Birlikte ilk yapabildiğimiz şey görev dağılımı oldu, sonra bireysel olarak hareket ettik. Beyin fırtınasını daha çok dergiye neler koymamız gerektiğinde yaptık, diğer dergilerde bunlar varmış, a biz de bundan yapalım tarzı değişik yollar keşfettik. Elimizden gelen en orijinal en profesyonel bir şekilde ortaya bir şey çıkarmak için daha çok beyin fırtınası yaptık. Bunun dışında herkes kendi konularında bireysel olarak daha rahat edeceğini düşündüğümüz için görev dağılımını kişiye göre yaptık. Ben bu konuda daha bilgi sahibiyim, ben bunu alayım gibi. (Student 20 - Class 1)

Grup üyeleri zaten çok uyumlu insanlar olduğu için biz çabuk hallettik zaten, biraz geç kalmamıza rağmen. Ben daha çok beceri olarak teknolojik şeyler, bilgisayar, grafikler onlarla daha çok kullandım. Konumla ilgili araştırma yaparken resimler için internetten yararlandım. Gerçek dergilere bakıp nasıl tasarlandıklarıyla ilgili fikir aldım. (Student 21 - Class 3)

Teknik olarak yaptığım çok fazla bir şey yoktu, sadece daha fazla kaynaktan yararlanmaya çalıştık; çünkü en bariz Wikipedia vardı, orada çok fazla bilimsel yazılar vardı. O yüzden farklı, daha çok blog sayfalarından yararlandım. Bunun dışında zaman yönetimiyle ilgili olabilir, grup olarak biraz erken bitirmek istedik. Hadi yapalım, hadi yapalım dedim; ama iyi de dönüş aldım, herkes de hemen hemen yetiştirmeye çalıştı. (Student 22 - Class 5)

Herkesin fikrini aldık, bir araya geldik ya email ile ya da okulda. Sınıftaki diğer gruplar neler yapıyor, neler yapılması gerekiyor, bizden ekstra acaba neleri var diye onları kontrol ettim. Bizde eksik olanları öyle tamamladım. (Student 23 - Class 2)

Projeye başlamadan önce kızlarla "fashion" üzerinde konuşuyorduk, sonra güncel konu "oscar ödülleri"ni düşündük, "Great experiences" konusuyla bağlantılı olarak. Diğer sınıftaki arkadaşlarımla da konuşup sizce buraya ne ekleyebiliriz diye sordum, hatta anne babama bile sordum. Sürekli herkesten bilgi edindik, sonra hoşumuza gidenleri seçtik. (Student 24 - Class 4)

WhatsApp ile iletişim kurmak çok iyi oldu. Çünkü öteki türlü herkese tek tek mesaj atmam gerekiyordu, zaman alacaktı, ama WA grubumuz olduğu için toplu olarak herkes ne yazdıysa görüyordu. Arkadaşlarınla beraber aynı konuyu aynı anda tartışabiliyorsun. (Student 25 - Class 3)

Çok iyiydi. Projeyi yaparken bir yerde takılıyorum, o sıra arkadaşlarıma veya size soruyorum gruptan, anında bana cevap verdikleri zaman projeden kopmadan devam edebiliyorum, ama cevap alamazsam, görmedi duymadı olursa, bıraksam o işi ertesi gün aynı yerden devam edemeyebilirim, unutabilirim. (Student 26 - Class 2)

İşbirliği için en iyi buydu bence, çünkü nerede olursan ol, saat kaç olursa olsun sen o soruyu sorabiliyorsun ve arkadaşların veya öğretmenin sana anında geri dönüt verebiliyor. Beklemek zorunda değilsin. Ben vakit ayırıp o anda bir şey yapıyorum ve o vakit içinde bitirmek istiyorum onu, karşıdan böyle uzunca cevap beklesem akşama veya ertesine güne kadar mesela, saçma olacaktı, sonuçta birlikte karar vermemiz gerekiyordu, tek başıma bireysel yapmıyorum ben bu projeyi, ondan dolayı onların bana anında cevap vermesi önemliydi. Size zaten sorularımızı hep soruyorduk, aklımızda herhangi bir soru işareti kalmıyordu, böylece ilerleyebildik projede. (Student 27 - Class 4)

WA'da bir şeyi çevirmiyorsun o anda aklına ne geliyorsa onu direk İngilizce yazıyorsun. Daha uzun süreli ve daha farklı bir birleşim olsaydı sürekli İngilizce konuşabileceğim bir kanal olmasını isterdim ki bireysel olarak da bunu yaptığım arkadaşlarım var. Bence güzel bir şeydi WA kullanmak, sonuçta böyle bir şeyi yaparken teknolojiyi de kullanmak lazım ve bu, bizim daha çok özgüvenli bir şekilde çalışmamızı sağladı. (Student 28 - Class 5)

Bence güzel özelliği sizin de o grupta olmanızdı, çünkü biz zaten sudan çıkmış balık gibiydik, herhangi bir fikrimiz olmadan bu işe girdiğimiz için sizin en azından bir fikriniz vardı ve soru sorduğumuzda bize anında cevap verdiniz. O açıdan biz orada rahat olduk. Dediğim gibi zihninde kalan bir şeyi anında sorup cevap almak güzeldi, mantıklıydı. Sizin orada olmanız bizim WhatsApp grubumuzun en büyük önceliğiydi, en büyük özelliği o oldu. (Student 29 - Class 4)

Bir hata yapmadan veya yaptıysam anında düzeltebilme şansı verdi. Mesela çok farklı düşüncelerimiz vardı, ama belli bir süre vardı, biz de anında işe koyulmadık, herkesin uygun bir zamanı yoktu çünkü. Ama size sürekli mesaj attık, grup içinde konuştuk, şunu şöyle mi yapalım böyle mi, bunu bu şekilde yazabilir miyiz, bu resmi koyabilir miyiz, bunu yapabilir miyiz diye anında geri dönüt alınca bir işe boşu boşuna başlamamış olduk, daha yararlıydı. Bizim lehimize avantajımıza oldu. (Student 30 - Class 5)

Anında geri dönüt almak güzeldi, çünkü bu okulda öyle her istediğimiz şeyle ilgili anında geri dönüt alma şansımız pek olmuyor. Bu yüzden bu tarz bir projede yer almak güzeldi, beni mutlu etti, bir de WA öyle çok formal bir ortam genelde olmadığı halde. Hiçbir şekilde tıkanmadık, hatta biz biraz çekingen kaldık bu konuda, daha da açık olmamızı isterdim. Belki de daha önce bu tarz bir şey yaşamadığımız için olabilir. (Student 31 - Class 1)

Günlük dil çok iyi oldu, sonuçta burada okuduğumuz makalelerinin hiçbiri kitabımızdaki gibi belli bir gramer kuralına bağlı olarak yazılmıyor, her şeyden görebiliyordunuz bir makalenin içinde, çünkü o başka bir insanın zihni ve bambaşka bir konunda bahsediyor. Dile en büyük katkısı kesinlikle birçok şeyi bir arada görebilmemiz oldu bizim için. Dediğim gibi kitapta tek bir gramer konusu üzerinde gidiyordu, ama burada bir sürü farklı şey vardı ve çok güzeldi. (Student 32 - Class 1)

Çok yardımcı oldu. Konu araştırması yaparken mutlaka bilmediğin kelimelere rastlıyorsun, onlara da bakma gereği duyduğum için ve sürekli aynı kelimeye denk geldiğimde o kelimeyi de öğrenmiş oldum. Vocabulary açısından çok katkısı oldu bana. Reading'de faydasını gördüm, sürekli zaten bir şeyler okuyorsun, dergiye koyman gerektiği için farklı sitelerden okumalar yapıyorsun. Writing için bir makale yazmıştım, ilk önce çok uzun yazmıştım, düzenlemem gerekiyordu. O konuda internete başvurdum, bazı yorumlar okudum, o yorumlardan da yararlanarak önemli detayları alıp yeni bir makale yazdım, çok iyi oldu. (Student 33 - Class 3)

Speaking açısından geliştiğimi düşünüyorum. Ve sonuçta bir sürü araştırma yaptım, normalde internete girip de "domestic violence" ile ilgili ya da herhangi bir konuda İngilizce araştırmam gerekmiyordu, ama proje ile bu yönde bana katkısı oldu. İnternetten bir sürü makale buldum, araştırdım ve bunları okudum, düzenledim. (Student 34 - Class 5)

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TURKISH SUMMARY

Son yıllarda akıllı telefonlar, kişisel dijital asistanlar, diz üstü bilgisayarlar, iPAD ve iPOD gibi mobil teknoloji araçların yaygın olarak kullanılması eğitim alanında öğretim-öğrenme sürecini önemli ölçüde etkilemiştir. Bu mobil araçların her zaman ve her yerde kolaylıkla kullanabilmesi öğrenciler tarafından oldukça olumlu karşılanmakta ve dolayısıyla kullanımlarının artmasına yol açmaktadır. Gerçek şu ki gitgide gelişen mobil teknolojiler modern iletişim yollarını etkilerken günlük hayatın içinde köklerini bulan dilin de öğrenme yollarının farklı durumlara göre şekillenmesini etkileyebilmektedir.

Bu araştırmanın amacı, sınıf dışı etkinlik olarak yabancı dil öğrenme sürecine dâhil edilen mobil anlık mesajlaşma uygulaması olan WhatsApp'ın mobil-harmanlanmış işbirliğine dayalı öğrenme ortamında yabancı dil olarak İngilizce öğrenen öğrencilerin dil yeterliliklerini geliştirme konusunda nasıl bir etkiye sahip olduğunu ve sonuçlarını araştırmaktır. Bu amaçla araştırmaya yol göstermesi için şu temel soruya yanıt aranmıştır: Okul-dışı öğrenme ortamında bir grup proje çalışmasına dâhil edilen WhatsApp'ın İngilizceyi yabancı dil olarak öğrenen öğrencilerin dil öğrenimlerini geliştirmesi sürecinde nasıl bir etkisi vardır?

Bu çalışma şu konular üzerine odaklanmıştır: İngilizceyi yabancı dil olarak öğrenen öğrencilerin dil öğrenmelerini kolaylaştırmak amacıyla özgün dil öğrenme ortamı oluşturmak ve öğrencilere her zaman ve her yerde anlık geri bildirim sağlamaktır. Bu çalışmanın hedefi teorik olmaktan öte, uygulamaya dayalı bir önem taşımaktadır; çünkü sınıf dışı mobil öğrenmenin gerçekten nasıl bir işlevselliğinin olduğunu ve yabancı dil öğretimindeki uygulamalarda ne gibi değişiklikler ortaya çıkaracağını ve bu alandaki öğretmenlerin bakış açılarını değiştirme veya genişletme hususunda derin bir araştırma yapmaktır.

Yabancı dil öğretiminde sıklıkla karşılaşılan güçlüklerden biri ana dili İngilizce olmayan öğrencilerin hedef dile yeterince maruz kalamamaları ve günlük hayatta dili kullanma ortamlarını bulamamalarıdır. Çoğu yabancı dil öğrenmeye çalışan öğrenci gerçek ortamlarda dili kullanma pratiğini yeterince kazanamamaktadır. Diğer bir açıdan, yabancı dil öğretiminin sadece sınıf ortamında sunulan, pratiğe çok fazla dayanmayan etkinliklerle sürdürülmesi, öğrencilerin dil gelişimini daha da olumsuz etkilemektedir. Bundan dolayı öğrenciler hedef dili etkili bir şekilde kullanacakları

ve o dile ait farkındalık kazanmalarını sağlayacak hem okul içinde hem de okul dışında öğrenmelerini destekleyecek birtakım farklı arayışlar içinde bulunmaktadırlar (Field, 2007). Etkili dil öğrenmeyi yakından ilgilendiren bir diğer son derece önemli etken de birçok öğrenme teorisinin içinde yer alan konulardan biri olan geri bildirimdir. Genel sınıf içi öğretimde öğrenciler kendi öğrenmelerini ilerletebilmek için öğretmenlerinin destek ve yardımlarına ihtiyaç duyarlar ve bunun doğrultusunda öğrenmelerini gerçekleştirirler; fakat öğrenciler sadece sınıf içi öğrenmeleriyle değil ayrıca sınıf dışında da birçok öğrenme fırsatları yakalarlar ve bu süreçte kafalarında oluşan soruların cevaplarına karşılık anlık geri bildirimlere ihtiyaç duyabilirler. Sınıf ortamında her bir öğrenciye ayrı ayrı geri dönüt vermek için yeterli zaman olmadığından dolayı, öğrenciler bir yanıt alabilmek için uzun bir süre beklemek zorunda kalabilir veya hatta ertesi gün sorularını unutabilirler. Yukarıda bahsedilen tüm bu yabancı dil öğrenme sürecindeki güçlükler dikkate alınarak bu çalışma, mobil anlık mesajlaşma olanağı sağlayan WhatsApp uygulamasının hem öğrenciler arasında hem de öğretmen ve öğrenciler arasında anlık geri bildirim göndermek ve almak için eş zamanlı bir iletişim kurma yararı sağladığını (Ho, 2011) vurgulamaktadır.

Araştırmanın ikinci bölümündeki literatür taraması, çalışma için daha somut bir anlayış sağlaması ve dayanmış olduğu teorik alt yapıyı belirtmesi için tez çalışmasının teorik çerçevesini detaylı bir şekilde anlatmaktadır. İlk olarak, proje tabanlı öğrenme ile ilgili olarak geniş bir literatür araştırması sunulmuştur. Bu konu başlığı altında şu konular yer almaktadır: (a) proje tabanlı öğrenmenin temel özellikleri: otantik öğrenme, öğretmen ve öğrencilerin rolleri, işbirliğine dayalı öğrenme ve grup çalışması, (b) proje tabanlı öğrenmede değerlendirme, (c) proje tabanlı öğrenmeyi uygulamanın yararları ve zorlukları ve (d) yabancı dil olarak İngilizcenin öğretildiği ortamda proje tabanlı öğrenmedir. İkinci olarak, harmanlanmış öğrenme teorik çerçeve, yöntemler, harmanlanmış öğrenmeye dayalı birtakım uygulamalar ve yabancı dil olarak İngilizcenin öğretildiği ortamda harmanlanmış öğrenme gibi konular bakımından ele alınmıştır. Daha sonra, mobil öğrenme şu alt konu başlıklarıyla detaylı olarak belirtilmiştir: mobil öğrenme teorileri; proje tabanlı öğrenme, işbirliğine dayalı öğrenme ve harmanlanmış öğrenme. Son olarak, tez çalışmasıyla ilgili son yıllarda yapılmış benzer çalışmalardan bahsedilmiştir.

Bu çalışmada yöntem olarak, karma yöntem uygulanıp keşfedici karma yöntem (Yin, 2009) desen olarak kullanılmıştır. Karma yöntem, tek bir çalışmada nitel ve nicel verileri birleştirmeyi, toplamayı ve analiz etmeyi vurgular (Creswell & Plano Clark, 2011). Buna ilaveten, karma yöntemin kullanılmasındaki sebep, bu yöntemin nitel ve nitel verileri birleştirerek araştırma probleminin ve sorularının daha iyi anlaşılmasını sağlamasıdır (Creswell, 2013). Çalışmanın amacı dikkate alınarak, bu literatür bilgisi karma yöntem araştırmasının bu çalışma için en uygun araştırma deseni olduğunu göstermiştir.

Nitel araştırma yöntemine göre yapılan bu çalışmada amaçlı örneklem yöntemi (Creswell, 2013) kullanılmıştır. Türkiye'de özel bir üniversitenin Yabancı Diller Hazırlık Yüksek Okulu bölümünde yapılan bu çalışmaya orta düzey (upper - intermediate) seviyede İngilizce bilen beş hazırlık sınıfının katılımıyla toplam 85 öğrenci katılmıştır. Yaşları 18 ve 20 arasında değişen bu öğrencilerden 20'si İngiliz Dili ve Edebiyatı, 20'si Mütercim Tercümanlık, 7'si Mekanik Mühendisliği, 7'si Endüstri Mühendisliği, 5'i İnşaat Mühendisliği, 5'i Banka ve Finans, 4'ü İktisat, 4'ü Yeni Medya, 3'ü Uluslararası İlişkiler, 2'si İç Mimarlık, 2'si Sosyoloji ve 1'i Bilgisayar Mühendisliği olmak üzere farklı bölümlere kayıtlı öğrenciler katılmıştır. Bu öğrenci grubunun seçilme sebebi İngilizce dil yeterliliklerinin yürütülecek okul dışı proje çalışması için uygun olması, ayrıca mobil araçları kullanma konusunda tecrübeli olup kendi öğrenme alışkanlıkları için amaçlı veya amaçsız bu mobil araçlardan faydalanabildikleri gözlemlendiği ve son olarak çalışmaya katılmaya hevesli ve gönüllü oldukları görüşlerine dayanarak seçilmişlerdir.

Çalışmada nicel ve nitel veri toplama kaynakları bir arada kullanılarak dört farklı kaynaktan yararlanılmıştır: yarı-yapılandırılmış bireysel ve odak grup görüşmeleri, akran değerlendirmeleri, proje ürününü değerlendirmek için hazırlanmış rubrik ve WhatsApp grup konuşmalarını içeren günlükler. Veri toplama araçlarının hazırlanış süreci şu şekilde olmuştur: Akran grup değerlendirme formları proje bitiminde tüm öğrencilere verilip birlikte geçirdikleri süreç boyunca neler yaptıklarını ve grup çalışmasındaki performanslarıyla ilgili hem kendileri hem de birbirleri hakkındaki kişisel görüşlerini paylaşmaları beklenmiştir. Formların hazırlanmasında belli başlı ölçütler göz önüne alınmıştır; örneğin on maddeden oluşan 5'li Likert tipi bir ölçek araştırmacı tarafından geliştirilmiştir. Akran değerlendirme formundaki ölçek "Kesinlikle katılıyorum (1)," "Katılıyorum (2),"

“Kararsızım (3),” “Katılmıyorum (4)” ve “Kesinlikle katılmıyorum (5)” diye beş seçenekten oluşmuştur. Seçeneklerin oluşturulmasında proje tabanlı öğrenmenin temel ilkelerinden “işbirliği ve eşgüdüm, proje planlanması, karar verme ve zaman yönetimi” (Blank, 1997; Dickinson et al., 1998) göz önüne alınmıştır. İçerik geçerliliğini sağlamak için bu alanda tecrübeli bir öğretmenden görüşleri alınmış ve alınan geri bildirime göre gerekli düzeltmeler yapılmıştır. Öğrencilerden her bir madde için hem öz değerlendirmelerini hem grup arkadaşlarını tek tek değerlendirmeleri yapmaları istenmiştir. Bu değerlendirme sürecinde öğrenciler birbirlerinden bağımsız değerlendirme yaptılar ve sonuçları kimseyle paylaşılmadı.

İkinci veri kaynağı analitik rubrik, proje çalışmasının her bir aşamasında öğrenci performansını ve yeterliliğini ölçmek ve en sonda genel bir puana ulaşma için bir değerlendirme aracı olarak kullanılmıştır. Analitik rubrik hazırlanırken proje üzerinde çalışırken öğrencilerden başarması beklenen öğrenme hedefleri ve becerileri, bilgi ve anlama gibi unsurlar dikkate alınarak hazırlanmıştır. Bu tür bir rubrik ile değerlendirme yapılmasının nedeni öğrencilere sergilemiş oldukları performansları doğrultusunda geri bildirim sağlamak ve biçimlendirici geri dönüt almak ve ayrıca tam olarak bitirilen proje çalışmasının aşamalarını tanımlamak ve değerlendirmektir. Analitik bir rubrikte ilk olarak, değerlendirmeyi yapacak kişi çalışmayla ilgili her bir ölçüte ayrı ayrı puan verir ve daha sonra tüm puanları toplayarak tek bir temsili puana ulaşır (Nitko, 2001). Rubrikte yer alan ölçütler; planlama ve hazırlanma, tasarlama, içerik, işbirliği, teslim ve sunum başlıkları altında belirlenmiştir. Son olarak, tez danışmanına danışılarak veri ölçeğinin içerik geçerliliği test edilmiştir.

Yukarıda anlatılan nicel verilere ilaveten, nitel araştırma tekniklerinden odak grup görüşmeleri ve bire bir görüşmeler karma bir teknik olarak kullanılmıştır. Yarı-yapılandırılmış veya ucu açık sorular katılımcılara sorulmuştur. Görüşme soruları katılımcıların vermiş olacağı cevapların çalışmadaki araştırma soruları için aydınlatıcı veya faydalı bulgular ortaya çıkartması açısından bakılarak hazırlanmıştır. Araştırma sorularındaki ana konular ve temalar dikkate alınarak, odak grup görüşmeleri için on soru, bire bir görüşmeler için on beş soru hazırlanmıştır. Soruların sıralaması en genelden en özele doğru düzenlenmiştir. Görüşmelerde ortaya çıkabilecek her türlü cevaba karşı araştırmayı yapan kişinin dikkatli olması ve cevaplara herhangi bir etki yapmadan görüşmenin akışı sağlanması için sorularla

ilgili bazı anahtar kelimeler de ilişkilendirilmiştir. Soruların güvenirlilik ve geçerliliğini temin etmek için hem alan uzmanına hem de tez danışmanına danışılıp verilen geri dönüte göre gerekli değişiklikler yapılmıştır. Son veri toplama aracı olarak öğrencilerin WhatsApp aracılığıyla oluşturdukları gruplardaki sohbetler kaydedilerek sonrasında içerik analizi yapmak için her bir grup için ayrı günlük dosyalar oluşturulmuştur. Toplamda 22 WhatsApp grubu olduğu için 22 de günlük dosyası elde edilmiştir.

Üçüncü bölümde yer alan veri toplama sürecinde, proje çalışmanın bitmesinin ardından katılımcılara ayrı ayrı akran değerlendirme formları dağıtıldı ve hem kendilerini hem de grup arkadaşlarını belirlenen ölçütlere göre değerlendirilmesi istendi. Bazı öğrencilerin değerlendirme günü okulda olmamaları sebebiyle katılımcıların hepsi bu sürece katılamadı; fakat daha sonrasında geriye kalan öğrencilere de ulaşılarak değerlendirmelerini yapmaları sağlandı. Sınıftaki öğretmenlerinin gözetiminde sonuçlar paylaşılmadan herkes bireysel olarak değerlendirmelerini on veya on beş dakika içinde tamamladı. Değerlendirmenin geçerliliğini sağlamak için değerlendirmeyi yapan kişi ile değerlendirilenlerin adları çalışmada gizli tutulmuştur. Rubrik değerlendirmesi ile ilgili olarak, yedi haftalık proje çalışmasından sonra 22 gruptan hazırlamış oldukları dergileri son teslim gününe kadar toplandı. Projenin son teslim tarihi gerek öğrencilere dağıtılan bilgilendirme notları gerekse WhatsApp grubu aracılığıyla duyuruldu ve ara ara hatırlatmalarla zamanı iyi değerlendirmeleri vurgulandı. Dergilerin değerlendirilmesi için iki farklı liste hazırlandı; birinci listenin içeriğinde ölçütler, belli derecelendirmelerden oluşan performans düzeyi ve performans açıklayıcıları gösterilirken, diğer listede her bir sınıf için ayrı bir liste oluşturulup gruplar ve gruptaki kişilerin yer aldığı bir puanlama çizelgesi belirtilmiştir. Araştırmacının kendisi ile birlikte tecrübeli yabancı dil öğretmenlerinden biri ile rubrik değerlendirmesi yapılmıştır.

Odak grup görüşmeleri ve bire bir görüşmeler süreci akran değerlendirmelerinden sonra gerçekleştirilmiştir. Toplamda iki odak grubu oluşturulmuştur ve üye sayısı 16'yı geçmeyen odak grup görüşmeleri yapılmıştır. Yüz yüze görüşmeler ise amaçlı örnekleme yöntemiyle seçilen toplamda 10 kişi ile yapılmıştır. Görüşmelerin yapılacağı kişilerin seçilmesinde bazı ölçütlere bakılmıştır; örneğin her bir sınıftan en az iki kişinin seçilmesiyle birlikte katılımcının proje

sürecine yeterince hâkim olması ve görüşmedeki sorulara cevap verebilecek düzeyde olması beklenmiştir. Görüşme protokolü (Creswell, 2013) hazırlanarak görüşmelerin sistemli yürümesi amaçlanmıştır. Bu görüşme protokolünde şu gibi temel ögeler yer almıştır: projenin adı, başlama tarihi ve yeri; görüşmeyi yapacak kişinin adı ve katılımcılar; projenin kısa anlatımı; görüşme soruları ve en sonda tüm katılımcılara katkılarından dolayı bir teşekkür notu. Görüşme yöntemi olarak standartlaşmış açık uçlu görüşme esas alınmıştır. Her iki görüşmede de sorular belli bir sıraya ve benzer bir formatta kişilere sorulmuştur. Soruların açık ve anlaşılır olmasına dikkat edilip sorular katılımcıların ana dilinde (Türkçe) yöneltilmiştir. Araştırmacı moderatör veya yönlendirici olarak rol üstlenmiştir ve soruları yöneltmeden önce öğrencilerin gerginliğini azaltmak ve onları sürece alıştırmak için birkaç hazırlık soruları sormuştur. Bire bir görüşmeler 10-15 dakika arası sürerken odak grup görüşmeleri yaklaşık 30-40 dakika sürmüştür. Görüşmelerden iyi verim alınması ve doğru ve detaylı bir analiz yapılabilmesi amacıyla görüşme sürecinde her bir katılımcının izni alınıp odak grup görüşmelerinde katılımcının sayısı fazla olduğu için video kaydı yapılırken, bire bir görüşmelerde ses kaydı yapılmıştır ve sonrasında analiz için tüm veriler bilgisayara aktarılmıştır.

WhatsApp günlük dosyaları cep telefonlarındaki yazılım sistemine bağlı olarak sistemdeki mevcut sohbetler otomatik olarak kaydedilip e-posta yoluyla bilgisayara aktarılmıştır. Farklı cep telefonlarında farklı yazılım sistemleri nedeniyle değişik yollarla da günlük dosyalarına ulaşılabilmektedir. Buradaki en önemli nokta öğrencilerin grup içi yazışma dilinin İngilizce olması, grupta yönetici olarak öğretmenin varlığı ve her ne sebep olursa olsun gruptan çıkışa izin verilmemesidir.

Dördüncü bölümde anlatılan toplanan verilerin analizi ile ilgili olarak her bir veri kaynağı detaylı olarak incelenip uygun nicel ve nitel analiz yöntemleri uygulanmıştır. İlk olarak, proje katılan öğrencilerin hem kendilerini hem de grup arkadaşlarını değerlendirdiği akran değerlendirme formlarının sonuçları hesaplanmıştır. Öncelikle tüm gruplar ait oldukları sınıflarına göre bir Excel dosyasında listelenip her bir grupta verilen puan değerleri öğrencinin adı başta olmak üzere sırayla grup arkadaşlarının ona verdiği puanlar bir sonraki analiz için hesaplama kolaylığı sağlasın diye yan yana sıralanmıştır. Veriler Excel dosyasında sistematik olarak düzenlendikten sonra ikinci aşamada SPSS kullanılarak her bir sınıfın ayrı olarak Pearson korelasyon katsayıları hesaplanmıştır.

Analitik rubrik, nicel veri analiz yöntemi uygulanarak hesaplanan diğer bir veri kaynağıdır. 22 grup tarafından ortaya çıkarılan toplam 22 proje ürününün değerlendirmesini araştırmayı yapan kişi ile bir de yabancı dil alanında tecrübeli olan bir öğretmenden yapmıştır. Değerlendirme için iki farklı liste kâğıdı kullanılmıştır. İlkinde rubrikin içerdiği beş ölçüt ve her bir ölçütün altında açıklayıcı diğer unsurlar bulunurken, diğerinde öğrenci adlarını, grup kodlarını ve sınıflarını gösteren bir puanlama listesi kullanılarak birbirinden bağımsız olarak puanlandırılmıştır. Her iki değerlendiren kişiden elde edilen değerler SPSS kullanılarak verilen iki farklı sonuçlar arasında herhangi bir korelasyon olup olmadığına bakılmıştır. Bunun için de Pearson korelasyon analizi uygun bulunup gerekli hesaplamalar yapılmıştır.

Bireysel ve odak grup görüşmelerin analizi için içerik analizi uygulanmıştır. 10 katılımcıyla yüz yüze yapılan görüşmelerden elde edilen ses kayıtları ve odak gruplar görüşmelerinin video kaydı defalarca dinlendikten sonra üzerinde herhangi bir değişiklik yapılmadan katılımcıların dedikleri kelimesi kelimesine yazılmıştır. Tüm transkriptler gözden geçirilerek tek tek içerik analizi yapılmıştır. Transkriptler, içerik analizi temel ilkeleri dikkate alınarak aşamalı olarak şu şekilde incelenmiştir: kodlama, ana temaları veya kategorileri oluşturma, temalarla ilişkili verileri düzenleme ve tanımlama, son olarak sonuçlar için bulguların yorumlanması (Strauss & Corbin, 1998). Transkriptler incelenirken in-vivo ve betimleyici kodlamalar yapıldı. Genel olarak bu süreçte, veride var olan kategoriler ve temaların ve analizi yapan kişiyle veri arasındaki etkileşim sonucunda ortaya çıkan bulguların keşfedilmesine dayanan tümevarımsal nitel analiz gerçekleştirildi (Patton, 2002). Transkriptlerin detaylı analizi sonucu ortaya sekiz tema çıktı: (a) proje sürecinin yönetimi, (b) çeşitli becerilerin gelişiminin desteklenmesi, (c) bireylerarası etkileşim yoluyla öğrenmenin kolaylaştırılması, (d) sınıf içi ve sınıf dışı ortamlarda grup işbirliği, (e) hedef yönelimli stratejiler kullanma, (f) WhatsApp ile iletişim kurmanın kolaylığı (g) anlık geri bildirimin etkililiği ve (h) birbirleriyle ilişkili becerilerin dil yeterliliğine katkısı.

WhatsApp günlüklerinin analizinde nitel içerik analizi uygulanarak öğrencilerin okul içi ve okul dışında yaptıkları çevrimiçi yazışmalar dil öğrenme açısından bakılarak incelenmiştir. Dil becerileri yönünden bakılınca, karşılıklı yazışmalarda dikkat çeken en önemli dilbilimsel unsur kullanılan farklı türdeki kelimeler, cümle yapıları ve ifade etme biçimleri olmuştur. Dolayısıyla, gerek

günlükler gerekse öğrencilerin görüşleriyle bağlantılı olarak içerik analizinde kelime bilgisinin gelişimine yönelik bir analiz yapılmıştır.

Dördüncü bölümde araştırmanın sonuçları ayrıntılı olarak gösterilmiştir. İlk olarak, odak grup ve bire bir yapılan görüşmelerden ortaya çıkan transkriptlerin içerik analizinden elde edilen sekiz tema alıntılarla desteklenerek açıklanmıştır. Birinci tema "proje sürecinin yönetimi" ile ilgili olarak, sıklıkla karşılaşılan bazı konular şunlar olmuştur: öncelikle projenin kapsamının, ne olduğunun kavranması, sonrasında küçük adımlarla uygulamaya yönelik çalışmalar başlatmak, (örneğin grup içindeki üyelerin görevlerinin belirlenmesi, dergi türüne ve içerik konularına karar verme). İlk aşamayı bitirdikten sonra öğrenciler derginin içeriğine odaklanıp seçtikleri konularla ilgili ön okumaları yaptılar. Öğrenci görüşlerine göre, ilk başta projeyi anlamak noktasında birtakım sıkıntılar yaşanmış ve bu yüzden hemen çalışmalara başlanamamış. Daha sonrasında görev paylaşımları yapılıp konular belirlenmiş. Yaşanılan sıkıntının öğrencilerin daha önce bu tarz bir çalışma içinde olmadıklarından kaynaklanmış olduğu belirtilmiştir. İkinci tema "çeşitli becerilerin gelişiminin desteklenmesi" ile ilgili, çalışmanın odak noktası öğrencilerin dil gelişimleri olsa da yapılan grup çalışması ile edindikleri yeni tecrübeler, arkadaşları ile işbirliği yapmaları onlara ayrıca başka becerilerinin de farkına varmalarına ve geliştirmelerine yardımcı olmuştur. Bu becerilere örnek olarak, eleştirel düşünme, problem çözme, araştırma ve çevreyle uyum becerileri verilmiştir. Üçüncü tema "bireylerarası etkileşim yoluyla öğrenmenin kolaylaştırılması" konusunda, öğrencilerin sınıf dışı faaliyetlerde işbirliği halinde aktif çalışmaları onların birbirlerinden bir şeyler öğrenmelerine fırsat vermiştir. Ayrıca, bir görev için sorumluluk alma, başkalarıyla etkileşim içinde olma ve hedef dili kullanmada gerçek hayattan somut yaşantı deneyimi elde etmeleri genel olarak öğrencileri olumlu yönde etkilemiştir. Dördüncü tema "sınıf içi ve sınıf dışı ortamlarda grup işbirliği" konusunda, öğrencilerin çalışmalarını etkili bir şekilde sürdürebilmeleri için okul dışında da işbirliği yapmaları bekleniyordu. Görüşlerinden yola çıkarak bazen buluşup bir araya geldikleri ama çoğunlukla okuldan sonra WhatsApp aracılığıyla projenin detaylarını konuştukları görülmüştür. Beşinci tema "hedef yönelimli stratejiler kullanma" ile ilgili, genel olarak başvurulan stratejiler şunlar olmuştur: beyin fırtınası yapmak, sevilen konuları seçmek, gerçek dergileri araştırmak, alandaki uzman kişilere danışmak, fikir alışverişi yapmak ve teknolojiden

olabildiğince yararlanmaktır. Altıncı tema "WhatsApp ile iletişim kurmanın kolaylığı" ile ilgili, öğrenciler birçok açıdan faydasını gördüklerinden bahsetmiştir. Bunlardan sıklıkla bahsedilenler şunlardır: öğretmen ile öğrenciler ve öğrencilerin kendi aralarında her zaman ve her yerde iletişim kurmak, hızlı ve net kararlar alabilmek, eş zamanlı iletişim kurmak ve zaman kazandırmaktır. Yedinci tema "anlık geri bildirimin etkililiği" ile ilgili olarak fikir alışverişinin verimli olarak yapıldığı, her zaman ve her yerde soru sorabildikleri, olası endişeleri azalttığı ve zamanı etkili kullanabildikleri vurgulanmıştır. Son tema, "birbirleriyle ilişkili becerilerin dil yeterliliğine katkısı" öğrenciler sadece bir dil becerisiyle değil tüm dil becerileriyle (okuma, yazma, konuşma ve dinleme) proje süreci boyunca etkileşimde bulunduklarını, İngilizceyi geleneksel etkinlikler ortamından farklı gerçek yaşantılarına dâhil edebildikleri, farklı deneyimler edindiklerini ve sınıf içinde kitaba dayalı geleneksel öğretilen İngilizce dışında günlük İngilizce konuşma dilinin farkına vardıklarını ifade etmişlerdir.

WhatsApp günlüklerinin içerik analizi öğrencilerin dil becerilerini geliştirmede en çok kelime bilgisi yönünden yararlandıklarını göstermiştir. Literatüre göre, orta düzey dil seviyesine sahip olan bireyler kendilerini rahatça ifade edebilir, hatta dili sadece mevcut bilgi sınırında kullanmayıp kendilerine özgü farklı anlamlar çıkarma yetisine de sahiptirler. Çevrimiçi yapılan yazışmalardan görüldüğü gibi öğrenciler çoğunlukla eylem ve isim ya da eylem ve edat birleşiminden (collocation) oluşan farklı yapılardaki kelime gruplarını kullanmaya özen göstermişlerdir. Deyimler ve mecazi kelimeler de yazışmalarda sıklıkla kullanılmıştır. Dilbilgisel (gramer) açısından kurallı cümleler oluştururken doğru zaman kullanımı, özne ve yüklem uyumu gibi konularda hatalar yapılmış olmasına rağmen, öğrencilerin sınıf dışı bir ortamda İngilizce'yi kullanma çabaları ve farklı deneyimlerle birleştirmeleri dil öğrenme becerilerini geliştirmede olumlu etkileri olmuştur. Bununla birlikte, yazışmalarda görülüyor ki öğrenciler resmi olmayan, günlük dilde daha çok kullanılan birtakım İngilizce kelimeleri kullanma eğilimi göstermişler; örneğin, kısaltmalar, semboller, harf değişiklikleri en sık kullanılan yapılardır.

Nicel veri analiz sonuçlarına göre, akran ve rubrik değerlendirme analizi için uygulanan Pearson korelasyon analizi araştırmanın bulgularına katkıda bulunmuştur. Akran değerlendirilme sonuçları bazı gruplarda öğrencilerin kendilerine yüksek puan verirken, arkadaşlarının ona düşük puan verdiği ya da tam tersi bir durumun söz

konusu olduğu göstermiştir. Dolayısıyla, öz ve akran değerlendirme aralarındaki korelasyon katsayısı gruptan gruba farklılık göstermiştir. Rubrik analizi sonucuna göre değerlendirmeyi yapan her iki öğretmenin verdiği puanlar arasında yüksek bir korelasyonun olduğu ve istatiksel olarak anlamlı bir fark olduğunu ortaya koymuştur.

Son bölümde, araştırma sorularının cevapları, olası sonuçlar ve öneriler detaylı olarak anlatılmıştır. Araştırma sorularına cevap olarak, özetle öğrencilerin mobil-harmanlanmış işbirliğine dayalı bir ortamda grup olarak proje çalışmasında yer almaları onların dil gelişimlerine olumlu yönde katkısı olduğu, kelime dağarcıklarının artığı ve hedef dilde günlük konuşma dili ile resmi dilin birbirinden farklı olduğunu yaşayarak farkına vardıkları sonucuna ulaşılmıştır. Buna ilaveten, öğrencilerin görüşleri ve WhatsApp günlükleri ile desteklenerek WhatsApp aracılığıyla öğrencilere anında geri bildirim vermek grup çalışmalarında oldukça büyük katkılarının olduğu ve genel olarak, öğrencilerin mobil öğrenme araçlarının eğitim amaçlı kullanılmasına olumlu yaklaştıkları gösterilmiştir. Sonuç olarak, bu çalışmanın, yabancı dil olarak İngilizce öğrenenler için ileriye dönük bir katkısı olacağı ve dil öğrenme yöntemlerine yeni bir bakış açısı getirebileceği belirtilmiş ve farklı alanlarda da bu çalışmanın yapılarak sonuçlarına bakılması gerektiği önerilmiştir.