

Doctoral Dissertation

**Exploring the possibilities of improving the situation of ICT in teaching EFL: the
case of public universities in Iraqi Kurdistan**

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Dedication

my love, Olga
and
my son, Kazhik.

They were there with me every step of the way.

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Abstract

This study, exploring the possibilities of improving the situation of information communication technology (ICT) in teaching EFL: the case of public universities in Iraqi Kurdistan, was undertaken in three phases to investigate the current situation of ICT integration in teacher education programs at public universities in Iraqi Kurdistan. In the first phase, the study intends to explore how Kurdish EFL teachers (N= 120) perceive the use of ICT in foreign language teaching and what pedagogical and circumstantial considerations regarding the use of ICT in FL teaching are important to them. The second phase of the study aims to investigate how and for what purposes the students (N= 320) use ICT in the process of language learning and how much they are satisfied with the use of ICT by their teachers in the process of classroom teaching. The aim of the third phase of the study was to gain in-depth experience about how policymakers (N= 15) influence the process of the integration of ICT in their institutions and how they evaluate the process of ICT integration and what they have done to minimize the obstacles the teachers and students might face when they try to utilize technology in teaching and learning practices. A complementarity concurrent mixed method design was employed to collect data. The purpose of adopting complementarity techniques was to collect sufficient data to answer two different but related research questions and to gain a deep understanding of the research topic and data accuracy through the combination of quantitative and qualitative data. Findings from both the survey questionnaires of the first and second phases of the study reveal that the teachers and students participating in the research perceive the integration of ICT for teaching and learning positively. Almost all the participants have basic knowledge of ICT tools, and they use these tools for different teaching and learning practices. Despite their high frequency of ICT use in their language teaching, the participants reported some critical

issues such as the insufficiency of ICT equipment in the classroom, lack of training; insufficient pedagogical support and lack of specific knowledge on how to use ICT that might impede them from using ICT. The results of the semi-structured interviews in the third phase of the study indicate that all the interviewees have positive attitudes towards the use of ICT in teaching, learning and administration practices. The data obtained from the analysis of the transcripts show that the research participants pursue various ways in order to provide a wide range of ICT elements in the teacher education programs for teaching and learning. The research findings also reveal that teacher education programs within Kurdish public universities have failed to integrate ICT systematically, and they have serious technical, pedagogical and financial problems.

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1. Introduction

By the end of the 20th century, Information Communications Technology (henceforth ICT) rapidly proliferated in every aspect of human beings life, affecting the ways people work, communicate, and socialize. Today, using and understanding ICT has turned into an exceptionally important topic in educational settings.

The emergence of the knowledge society has led the governments across the world to dedicate a significant amount of resources and make tremendous investment to integrate ICT tools into their education system in order to help students graduate with adequate skills and abilities necessary to live in a 21st century environment (Buabeng-Andoh, 2012; Binkley et al. 2012).

The major aims of these investments are to convey a series of challenges for scientific institutions in order to enhance the quality of teaching and learning through making changes associated with curriculum, evaluation and transforming the traditional teaching and learning experiences. This is to prepare better students who are considered to be digital experts in order to take part in the emerging knowledge economy and information based society as well as accelerate national development efforts (Dede, 2010; Csapó et al., 2009).

Today, the utilization of ICT in the field of education, in general, has turned out to be unavoidable. As a result, many educational institutions are using ICT tools at a very fundamental level from improving teaching with PowerPoint to delivering instruction via a combination of face-to-face and online, or teaching entirely online (Winke & Goertler, 2008).

Hence, the question today regarding the use of technology is not whether to use technology in the classroom but how to use it to support teaching and learning practices.

Thus, integrating ICT into educational systems has become widespread in developed countries (Golonka, et al., 2014).

In 2010, a platform to reform the system of higher education was declared by the Ministry of Higher Education and Scientific Research in Iraqi Kurdistan (MOHE). A great emphasis of the platform was given to adopt new methods of teaching and update the knowledge and skills of teachers with a new philosophy towards integrating (ICT) in the process of teaching and learning (MOHE, 2010).

The intention of this platform has been premised on the potential of the new technological tools to challenge the inherited out-of-date higher education system of the "old Iraq", and approach a modern and westernized system of higher education to prepare students to realize the job demands of the local market (MOHE, 2010). As a result, the Kurdish government took the initiative to invest a great deal to transform the teaching environments with ICT infrastructures and the decision makers of the universities encourage their teachers to use multimodal technology in language teaching (MOHE, 2010).

One of the important themes of the road map was aimed to enhance the quality of teaching in teacher education programs with the help of ICT-rich environments. MOHE is convinced that launching of such initiatives is an important step in improving and developing teachers' teaching skills and abilities to adapt to the 21st century challenges (MOHE, 2010).

The platform has generated a whole set of national intentions about the ubiquity of technology integration to achieve the above broad aims without specifying how teachers, students, and administrators may achieve these aims operationally, and there

was no overarching strategy in place to support them in order to overcome the challenges they face.

Unfortunately, the accommodation of ICT tools into teacher education programs in the Kurdish public universities was not researched. In particular, the response of the teachers, students and policymakers and their pedagogical and conditional implementation of ICT integration seem to be lacking consideration. After eight years of intensive investment of ICT into the process of teaching and learning, no significant project has been conducted to investigate its impact in the process of foreign language teaching.

Thus, the lack of research in this area stipulates the researcher to carry out the present study to investigate different aspects of the current situation of ICT integration in the English as a Foreign Language (EFL) teaching programs at public universities in Iraqi Kurdistan.

1.1 The aims of the research

Regardless of the abundance of studies in the field, in a review of literature on technology-enhanced language learning, Egbert, et al. (2002) and Stockwell (2007) stressed the significance of the inclusion of the context and the experiences of teachers and students into research. They contended that data collection in specific teaching environments is vital to increase the amount of information about the efficacy of the use of technology in language instruction and provide rich and meaningful data about all the factors that influence the use of technology in the process of teaching and learning.

In the case of the Kurdish context, the process of ICT integration in teacher education programs and its impacts on the teaching and learning English as a foreign language have not been researched. Thus, the study aims at illuminating and understanding the current situation of ICT from the perspectives of EFL teachers, EFL learners, and policymakers to:

1. explore, describe, and interpret the selected participants' experiences regarding the use of ICT in the process of teaching and learning EFL.
2. assess issues and bottlenecks from the teachers, students and policymakers' perspectives in order to gain a holistic view and illustrate the current status of ICT use in English language teaching and learning, and
3. provide university decision-makers and practitioners with several proposals that will address the challenges and give recommendations to improve the current state of ICT use in teaching the English language in teacher education programs at public universities in Iraqi Kurdistan.

1.2 The organization of the thesis

The present dissertation is organized into seven chapters. Chapter one explains and outlines a general introduction to the research and aims of the study.

Chapter two reviews the relevant literature from the field in relation to the topic of the study with a particular focus on the concept of education in the 21st century, definition of ICT for the purpose of the current study, how can ICT integration contribute to increase the quality of education, the concept of constructive theory in

relation to ICT use in the process of teaching and learning, a brief overview of ICT in teacher education programs, ICT and foreign language teaching, the effects of ICT on the role of teachers in teaching process, self-regulated learning, self-efficacy and ICT, how to integrate ICT into an education system, the role of teachers and teacher education programs, and finally, the chapter provides a brief introduction about the Kurdish education system, and a review of teacher education programs development in Iraqi Kurdistan.

Chapter three explains the overall research methodology employed in the three phases of the study. The chapter begins by introducing the research questions the study seeks to answer, and continues to justify the rationale for employing mixed methods approach and instruments for the purpose of data collection. The chapter ends up with a brief introduction about the research participants.

Chapter four, five and six detail and justify the use of different research methods, the method, the participants, the data collection, the data analysis, the results and the discussions of the three phases of the study.

Chapter seven summarizes the main findings of the three phases of the study, the contribution of the study to the literature, as well as considering some pedagogical implications. The chapter also discusses the limitations of the study and suggests the possibility for further research work.

2. Review of related literature and research

The review of literature sheds light on the topics that fall within the scope of the study in order to provide a theoretical framework that supports the research aims concerning the professional development of ICT integration in the process of EFL teaching/learning within the teacher education programs at public universities in Iraqi Kurdistan.

2.1 Education in the 2^{1st} century

Since education has come to be considered as a human right in 1948 (UNESCO, 2000), policymakers around the world tried to decrease the level of illiteracy through education compulsory in order to enable their citizens to have basic education which includes the three Rs: Read, wRite and aRithmetic (Haddad & Draxler, 2002). Since that time students as raw materials come to schools in order to be converted into graduates as a finished product by their teachers through the application of curricula, discipline, and pedagogy (Hodas, 1996).

In the 21st century, this version of education, which was considered to be a good one for the last 60 years, is no longer capable of meeting the educational needs of our times. The rapid changes and increased complexity of 21st-century globalization era challenges the structure and content of teaching and learning activities of the traditional version of education. The new structure should equip the citizens with the "knowledge, skills, values, and attitudes they need to survive, to improve their quality of life, to empower them to participate fully and responsibly in the life of their communities and nations." (Haddad & Draxler, 2002, p. 61)

The challenges are not small, and it is the responsibility of our educational system to stand out for the inevitable changes and prepare our students to respond to the unique demands of today's life. The National Education Association in the United States of America (2014) mentions some of the challenges which should be addressed and solved by students:

Global warming, immigration reform, pandemic diseases, and financial meltdowns are just a few of the issues today's students will be called upon to address. Today's students must be prepared to solve these challenges. (p.5)

Addressing these issues and finding solutions for them requires the whole educational system including learners, teachers, decision makers, teacher education programs, curricular materials, discipline, and pedagogy to live between the functions of continuity and change or dynamic and reform. The function of continuity is to drive learners from what is known to the unknown and the change function is to view the education system and to examine how the new teaching/learning environments can be used to engage both the teachers and students in the kind of team and project work that can enable learners to take greater responsibility for their learning and the construction of their knowledge in order to meet the needs of new era (Haddad, 2002).

Thus, to live between the function of continuity and change, the 21st education system should not be about the three Rs alone: "Reading, writing, and aRithmetic" (Lippl, 2013, p.1) but it should include the 4Cs super skills as well: "Creativity, Communication, Critical Thinking, and Collaboration" (SBAC, 2015, p. 5).

Integrating the 4Cs into classroom teaching is very important to "turn our students into the best modern learners" (Lippl, 2013, p.1) and make them show that they

can respond to the complex changes of the 21st century and understand the world where they will move into as employees.

Teachers and learners are the main players in the educational system, and their role is very important, but as human beings, they have limits. In order to teach the 4Cs super skills and achieve the six Big Shifts, both teachers and students need other interventions to be brought into the teaching/learning environment. In the case of education, the other intervention is information communication technology (ICT).

2.2 What is ICT?

In recent years, there has been a unique consensus that the term Information and Communications Technology had been used in education in the last four decades, but the term became popular after Sir Dennis Stevenson used the acronym in a report to the UK government. Stevenson (1997) explained that:

On a point of definition we talk in this report of ICT, adding 'communications' to the more familiar 'information technology'... to reflect the increasing role of both information and communication technologies in all aspects of society" (p.12).

In 2000, ICT was used in the revised National Curriculum for England; Wales, and Northern Ireland. Since then, ICT evolved into a broad multidisciplinary field driven by the rapidly growing communication system.

Even though one can come across ICT in almost every aspect of human activities, the question of what exactly ICT is arises rather often, especially among the older generation: What is ICT? It is still not possible to find one single simple universally accepted definition for this term.

Blurton (2002) defines ICT as a “diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information” (p.1). Salehi (2011) recognizes ICT as a nonspecific term referring to technologies that are being utilized to gather, save, edit, give and take information in different forms.

Anderson and Glen (2003) derived the origins of information and communication technology (ICT) from information technology (IT). Anderson and Glen (2003) remark that adding the term of communication to information technology (IT) is to reflect the important development of new technologies in all fields of education. They define ICT as:

... those technologies that are used for accessing, gathering, manipulating and presenting or communicating information. The technologies could include hardware (e.g. computers and other devices); software applications; and connectivity (e.g. access to the Internet, local networking infrastructure, video-conferencing) (p. 52).

Based on the definitions mentioned above and for the purpose of this study, information and communication technology is defined as a method of gathering, processing, and transmitting information in the course of the study. Its importance lies not in the technology itself but in its capacity to make more noteworthy access to

scientific/ academic resources that facilitate the process of EFL teaching and learning in order to address teachers' and students' needs or purposes.

2.3 How can ICT help?

Haddad (2002) claims that the impact of the ICT revolution on all the aspects of life are dramatic and the changes have been so deep and fast that no one could expect them three decades ago even those who have pushed the new frontier:

The changes ICT revolution has wrought are not limited to one single sector of society. The car I now drive has more microprocessors than the university where I started in 1960. Hospitals would have to close and airlines would have to be grounded without them. My PC now serves as a post office, word processor, bank window, shopping center, CD player, Photoshop, news medium, and, of course, a vast library (p. 21).

Watson (2001) believes that ICT application in the process of teaching has transformed education systems. Teachers and students use different ICT tools daily, and these tools have pedagogic possibilities and approaches to be used successfully for academic purposes.

The purposes of ICT application is to raise the quality of education because ICT integration facilitates huge access to new information for the teachers, students, and administrators that did not exist in the past (Perraton 2004 as cited in Evoh, 2007). ICT can be used to update the educational system in order to go parallel with the needs of a knowledge society for all and may improve teaching/learning process and facilitate a

more active and interactive pedagogies, increased motivation, updated teaching materials, supporting different learning styles (Schmidt & Brown, 2004).

Under the right conditions, the integration of ICT into the educational environment may change the traditional teacher-centred and text-bound systems into student-centred and interactive teaching/learning systems (UNESCO, 2009). According to a study (ITL Research, 2011), education should integrate ICT in order to change the roles and relationships among teachers and students.

Integrating ICT into education will influence the process of teaching and learning by changing the role and relationships between teachers and learners (UNESCO, 2002). ICT challenges the authority of the teachers in the classroom and gives them new position which is increasingly different from being a master who stands in front of the learners as the owner of knowledge to a facilitator who helps them to become good learners (UNESCO, 2009).

Fullan (2013) states that “teachers are needed, but it is the new role that is required” (p. 25). The new role does not diminish the value of teachers in the process of teaching but shifts them from being a single transmitter of knowledge to become facilitators and guides the learning process in order to help and encourage students acquire knowledge. According to UNESCO (2004):

[a]s facilitators, teachers have to be flexible, responding to the needs that students have, and not merely dependent on what has been set up ahead of time by curriculum developers and their idea of who will be in the classroom. (p. 20)

The new flexible role of the teachers requires them to create a learning environment where students will become more conscious of their progress, content, and

objectives of learning. Becoming more conscious of their learning process demands the students to take greater responsibility for their learning and become autonomous learners. Integrating ICT may help learners to:

1. have comprehensive access to a range of resources such as online libraries, word processing, internet browsers, Wikis, blogs, podcasting, online photo galleries at anytime and anywhere;
2. use these tools to search for authentic material in order to do their home works and find solutions for their projects;
3. acquire the information literacy and critical awareness so that they can productively engage with the digital and knowledge society within the teaching and learning context;
4. reduce the isolation and facilitate communication between student-teachers and among students and peer support in learning;
5. enhance teacher-learner contact through e-mail, chat sessions, etc.;
6. share one's ideas and responding to the ideas of others improves thinking and increases understanding.

(UNESCO, 2002, p. 65)

Haddad and Draxler (2002) claim that ICT can contribute significantly to the upgrading and professional development of the teachers. ICT can help teachers overcome isolation and introduce them with sources of teaching materials, researchers and teachers around the world. Integrating ICT into the process of teaching will be helpful to modify the role of the teacher from:

1. the transmitter of knowledge to mediator and facilitator of learning from a variety of information sources
2. controller of learning to creator of the learning environment
3. an expert to collaborator and co-learner

(UNESCO, 2002)

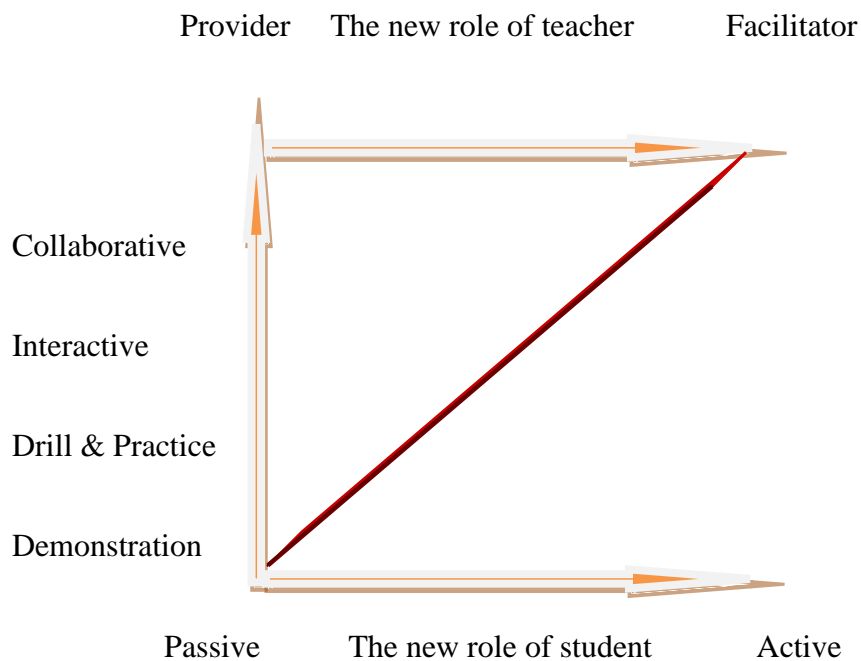


Diagram 1. The new role of teacher and student (Based on Haddad & Draxler, 2002, p. 13)

It should be clear that integrating ICTs into the educational process is not a simple, one-step activity but a very sophisticated, multifaceted process which involves a series of deliberate decisions, plans, and measures and a rigorous analysis of educational objectives and changes, a realistic understanding of the potential of technologies, a purposeful consideration of the effectiveness of ICTs for education (Haddad, 2002). Therefore, decision-makers, parents, teachers, and students should understand that introducing ICT tools into the classrooms and the education process

does not mean to expect magical performance. Teachers should not have blind pedagogical faith or utopian visions about the ability of the ICT, and they need to understand that ICT tools will not bring about improvements in educational quality and using them cannot automatically result in that students will learn better or more (Toure, 2008). ICT cannot make a bad teacher into a good one as they cannot fix a bad educational philosophy or compensate for bad practice (Haddad & Draxler, 2002).

Experiences show that existing ICT tools in the classrooms do not always promise better teaching as these tools may not suit all subjects and students equally. Educational planners should focus on the fact that there are considerable differences between a subject like physical-education and a subject like English as a foreign language. For instance, uploading web content for these two different subjects does not result in quality teaching in the same way. Therefore, the conditions for using these different tools, strategies, and pedagogical possibilities should be met concurrently to realize the potential of the ICT for knowledge dissemination and effective learning otherwise they may "promote automated thinking instead of critical thinking, encourage dependency rather than autonomy and interdependence" (Toure, 2008, p. 1).

Finally, no matter how well an ICT project is designed and planned to be used in the teaching and learning process before it is introduced its different components on a smaller scale should be piloted. The small piloted scale is to examine whether the integration is appropriate for the "educational objectives, desired roles of teachers and learners." (Haddad, 2008, p. 5).

According to Haddad and Draxler (2002),

To 'tech' or not to 'tech' education is not the question. The real question is how to harvest the power of technology to meet the challenges of the 21st century and

make education relevant, responsive, and effective for anyone, anywhere, anytime (p.6).

Thus, in order to answer the "how" question, the education policymakers need to develop a solid ICT framework which provides a detailed implementation plan in order to minimize the integration challenges and maximizes the benefits which ICT may bring into the process of teaching and learning.

2.4 Constructivism as a learning theory and ICT

Over the past few decades, several innovative concepts have been presented on the views of disregarding students as empty vessels holding up to be poured with knowledge. These innovations view students as learners who go to classrooms with their interests, personal learning experiences, unique background, and individual conditions.

Within the field of education, there are wide ranges of learning theories that furnish us with reasonable conceptual frameworks of describing the way students are learning and the way they are searching for answers to their practical issues.

Many scholars and instructional designers have attempted to make a model that best fits teaching and learning practices. Rakes, Fields, and Cox (2006) believe that among all the theories and major schools of thought, constructivist as a learning theory is the most well-known because of bringing student-centred-bound system which aims at enhancing the level of learning from basic to a higher-order of skills.

The core of constructivist as a learning theory lies in the student's dynamic activity and responsibility in learning, i.e. the self- regulation of learning. From the pedagogical point of view, the student's learning exercises ought to give students chances to test and experiment new conceptual comprehension in different connected applied circumstances (Clayden et al., 1994).

Constructivism is founded in the work of individuals such as Piaget, Dewey, Vygotsky, Ernst von Glaserfeld, Kant and Kuhn (Phillips, 1995; Twomey, 1996). According to these individuals, constructivism is a philosophical view that portrays how teachers and their students collaborate; how classroom time and space are utilized, and how control inside the classroom is in a balanced state between teachers and learners.

Constructivist instructors design their guideline after the old Chinese saying: "Tell me and I will forget; show me, and I may remember; involve me and I will understand" (Hernandez-Ramos, 2005, p.47). This is in line with the complaint of pragmatic philosophers Piaget and Vygotsky who believe that people construct their knowledge socially and individually through gradual advancement of experiencing things and reflecting on those experiences in multiple dimensions of realities. In light of the work of Jonassen, Peck, and Wilson (1999), constructivism as a theory of learning hypothesizes that learning is a dynamic process of knowledge construction in which people make sense of their reality by building the models of their experiences. According to Kanuka and Anderson (1999), constructivism has four inner convictions in common:

1. new knowledge is constructed upon the establishments of previous learning;
2. constructing knowledge is an active rather than a passive process;

3. language assumes an imperative role in the learning process; and
4. the learning environment should be student-centred bound system rather than a teacher-centred bound system where students learn how to learn, raise their questions, generate their particular hypothesis with emphasis on learning through discovery, exploration and testing.

In a constructivism learning atmosphere, knowledge is not attained but constructed (von Glasersfeld, 1989), teachers are not the only speakers and students are not passive learners rather they invite their students to raise their questions and search their answers. In a constructive classroom, the student's role is changed from a "learner as sponge" toward an image of "learner as an active constructor of meaning" and in this way students as teachers have shared responsibility, control, and reflection on their learning process. (Ferrence & Vockell, 1994).

Yager (1991) emphasizes that in a constructive learning environment, teachers adjust their teaching strategies and offer their students fundamental structure, voice, time, and space in order to comprehend the subject matter, foster critical thinking, flexibility, creativity, active learning, and more.

In a constructivist classroom, the focus of pedagogy is to redefine the new role and responsibilities for teachers and students towards a student-centred environment where teachers are not merely the passive recipients and teachers are experts. In their teaching practice, teachers need to enhance the construction of new knowledge as much as its mastery, and they should engage students in knowledge construction through collaborative activities that encourage them to ask questions and think of their answers. Teachers also need to guide the students to internalize and transform new information

through working cooperatively on tasks that require higher order thinking skills in order to effectively explore the way the educational system works for rapidly transforming the world of the 21st century needs (Jonassen et al., 1995).

Doolittle and Camp (1999) put forward eight basic characteristics of constructivist pedagogy in which the focus is on the active role of the learner's "dynamic interplay of mind and culture, knowledge and meaning, and reality and experience" in constructing knowledge.

1. Learning should take place in authentic and real-world environments.
2. Learning should involve social negotiation and mediation.
3. Content and skills should be made relevant to the learner.
4. Content and skills should be understood within the framework of the learner's prior knowledge.
5. Students should be assessed formatively, serving to inform future learning experiences....
6. Students should be encouraged to become self-regulatory, self-medicated, and self-aware.
7. Teachers serve primarily as guides and facilitators of learning, not instructors.
8. Teachers should provide and encourage multiple perspectives and representations of content.

(pp. 9-12)

With emerging new technologies, constructivism as a theory of learning is increasingly gaining extensive consideration. In the literature on ICT in education, the term 'constructivist' refers to a student-centred-bound system, where the student is responsible for his/ her learning while the teacher is as a facilitator of learning and

provides clear instruction guideline of learning (Killen, 2009).

Constructivists argue that teachers need to concentrate on creating a healthy environment to construct knowledge rather than its transfer. Keengwe et al., (2008b) recognize that teachers ought to use ICT as a device inside classroom in view of constructivist pedagogy in order to expand learning in core subject areas. Jonassen et al., (1999) believe that the application of technology into the process of teaching and learning is significant to create a constructive learning environment where students will figure out how to learn and how to seek solutions for real-world problems.

Thus, in the ICT based technological and pedagogical context the students will be assisted to learn meaningfully through “knowledge construction, not reproduction; Conversation, not reception; Articulation, not repetition; Collaboration, not competition; and Reflection, not prescription" (Jonassen et al., 2003, p., 15). As the outcome, educators utilize ICT instruments as intellectual partners to enable students to construct the necessary knowledge by considering what they are doing or what they did and through investigating, discovering, and sharing their thoughts with others. Jonassen et al., (1999) stress that teachers with the help of technologies should play as counsellors to assist students:

thinking about what they are doing or what they did, thinking about what they believe, thinking about what others have done and believed, thinking about the thinking processes they use... technologies can foster and support learning... if they are used as tools and intellectual partners that help learners to think (p.2).

In view of this, teachers are required to design ICT based exercises and incorporate them in their classroom instruction in a constructivist way by teaching their students the necessary skills to utilize ICT over an assortment of personal and

professional levels. In the constructive setting, the teacher needs to understand the potential of ICT as a constructivist learning element and to get a reasonable comprehension of the instructive usefulness of technological tools in the classroom teaching.

In sum, in order to put the constructivist theory into practice, the proposition that knowledge is constructed actively by the learner, teachers are required to integrate ICT into teaching-learning in a constructive pedagogical framework to deliver instruction or facilitate learning.

2.5 ICT in teacher education

Several prominent researchers in the field of teacher education such as Darling-Hammond (2010) and Cochran-Smith and Zeichner (2005) have argued that teacher education plays a key role in preparing the student for the future teaching profession. However, most of these researchers have under-communicated the use of ICT in teaching or how future generations of teachers are to develop digital competence through teacher education. These shortcomings could be linked to Grossman and McDonald's (2008) argument that contemporary research on teacher education is disconnected from research on teaching, higher education, and professional education.

A true purpose of incorporating ICT into teacher education programs is to inform teachers to utilize ICT as an element in their pedagogical activities so that students will be offered the opportunity to pick up the knowledge they need to teach a

specific subject later when the student becomes a teacher. To achieve this, the instructor can teach the students how ICT can be utilized in teaching and learning practices.

The integration of ICT into teacher education programs may likewise offer teachers a chance to examine the utilization of ICT as a device in teaching for different academic purposes. A skilled teacher can demonstrate different points of view on how to view the potential of ICT uses fundamentally.

Teacher education programs need to prepare the students for being able to coordinate ICT in their subject in order to confront the challenges of teaching in today's digitalized schools.

Based on the results of a growing body of empirical studies (Davis, 2003; Tømte et al., 2015), many teacher education programs developed several professional programs to minimize the difficulties these programs face when they attempt to use ICT.

A typical issue with the employment of ICT for instructing and learning is that teachers have "electrified old teaching methods" (Larsen, 1998, in Krumsvik, 2007b, p. 65). The key issue here is that the intercession of teaching materials and practices can scarcely be viewed as a technological upgrade when lesson notes make their way from transparent slides of PowerPoint to Prezi, and chalk and talk practices from ordinary blackboards to interactive whiteboards (Wood & Reiners, 2015).

Kay (2006) and Tondeur et al. (2012) argued that teacher education programs across the world have been slow to incorporate digital technologies and uptake innovative methods for teaching with ICT. Several research reports showed that ICT in teacher education programs is not in harmony with the expectation of the national curriculum, and it is used as a tool-focused to deliver the content of the teaching subject

rather than supporting students to gain higher academic achievements (Hetland & Solum, 2008; Tamim et al., 2011; Soby, 2003)

In addition, students have announced that they feel ill-equipped to teach with ICT after graduating from the teacher education program, and they have contended that their ICT-preparation in teacher education is not lined up with the necessities of today's digital schools (Guðmundsdóttir, Loftsgarden, & Ottestad, 2014).

In a study carried out by Lei (2009), it is revealed that students have not been taught how to pedagogically use ICT for teaching and learning in their teacher education programs. Lei noted that students could not distinguish between the use of ICT tools for entertainment such as social media and its use for learning purposes. Haugerud (2011) believes that there “seems to be a gap between technical knowledge and knowledge on how to employ technology in a learning context” (p. 227).

Research have explored various issues within the field of ICT training and teacher education programs including: implementation of institutional frameworks and models for ICT use (Krumsvik, et al., 2012; Otero et al., 2005), barriers and enablers for ICT integration (Brzycki & Dudt, 2005; Goktas, Yildirim, & Yildirim, 2009), evaluating students' and teachers' skills, needs, and attitudes to teach with ICT (Drent & Meelissen, 2008; Sang, Valcke, Braak, & Tondeur, 2010).

2.6 ICT and foreign language teaching

Over the last hundred years, numerous inventions and new technologies have proliferated in every aspect of human life. Although the new inventions have not made our world perfect, they certainly make an ever-changing effect on many things at a rapid pace in almost all fields of our professional world.

As in every other field, the use of technology has resulted in serious changes in the process of language teaching and learning. Eaton (2010) argues that in the field of language pedagogy, today's foreign language teaching is significantly different from that of the second half of the twentieth century. Most of the changes are related to new trends in language teaching methodologies. Eaton (2010) explains that in order to challenge the new changes effectively, and replacing "old authoritarian classroom models into gentler and more collaborative models", language teacher training programs need to invest time and effort to think about "how we learn, teach and acquire knowledge" (p.6).

To achieve these objectives, education planers within the teacher education programs need to provide teachers huge pedagogical and technical resources in a range of pedagogical ways that facilitate the application of new teaching strategies and quality of teaching as well. Taylor (2009) insists that the traditional foreign language classroom, which focuses on language mastery, should be converted into a cooperative learning environment through technology. Eaton (2010) mentions that "the focus on language education in the 21st century is no longer on grammar, memorization, and learning from rote, but rather using language and cultural knowledge as a means to communicate and connect to others around the globe" (2010, p. 5).

According to the American Council on the Teaching of Foreign Language (ACTFL, 2013), at all different education levels, teachers and learners exploit some forms of technology as pedagogical tools in language classrooms to facilitate and enhance the process of language teaching and learning. There is some proof that coordinating ICT in teaching and language learning brings about desirable learning results (Becta, 2007; Felix, 2003; Gray et al. 2007; Oyaid, 2009; Smith et al. 2005). Cononelos and Oliva (1993) noticed that utilizing technology innovatively can be exceptionally profitable and fulfilling for language teachers and furthermore useful for language students; most EFL instructors have turned out to be aware of the opportunities to coordinate ICT into their teaching procedure (Chen, 2008).

Research has demonstrated that ICT can enable educators to achieve pedagogical objectives and positively impact students' foreign language learning by providing access to authentic language material as well as communication opportunities with the native speakers of the target language (Felix, 2005; Stockwell, 2007; Zhao & Frank, 2003). Using ICT tools may enable students to speak with each other, or even with speakers of English around the globe (Warschauer & Healy, 1998).

ICT applications for language teaching are varied and ranged from audio and video recordings to online resources. Today, evidence suggests that web-based technologies such as blog, wiki, online-audio dictionary, Skype and social media (Facebook and Twitter) may offer language learners large quantities of authentic learning material resources that may greatly increase students contact with the foreign language they are learning (Stanley, 2013).

As indicated by Becta (2010), foreign language instructors can exploit an enormous collection of ICT resources for the purpose of teaching and learning. Besides,

various research studies have exhibited that students may take benefits from utilizing different kinds of ICT tools including electronic dictionaries, online chat, online dictionaries, wikis, podcasts, video, and interactive whiteboards to improve different foreign language learning skills such as listening and pronunciation (Golonka, et al., 2014; Stockwell,2007; Brox & Jakobsen, 2014; Kim, 2011).

In their investigation of four EFL teachers' practices of ICT in their classroom, Gray et al. (2007) found that three teachers invested adequate time making effective utilization of ICT. They developed new teaching materials and prepared projects utilizing "digital video, iPod, video-conferencing and podcasting" (p. 424). Thus, teachers' effective utilization of ICT helped their particular trust in their capacity to accomplish teaching.

Becta (2010) proposed that foreign language educators could help students to learn the target language in a more applicable setting by furnishing students with access to native speakers and credible authentic materials, by exchanging email addresses or utilizing social networking sites, for example, social media networks can help students to make friends and share their thoughts. Instructors can likewise make utilization of authentic target language on the Internet. Besides, instructors can support students' independent-learning by introducing applications, for example, Glogster, which may motivate students to do their learning projects by posting their posts.

Oyaid conducted a study in six high schools in Riyadh in Saudi Arabia to investigate the students' utilization of ICT inside and outside the school. She found that 73% of students utilized the Internet to look for information for learning and different purposes once per month. They likewise used word processing, Internet searching, and they went to the forum, chat rooms and got emails.

Moreover, teachers can utilize ICT for student evaluation and to keep parents about their child's learning. Students can utilize it to track their progress (Becta, 2010). Mcloughlin and Oliver (1998) argue that the Internet can be utilized to help a more open/intuitive approach in the process of education. Mayer (2005) argues that internet helps instructors to hold class gatherings, to incorporate more communicative exercises, and to acquaint students with the valid condition of the target language. ICT can effectively give students high-quality assets and important knowledge (Felix, 2003).

Sufficient utilization of genuine materials helps language learners to feel that they live in a world where learning the target language is part of their unique context (Kelly et al., 2002). Kelly et al., (2002) explains that acquainting students with EFL culture helps their comprehension and expands their inspiration to learn, which will bring about more prominent confidence to utilize the language they learn.

Language teachers can use ICT tools in the process of language teaching to assist their students improve their speaking, writing, reading and listening skills and practice the language they are learning with confidence (Ertmer et al. 2012). For example, in an English as a foreign language classroom, a teacher may ask the students to practice their listening skill and speaking with the help of online audio dictionaries to understand the meaning of vocabulary. Students can listen to the native pronunciation from the dictionary; also make a record of themselves for playback which may assist them to identify grammatical errors, inaccuracy in pronunciation as well as explain the meaning of the words in context. (Warschauer, 2008)

ICT can likewise be utilized to communicate within a blended approach. Banados (2006) carried out a study at a university in Chile, where a communicative English program utilized pedagogical blended learning. The communicative English program used UdeC English online, conversation classes with native speakers of

English and face-to-face EFL teacher-led classes. It was noticed from the investigation that the execution of the blended learning program shifts the role of the teacher in the classroom. Teachers were more supportive of their students; they encouraged students to work independently and, provided them with consistent feedback. They outlined language learning assignments and devoted more opportunity to their students as online tutors. They kept following up their assignments and urged students to finish their errands. As to learning progress, Banados (2006) found a high level of improvement in terms of language skills. Banados also claimed that the findings of the investigation might "give us new hope to believe that teachers and students can succeed in their goal of teaching and learning English more effectively" (p. 544).

Al Bukhari (2007) investigated the degree of the significance of utilizing English language websites on enhancing speaking and listening skills of students from the point of view of 344 female teachers and 26 inspectors in relation to student's education level, a number of instructional classes enrolled, age and year of experience. The findings of the study disclosed that the English language learning websites could positively tune up speaking and listening skills of the students, and teachers were more positive about the effect of the English language websites on the learning of the students than inspectors.

The utilization of ICT in English classrooms in the process of teaching and learning turned into a theme for much discussion. For instance, the investigation of Zayli'e (2007) was concerned about examining the impact of using ICT tools as an instructional means in teaching English grammar (verb tenses: Past/Present/Future) on 42 students' accomplishment in Saudi Arabia. The researcher used a quasi-experimental method to measure knowledge and comprehension levels of Bloom's taxonomy based on using ICT tool compare to oral presentation and using blackboard with coloured markers. The experimental group included 22 students who studied grammar through

using ICT tools as teaching mean; and a control group which comprised of 20 students who studied the same grammar using traditional methods such as using textbooks, verbal presentation and whiteboard. The results of the study display huge differences for the experimental group in students' accomplishment in knowledge, comprehension and the whole post-test. All in all, the discovery of this investigation confirms the findings of the previous studies that illuminated the important role of ICT to improve the quality of teaching and learning English as a second and/or foreign language.

Before the emergence of technology, one of the most notorious difficulties of language learners was the lack of authentic materials and lack of opportunities to practice the target language they learn. Warschauer (2006) states that ICT can play a big role to help students overcome these limitations and have virtual contact to the target language which, in the past, was just conceivable to visit the countries where the target language was spoken. Today, technology may significantly contribute to assist students to

1. read, listen to, and view authentic, engaging, and appropriate materials from the target culture,
2. practice interpersonal skills as they interact via video, audio, or text in real-time with other speakers of the target language,
3. collaborate on presentational tasks with their peers or teacher, anytime, anywhere,
4. work at their own pace as they access online content and/or utilize adaptive computer programs managed by their teacher,
5. practice discrete skills with engaging online games and applications.

6. benefit from differentiated instruction where multiple applications can be used to assess students, assign varied tasks, track data, give real-time feedback and manage classrooms and lessons,

Statement on the role of technology in language learning (ACTFL, 2017)

Houcine (2011) believes that the application of ICT tools in a pedagogically sound way may heavily facilitate the process of foreign language teaching because:

1. the possibility to adapt the teaching materials easily according to circumstances, learner's needs and response;
2. ICT allows to react upon and enables the use of recent/daily news, it offers access to authentic materials on the web;
3. A quick feedback is made possible;
4. the possibility to combine/use alternately (basic) skills (text and images, audio and video clip...);
5. lectures become more interesting and less ordinary which boosts learners' engagement;
6. ICT enables to focus on one specific aspect of the lesson (pronunciation, vocabulary...).

(pp. 1-2)

Thus, ICT affects not only how the language is taught, but also what kind of language is or should be taught, therefore combining different methodologies with the help of ICT tools in a pedagogically sound way may "transform the learning context by providing multiple opportunities for shared content and resources, self-directed learning, collaborative learning, ubiquitous and lifelong learning" in order to graduate a

language learner who is electronically literate and is able to speak, understand, analyze and critically respond to the demands in various models and evaluate the validity and reliability of informational resources for living and working context (Jimoyiannis, 2012, p. vii).

Although the above-mentioned literature confirmed that ICT elements play a great pedagogical role in empowering teachers and students to transform the traditional concept of the classroom, Stanley (2013) repeatedly emphasizes that the focus of the education planners is to "put pedagogy first and to only use technology when it genuinely adds value to the learning process." (p. 3). Moreover, these elements should not be treated as a silver bullet to solve the challenges in the process of teaching (Loveless & Ellis, 2003, Five ways teachers can use technology to help student, 2013).

As far as language teaching is concerned, there is no evidence to show how teachers best use ICT tools (Adams, & Brindley, 2007). The use of technology should be based on the topic of the course of the study, therefore policymakers, principles and FL teachers may have a clear notion of 'bridging activities' in order to avoid "knee-jerk investments" in the classroom which may lead to "Everest syndrome": the temptation to 'use a specific technology just "because it's their" (Stanley, 2013, p. 3) Thus, having ICT elements in the classroom should be one goal to support language teachers to create a dynamic teaching environment where the students find many options in order to answer their interests and find appropriate opportunities to meet their language needs (Thorne & Reinhardt, 2008).

In order to maximize the potential educational benefits of ICT into foreign language teaching, education planners and language teachers should have a full description of ICT integration. Tom Rank et al. (2011) describe the integration of ICT

in an educational context as a step-by-step procedure "rather than a dramatic leap into the unknown. It's a bit like rungs on a ladder – each rung needs to be in place for ascent to be safe, and it's risky to skip a rung, and dangerous to leave one out" (p. 2). Decision makers, foreign language teachers, and learners should have a clear understanding that using ICT tools in the classrooms teaching is a very complex process and its integration does not mean we can expect magical performance or outcomes (Haddad & Draxler, 2002). Teachers should have a sound pedagogical foundation about ICT use rather than utopian visions about the ability of the ICTs. They need to understand that "technology doesn't change practice—people do" (Loveless & Ellis, 2003, p. 63). In another word, ICTs cannot make a bad teacher into a good one as they are not able to fix a poor education policy (Haddad & Draxler, 2002). Thus, teaching and learning a foreign language needs more than the capacity to utilize a set of different ICT techniques or skills with the most recent range of software applications.

Therefore, to be cost-effective, and achieve an optimal level of benefits from ICT use in FL teaching programs, education policymakers in the teacher education programs need to provide several certain right conditions to integrate ICT into the language teaching environment (UNESCO, 2009). These include sufficient ICT elements including computers, fast Internet connection, head projectors, pedagogical training, and specific knowledge on how to effectively use ICT in the foreign language teaching (O'Neill, Singh, & O'Donoghue, 2004; Baylor & Ritchie, 2002).

Researches show that providing the right conditions will bring about numerous positive changes to the foreign language classrooms such as challenging the traditional teacher-centred system into the student-centred system (UNESCO, 2009). It also empowers language teachers to use different teaching styles to draw the attention of the

students and encourage them to use huge learning resources that are available outside of formal curriculum anywhere and anytime. (Alsunbul, 2002).

2.7 Effectiveness of ICT on the role of teachers

Teachers' readiness to adopt ICT tools in the process of teaching is by all accounts disputable. Some have successfully incorporated ICT tools into the classroom, others have been careful in their acceptance, and some have simply dismissed these tools.

While it is vital to distinguish how ICT is to be used in the process of teaching, it is more critical to discover factors behind teachers' use or little use of it and recognize factors that facilitate or inhibit its utilization.

Scrimshaw (2004) investigated enabling factors that motivate teachers to utilize ICT. The investigation includes a literature review, which prescribed viable approaches to minimize the obstacle, and an online questionnaire of practitioners' perspectives of enabling factors that encouraged or empowered them to coordinate ICT in their instruction. The results of the study display that the enabling factors which may urge teachers to coordinate ICT in the classroom can be categorized as:

1. individual level enablers, for example, access to personal computer, high speed internet connection, boundless access to adequate reliable software programs, teachers' beliefs, teachers' attitudes and confidence in using ICT in teaching; availability of technical support, access to high quality ICT professional development training; and

2. entire school level enablers, for example, spontaneous technical/ pedagogical ICT training, clear ICT policy use by the teacher education programs, good access to high quality ICT tools in the classrooms, and onsite technical support.

Researchers in the field of education also examined the barrier that teachers may experience while integrating ICT tools in the process of teaching. It is uncovered that the troubles in the utilization of ICT are identified with the shortcoming of teacher's information about educational technologies and how they can be utilized for teaching activities in the classroom (Morrison, 2011).

In an exploratory study conducted with teachers of several schools, Granger et al., (2002) distinguished several emerging factors that upheld fruitful utilization of ICT in teaching. The factors include ICT training, seminars, workshops held by the school to assist teachers to acquire knowledge on how to use ICT in the process of teaching in a sound pedagogical way.

The viability of ICT on the role of teachers might be anticipated obviously through the investigation of Hennessy et al. (2007) who examined how experienced classroom practitioners are starting to outfit the usefulness of ICT for the purpose of teaching practices. They used class observations, group interviews with four secondary science teachers, and interviews with two teachers and their students as data collection instruments for their study. Eventually, they noticed that the utilization of ICT bolstered shared cognition, enunciation, aggregate assessment, and reframing of students' thoughts, and the organizing of new realities for students.

More investigations proceeded on addressing the impact of teacher's attitudes towards ICT on students' learning. For instance, Sangrà and Mercedes (2010) explored

four distinct schools, and they noticed that there is a great sentiment from a group of teachers concerning the utilization of ICT in education. The results obtained from the analysis of the data show that the teacher's attitude is imperative in the instruction process and the absence of intrigue interest appeared to have significant impacts on the teaching process in the classroom.

Besides, Livingston and Rae (2006) believe that the attitude of the teachers toward ICT in the process of teaching should be taken into consideration. Condie (2005) also backs the perspective of Sang et al. by utilizing the relationship of either paddling at the water's edge or really swimming. Sang et al. (2010) propose that swimming at the edge is not sufficient.

Al Khateeb (2000) also investigated the positive and negative attitudes of the teacher in public schools in Jordan towards instructional technology in connection to some independent variables, for example, gender, specialization and years of experience. The results demonstrated that there are noteworthy contrasts between teacher's patterns toward instructional technologies and the academic qualification, teachers who hold BA degree, are more positive toward technology use in the process of teaching than College certificate. Besides, the results showed that there are no big differences in regard to the teacher's attitudes towards instructional technology between gender, specialization, and experience. The results of this study provide a comprehensive understanding of how teachers perceive instructional technology and what factors impact their perspectives toward such technologies.

Ng and Gunstone (2003) investigate the attitudes of science teachers of public secondary schools towards the use of ICT in learning and obstacles that might inhibit them from using the ICT tools. The results display that the majority of the teachers were keen on using such tools in their classroom teaching. The results also reveal that,

regardless of the positive attitudes, teachers were infrequent in adopting the ICT elements in the classroom.

Ong and Lai (2004) explored the consequences of educational research related to ICT use in e-learning. Ong and Lai endeavoured to find out the role of gender in relationships with the Technology Acceptance Model (TAM). The results show that male students outperformed female students in the utilization of e-learning models. In addition, females were more influenced in their observations towards using ICT, while the choices of executing ICT among males were more influenced by self-perception with respect to the use of e-learning. The investigation proposes that researchers should consider the components of gender in relation to how teachers and students perceive any form of ICT use in teaching and learning.

Abdullah (2012) conducted a study to investigate how often 250 Syrian primary teachers use ICT tools in the process of learning and how their perceived attitudes influence it. In addition, the study aimed at setting up whether there are any distinctions among teachers' attitude regarding the factors of gender orientation, qualification, ICT training enrollment, year of teaching experience and place of working. The findings of the study uncovered that although the teachers have a high positive attitude towards ICT use for the learning process and managerial issues modestly, the level of utilizing ICT as a learning tool was low due to having numerous obstacles such as lack of ICT tools in the teaching environment which made its use very difficult. The findings also display that there are no significant differences between the teacher's gender variable while taking professional training regarding how to use technology. Besides, the teachers demonstrated a noteworthy inconsistency between their attitudes toward ICT and the level of their utilization.

Concerning the logical inconsistencies in teachers' points of view towards ICT, Handal (2011) investigated the use of ICT by a group of a teacher in an Australian school. He noticed that there are contradictions between teachers; some of them perceive ICT integration helpful in the process of teaching for some course of study and less useful for a different course of study. He mentions two explanations for this inconsistency: the first is that the teachers discovered ICT adverse to learning and the second reason is that there is misalignment between evaluation and classroom teaching. This approach brings up issues with reference to what optimally ICT suits the different subject areas, whether such issue ambiguities are settled by a fixed, worldwide scale of ideal answers.

Ward and Parr (2010), in their study, recommended two hypotheses. The first hypothesis is that all the subjects and their teaching are hallowed in schools. Besides, the qualification of the subjects is frequently reflected upon the school; hence, they recommend that schools are unwilling to improve with a change of practice or the utilization of technologies. The second hypothesis is that although there is an overall school policy which might be deciphered diversely at the departmental level and with every individual teacher. Therefore, this would seem to support the view that schools are complex, adaptive systems within which the adoption of any innovation is likely to follow unpredictable diffusion trajectories (Ward & Parr, 2010).

2.8 Self-regulated learning

Zimmermann (1989) assumes that self-regulated learning may play a critical role in all periods of learning. She argues that a self-regulated learner is aware of his/her learning procedures and knows how to screen and control them in order to take a more prominent responsibility of his/her learning process.

Schoenfeld (1987) explains that self-regulated learning can increase and facilitates meaningful learning of the student in the classroom. Supporters of self-regulated learning contend that learners can be instructed to turn into more self-regulated students by procuring successful strategies and by improving perceptions of self-efficacy. Swanson (1990) believes that passive students can profit from reciprocal instructing through procedures of modelling, guiding, and collaborative learning. He explains that teaching students the regularity behaviours may positively enhance the academic achievement of these passive/poor students. Actually, after teaching regularity behaviours, low-achieving learners show results like the individuals who were ordinarily high achieving (White & Frederiksen 1998).

Rapid development in the field of ICT has made it conceivable for both teachers and students to have huge access to rich, new and authentic teaching/learning materials (Steffens, 2006). Such sophisticated technology-enhanced learning environment requires the teachers to create a learning environment which leads to self-regulation of learning. With the help of self-regulated learning, students become more conscious and responsible for their learning process (Zimmerman, 2000).

2.9 Self-efficacy in ICT use

Bandura (1997) assumes that an individual's understanding of the interaction between behaviour cognition and context provides the best way to indicate the attitude and perception of the individual. Self-efficacy has been characterized as a construct identifying with a person's self- perceived confidence in his/her capacity to do activities that will accomplish assigned objectives (Pintrich & Schunk 1996).

Self- efficacy depends on convictions about what a man can achieve with the knowledge and skills he possesses. Since self-efficacy is said to be situation-specific, it is likely that a person will show different levels of self- efficacy in a different situation. Bandura argues that the acquisition of self-efficacy convictions will be encouraged by four variables: (1) the successful completion of a task (inactive experience or mastery), (2) observation of a successful model (vicarious experience), (3) verbal persuasion and (4) enthusiastic or affective state.

In his investigation of pre-service teachers, Kellenberger (1996) reports that belief about accomplishment with PCs in the past has some effect on perceived PC self-efficacy. Although the results of his investigation suggest that past achievement may not impact self- efficacy as much as the level of value a student puts on PCs in an instructive setting.

Other researchers have discovered solid connections between self- efficacy, and achievements (Pintrich and Schunk 1996; Bandura 1986). With the expansion of the utilization of PCs at all levels of training, researchers have become interested in links between beliefs about the individual capacity to perform instructive PC, and utilization of PCs.

Jones' (2002) findings support that there is a significant relationship between the level of self-efficacy and computer use. Albion (1999) takes note of the decisions made by teachers about the utilization of PCs in their classrooms; they are probably going to be influenced by various variables including the availability of digital resources in the classroom, personal competence, curriculum and lack of time. However, there is significant confirmation to propose that, teachers' self-efficacy beliefs are a huge factor in determining the use of technology in classroom teaching.

From the viewpoint of self-efficacy theory, the optimal approach for developing teachers' self-efficacy for ICT use is to furnish them with technical as well as pedagogical training of ICT tools available in the classroom.

In the context of a teacher education program, pedagogical training, technical training, workshops and seminars on how to use ICT tools in the process of ELF teaching may be useful in order to increase self-efficacy of the teachers.

Concerning the use of new technologies, self- efficacy theory proposes that real experience is more compelling than a vicarious experience for expanding self-efficacy convictions. Thus, teachers' self-efficacy beliefs about using technology for teaching are directly related to their practice.

2.10 How to integrate ICT into an education system?

Resnick (2002) states that “while new digital technologies make a learning revolution possible, they certainly do not guarantee it” (p. 32). Thus, education policymakers need to understand that the availability of ICT tools in a teaching environment is not a catalyst to expect magical performance from teachers and students. Teachers should understand that using ICT cannot automatically result in the fact that students will learn better or more (Toure, 2008). Therefore, it is important to draw the attention of the creative teachers at all levels of education to the fact that ICT tools should be used as teaching aids to assist the students to learn the subject matter of the course of the study.

Law (2004) argues that there is no universally accepted framework to integrate ICT into educational system optimally; countries around the world use various designs and plans. Due to the complexity of the ICT implementation, education policymakers need to make many decisions in order to realize "how" to use technologies to gain the educational objectives (Reimann & Goodyear, 2004). According to Bhasin (2012), one possibility is to design an ICT project which provides a step by step plan that brings high-quality ICT integration which may cover all the details of hardware and infrastructure, software and services, human-ware, and systematic planning and management.

2.10.1 Hardware and infrastructure

When education planners consider integrating ICT into their education system, their first priority is to make sure that teachers and students will have sufficient direct access to ICT hardware and infrastructure facilities in the educational context.

Availability of technology is the first issue for the teacher and the students to be considered by their institutions. Bhasin (2012) argues that to make the ICT process effective and its integration successful, both teachers and learners should have access to a range of technologies based on the level of education and its needs. An important issue regarding all these equipment is to be able to run smoothly when they stop working they should be repaired and whenever necessary immediate technical assistance should be provided (Bhasin, 2012).

2.10.2 Software and services

The second priority of the education planners is to provide high quality, up to date, and reliable software services to be run on the hardware. Bhasin (2012) explains that teachers, learners, and educational institutions should be provided with a diverse set of "educationally valuable software tools, content resources, and related services" that are considered essential in today's classroom (p.132). She believes that providing software facilities is a critical factor to assist teachers and students to access extensive teaching/learning resources. Bhasin includes (2012) "learning management systems (LMS), course content management systems (CCMS), multimedia and Web-based courseware, learning resources banks, computer-assisted testing systems, framework software such as modelling and Microworld environments, educational gateways, educational management systems, and other application software." (p. 132). Thus,

having access to one or more of these software services will assist teachers and students to get meaningful information to teach/ learn the course of their studies and share their thought and knowledge.

2.10.3 Human-ware

The third priority in the process of ICT integration into an education system is the human-ware element. Bhasin (2012) hopes to ensure that the "aims of the human-ware are to create a professional that makes effective use of ICT and understand the pedagogic issues." (p. 132). Education planners, families and principles should take human factors into consideration as an important basic building block of ICT integration, they have to emphasize that the focus of ICT inducement in education system lies in the heart of teachers' teaching skills and students' learning development rather than on the presence of technology itself or offering tens of ICT equipment in teaching environment. (Key to ICTs in education is human-ware, not software, 2008).

To achieve these aims and bring about the fundamental changes in the process of teaching, an educational institution needs to provide all teachers with sufficient ICT elements and software with sustainable, relevant professional development training. Behar and Mishra (2015) believe that "teacher education and teacher professional development should be the overriding priority for education policymakers—rather than the current fashion of investing in technology that appears to offer a shortcut to higher school standards." (p. 73). The training services should focus on the technical aspects as well as pedagogical practices (Cox, 1994). The courses offered in training should include ongoing guidance and potential rules in order to assist the participating teachers

to formulate a proper understanding of "content and curriculum knowledge; knowledge of learners; evaluation of student learning outcomes; ICT Content Knowledge; Application of ICT in Context." (Fitzallen & Brown, 2006, p. 4). Thus, the result of participating in the ongoing training is to help the participants gain adequate skills and understanding of the educational uses of ICT in order to answer the given question "How should ICT be used in the teaching and learning process so that it contributes to the learning of the student?" (Bhasin, 2012, p. 133).

2.10.4 Systematic planning and management

Integrating ICTs into the educational system is a very sophisticated and complex process. In order for teacher education programs to reap the full benefits of ICTs, they need to make wise decisions as well as provide systematic planning which entails "rigorous analysis of educational objectives, realistic understanding of the potential of technologies", and the effectiveness of ICTs for education and pedagogical design (Haddad, 2002, p. 7). According to Bhasin (2012), the concept of ICT planning and management should be regulated at "the national, regional, and institutional levels." To accomplish this goal at the institutional level, ICT should be integrated chronologically at the macro (curriculum), meso (topic) and micro (lesson) levels. At the curriculum level, ICT is used to "support a more substantial amount of subject content and learning experience of a whole course", at the topic level it is used "in certain topics to supplement student learning" and at the lesson level it is applied to "help students better understand certain concepts" (Wang & Woo, 2007, p. 148).

Although the above-mentioned framework does not promise a full description of the ICT integration process, it provides education planners with careful implementation planning, which warrants successful ICT integration.

2.11 The role of teachers and teacher-education programs

Today more than ever, the function and role of a teacher in an education system are crucial, decisive and challenging. Philosopher Henry Adams (1928 as cited in Prothero, 2011) believes that the effects a teacher has on the students are eternal and "s/he can never tell where his influence stops."

Smith (1986) adds that "teaching is a profession that profoundly affects the lives of every individual, and ultimately the strength and well-being of the nation" (p. 39). It is because of this that the bright reputation and future of a nation directly linked to its educational system. According to Fullan (2013), the role of the teachers should not be isolated behind the classroom doors and narrowed down to teaching students the content of the subjects allocated for them, and a teacher needs to take other responsibilities and act as "the agent of change" (p.25).

Paradoxically, the new role of teachers as an "agent of change" demands them to perform duties which are not restricted to teaching activities but are directed in the wider sense to human development such as being "a symbol of guidance and inspiration for his/her students to achieve the esteemed goals in their future lives." (Mubashra & Saadia, 2014, p. 726). In order to have these attributes, teacher candidates

need to be trained in the teacher educations in order to obtain a well-rounded background in pedagogical practices.

Today in almost all the countries around the world, governments invest a lot in order to prepare high-quality teachers with thorough knowledge of both content and pedagogy through the teacher education programs.

Darling-Hammond (2010) believes that teacher education may play an important role in providing teacher candidates with up-to-date knowledge to meet the requirements of the teaching profession. He believes that teacher preparation programs search for the best possible approaches to equip their candidates with the knowledge, skills, abilities which are necessary to become a great teacher in the future. Evidence of studies emphasize the fact that teacher education programs do not necessarily depend on cognitive competencies such as knowledge and pedagogical skills alone, the programs need to focus on effective competencies such as positive attitudes as well in order to educate a teacher candidate who will be able to teach their students effectively in the future and stand against the problems they may face in the process of teaching. (Çetin, 2006, Lasek & Wiesenbergoва, 2007)

According to Oruc (2011), one of the key factors of understanding and improving the teaching process is investigating the attitude of the teacher candidates towards the teaching profession. It should be the priority of teacher educations to address the attitude of their candidates because it may influence their academic achievements. The attitude of the candidates can be a positive, negative or even a neutral. When having a positive attitude towards the teaching profession, candidates may take full advantage of every moment of their training and make the most out of it in the future as teachers. (Zimbardo & Lieppe, 1991)

As LaCour (2005, as cited in Karanezi & Rapti, 2015) puts it:

If we ask veteran teachers what their job is like, they will answer: difficult, wonderful, exhausting, fun, stressful, enlightening and rewarding. Then, when we ask them if they would choose the same career if they could live their lives over, the answer is usually "Yes". (p. 625)

2.12 Education in Iraqi Kurdistan

Since its establishment in 1921 till the end of the 1970s, the education system of the Iraqi government was recognized as one of the most developed systems in the Arab world, “higher education especially the scientific and technological institutions were of international standard, staffed by high-quality personnel” (UNOHC, 2003, p.,1). From the beginning of 1980 till the mid of the 2000s, Iraq was involved in long wars with neighbouring countries and the international communities. According to a report by UNOHC (2003), three decades of war have deteriorated the Iraqi education system and left it with critical shortcomings in many areas, for instance:

1. the reduction of teacher salaries from 500-1000 dollars per month in 1990 to 5-10 dollars today has resulted in the increased turnover of teachers looking for better-paid jobs elsewhere.
2. in-service training of teachers and school management staff has been more or less non-existent.
3. curricula and textbooks have not been revised for about two decades, and teaching methodologies have not been updated

(p.2)

Thus, the wars and international sanctions turned the best education system in the Arab world into the worst one.

Iraqi Kurds rose against the previous regime of Iraq in 1991, and they established a regional government. The regional government established two ministries, namely the Ministry of Education and the Ministry of Higher Education and Scientific Research.

One of the main challenges of the new local government faces is the limited capacities of teachers in the fields of speciality (teaching subjects) as well as teachers' outdated knowledge of their subjects they teach, the absence of appropriate modern teaching methodologies, and the traditional curriculum (MOHE, 2010). Therefore, both ministries offered many different models of teacher education programs in order to educate new generations in respect to the needs and aims of primary and high schools (UNESCO, 2003). But due to civil war, financial crisis, international and Iraqi sanctions the Kurdish system suffered as much as the Iraqi system. These problems reduced the capacity of the Ministries of Higher Education and Scientific Research in the fields of planning and offering comprehensive programs for teacher education. Such limitations have affected both the quality of and access to education at all levels. (UNESCO, 2003)

After the Iraqi Operation freedom and particularly since 2003, one of the key concerns for the Ministry of Higher Education was to ensure access to quality education in Iraqi Kurdistan. Once again, the teacher education program is perceived as a critical issue in the development of the Kurdish education system. The public universities established Colleges of Teachers at the request of the Ministry of Education to bring real and meaningful change to teacher education in Iraqi Kurdistan (MOHE, 2010).

In order to address the problems and meet the short and long term goals of teacher education policy, new departments specializing in classroom teaching were established, and they offered teacher education program with updated curricula and pedagogy courses

3 Research design

3.1 Research questions

This dissertation aims to answer the following two main research questions and related sub-questions:

1. What characterizes the current status of ICT use in TEFL to English major students in teacher education programs at public universities in Iraqi

Kurdistan?

- 1.1 How is ICT used in TEFL to English major students in their teacher education programs at public universities in Iraqi Kurdistan?
- 1.2 What pedagogical considerations regarding the use of ICT in TEFL teaching are important for EFL teachers at public universities in Iraqi Kurdistan?
- 1.3 What conditional implementations regarding the use of ICT in teaching EFL are important for EFL teachers in teacher education programs at public universities in Iraqi Kurdistan?
- 1.4 What are the attitudes of EFL teachers in teacher education programs at public universities in Iraqi Kurdistan towards the use of ICT in teaching EFL?
- 1.5 What is the disposition of pre-service teachers (English major students) in teacher education programs at public universities in Iraqi Kurdistan towards the use of ICT in teaching EFL by their teachers?
- 1.6 How do university officials perceive the use of ICT in teaching EFL in teacher education programs at their universities in Iraqi Kurdistan?

2. What needs to be done in order to improve the situation of ICT use in TEFL in teacher education programs at public universities in Iraqi Kurdistan?

- 2.1 What pedagogical steps need to be taken in order to integrate ICT in FL teaching meaningfully?

- 2.2 What needs to be done in order to integrate ICT in FL teaching effectively? and
- 2.3 What financial considerations should be taken into account in order to integrate ICT in TEFL in teacher education programs at public universities in Iraqi Kurdistan?

3.2 Instruments

ICT integration in teacher education programs in Kurdish universities is a little-known phenomenon. When considering this little-known phenomenon, complementarity concurrent mixed method data collection strategies is the most appropriate data collection instrument to elicit information in order to respond to the research questions of the study and to adjust the strengths and shortcomings of both quantitative and qualitative approaches (Creswell, Plano & Clark 2007).

Green et al. (1989) highlight that “in a complementarity mixed-method study, qualitative and quantitative methods are used to measure overlapping but also different facets of a phenomenon, yielding an enriched, elaborated understanding of that phenomenon” (p.258). The specific purpose of employing complementarity techniques in this study is twofold. On the one hand, it is the most appropriate data collection strategy to answer two distinct but related research questions of the proposed study (Creswell & Plano, 2007). Schoonenboom (2016a) states:

In complementarity concurrent studies two research lines contribute independently to one overall goal. The two research lines lead to partial conclusions which are subsequently brought together in one overall conclusion and the point of extension is research questions. (p. 8)

On the other hand, it is triangulation to obtain a deep understanding of the research topic and data accuracy through the combination of quantitative and qualitative data (Tashakkori & Teddlie, 2003).

Selecting reasonable research instruments for data collection is one of the basic components for conducting a useful study. Applying various research techniques in a consistent interaction approach is considered a critical part of the research study (Creswell, 2003).

Two data collection instruments, a quantitative and a qualitative, were used in the current study. The first instrument is a questionnaire, and the second is a semi-structured interview protocol.

In the light of the recommendations of Cohen et al., (2003), in this study, the questionnaire is viewed as an appropriate strategy for data collection because of the following reasons:

1. Keeping up participants' confidentiality and privacy is one of the primary reasons that make questionnaire a favoured-instrument for data collection.
2. Questionnaire is an economical data collection instrument to collect data from a large number of individuals.
3. Another significant merit of a survey questionnaire is its corroboration with discoveries from other data collection techniques, for example, interviews.

In addition, reading intensive research literature review, personal experience and the outcomes of the preliminary study pushed the researcher of this study to believe that one of the best data collection instrument is a self-reported questionnaire in order to elicit information to answer the first main research question of the study (Janssen et al., 2013).

The researcher could not find a full and proper questionnaire which might elicit sufficient information to the research questions of the study related to the conditional implementation and pedagogical consideration of the teachers' ICT use in the process of teaching and students' dispositions towards ICT use, therefore; two quantitative self-reporting survey questionnaires were developed in the current study in order to get a broad overview of the EFL teachers' perspectives on the use of ICT in the process of teaching and to investigate students' disposition towards the use of ICT in foreign language study experiences.

The first questionnaire was used to collect data from EFL teachers teaching in teacher education programs at public universities in Iraqi Kurdistan. The items of the questionnaire tended to examine how/why EFL teachers perceive and determine the use of ICT in the process of teaching and what kind of conditional implementation and/or pedagogical consideration should be provided in order to overcome their difficulties and ensure that ICT use brings potential impacts to the whole process of foreign language teaching.

The second questionnaire was constructed to obtain information from the students studying in teacher education programs. The items are tended to find out the dispositions of the students regarding ICT use in the process of language learning experiences.

Although questionnaire is not a costly method of data collection, it should be designed with much effort, a great deal of time and awareness to gather valid and reliable data about the theme of the research study.

Experience shows that participants usually do not like long and complex questionnaires that take a great deal of their time (Dörnyei, 2010). Other than the length of the questionnaire, the organizational structure is also very significant, therefore; the items need to be ordered from general to specific information and to move from simple to complex items (Creswell, 2003).

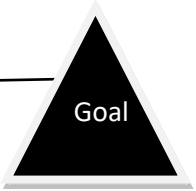
The current study takes the length of questionnaires into account in term of type and number of the questions. The items of the questionnaire were constructed to be a reasonable length, so it urged individuals to take part without influencing the quality or quantity of data gathered. The content of the questionnaires starts from very general to specific information.

The details of how the two research questionnaires and semi-structured interview protocol were developed will be reported in the following sections.

Data collections have been undertaken in three phases (to be described later in sections four, five and six).

Diagram 2. The overall research design of the study.

Exploring the current status of ICT use in teacher education programs at public universities in Iraqi Kurdistan Region.



What characterizes the current status of ICT use in TEFL to English major students in teacher education programs at public universities in Iraqi Kurdistan?

Research questions

What needs to be done in order to improve the situation of ICT use in TEFL in teacher education programs at public universities in Iraqi Kurdistan?

EFL teachers, Students and policymakers in public universities in Iraqi Kurdistan

Participants

120 EFL teachers
270 students

15 policymakers

Two different questionnaires

Sampling
Data Collection

Semi-structured interviews

Factor analysis

Data Analysis

Content analysis

Results

Results

Results

Partial conclusion

Partial conclusion

This research question aims at describing the current status of ICT use in teacher education programs from the perspective of EFL teachers and students in terms of their views about the various techniques, their ability/creativity in using these and also in overcoming problems, or issues like how their training (or the lack of it) influences their practice, or what they think they would need to improve the situation.

This research question aims at exploring the experiences and involvement of policymakers in the process of ICT integration in terms of what short and long term plans do they have to facilitate the process of ICT integration and overcome the challenges that might impede the use of ICT

Conclusions

3.3 Research participants

In order to elicit sufficient information to answer the research questions this study intends to answer, three types of research participants took part in three phases of data collections.

In the first phase of data collection of the study, convenience sampling was employed to recruit 120 full-time EFL teachers who teach in English departments in teacher education programs at public universities in Iraqi Kurdistan. The academic title of the participants fall into four categories: Assistant lecturer, lecturer, assistant professor and professor and the overall mean age of the participants is 39.

For the second phase of the study, convenience sampling was also used to recruit 320 EFL learners who have to study for four years in the departments of English languages in teacher education programs at public universities in order to receive a bachelor degree and later to be entitled to teach English language in basic or high schools in the region of Iraqi Kurdistan.

For the third phase of the study, fifteen university policymakers were interviewed at five public universities in Iraqi Kurdistan. The participants held the position of vice-president for scientific affairs, dean of the college of basic education, head of English departments, directors of quality assurance and directors of finance units. All of the interviewees served in the office at the time of the interview for at least one academic year.

The detailed descriptions of the research participants will be provided in the chapter four, five and six.

4. Phase 1 – The investigation of FL teachers’ use of ICT

The first phase of the study aimed at investigating the conditional implementations and pedagogical considerations of FL teachers as well as their perceptions/attitudes towards the application of ICT in the process of language teaching in teacher education programs. The rationale behind this was to get a holistic view of the feasibility and degree of ICT use in the teaching context where the study was conducted.

The first phase of the research was guided by the first three sub-questions of the first main research question:

1. How is ICT used in TEFL to English major students in their teacher education programs at public universities in Iraqi Kurdistan?
2. What pedagogical considerations regarding the use of ICT in TEFL teaching are important for EFL teachers at public universities in Iraqi Kurdistan?
3. What circumstantial considerations regarding the use of ICT in teaching EFL are important for EFL teachers at public universities in Iraqi Kurdistan?

4.1 Methods

A self-reported questionnaire was employed as a data collection instrument for the first phase of the study. For this purpose, I developed a questionnaire based on reading an intensive literature review. The items of the questionnaire covered the areas related to the utilization of ICT in the process of teaching by FL teachers in teacher education programs as well as the factors that might impede or facilitate the ICT use.

In addition, I employed a quantitative research methodology for the first phase of the study to analyze a large amount of data in order to elicit information for the sub-research-questions. In what follows the description of the participants, the development of the questionnaire, its administration, data analysis, as well as results and discussions, will be entailed.

4.2 Participants

The data collection of the first phase of the study was purposefully limited to full-time EFL teachers who teach in English departments in teacher education programs at public universities in Iraqi Kurdistan. For the purpose of sample selection, convenience sampling was employed to recruit the research participants. Based on this type of sampling 120 EFL teachers were selected, the rationale for their selection was that they possessed "certain key characteristics that are related to the purpose of the investigation" and they were "easily accessible" (Dörnyei & Csizér, 2012, p. 1). Table 1 to Table 6 show the individual characteristics of the participants.

4.2.1 Gender balance

As it is noticeable in Table 1, the gender balance of the participating teachers is not perfect. In the context of higher education in the region of Iraqi Kurdistan, it seems that teaching in teacher education programs is an overwhelmingly male profession, contrary to western countries where females dominated the teaching profession. The imbalance in the number of respondents might be a cultural reflection where women had less chance to prolong their education and become university teachers. As a consequence, male teachers outnumber females in the Kurdish public university in Iraqi Kurdistan at the time the study was carried out. Table 1 shows that almost three-quarters of all the participating teachers (65%) are male, while only 35% are female.

Table 1. Distribution of the participants

		N	%
Gender	Male	78	65
	Female	42	35
	N	120	100

4.2.2 Education

In Iraq Kurdistan, Master degree is the basic requirement to become a teacher in Kurdish higher education institutions, and increasingly universities only recruit graduates with a doctoral degree. As it is shown in Table 2 below, majority of the participants (75.8%) are Master degree holders while PhD holders are 24.2% and 30 out of 91 of the Master degree holders reported that they were working on doctoral degrees.

One possible explanation for this situation is that up to 2011 there were five public universities in Iraqi Kurdistan, after 2011 and in particular after the road map to reform higher education, the Ministry of Higher Education and Scientific Research opened eight new universities. In order to provide the necessary numbers of teachers to teach in these universities, MOHE opened many different Master programs at home and sent students abroad to prolong their education. Therefore, it is not surprising to find out the number of participants with Master degree thrice more than PhD holders.

Table 2. Distribution of the participants according to Education

		N	%
Education	Master	91	75.8
	PhD	29	24.2
	N	120	100
PhD student		30	

4.2.3 Academic title

In Kurdish universities, in terms of academic title, qualified teachers fall into four categories: Assistant lecturer, lecturer, assistant professor and professor. The MOHE regulated the academic title promotion in all the higher institutions in Iraqi Kurdistan. Master degree holder with limited requirements can be promoted to assistant lecturer. Assistant lecturers can be promoted to lecturers after two years of classroom teaching and publishing a minimum of two research studies in peer-reviewed journals. Lecturers can be assistant professors after four academic years of teaching and publishing a minimum of three research studies in peer-reviewed journals. However,

there is a much higher and stricter requirement if one applies for promotion from assistant professor to professor. Table 3 displays that the vast majority of respondents were assistant lecturers (54.2%) and lecturers (37.5%).

Table 3. Distribution of the participants according to the academic title

	N	%
Assistant lecturer	65	54.2
Lecturer	45	37.5
Assistant Professor	7	5.8
Professor	3	2.5
N	120	100

4.2.4 Teaching experience

As it is noticed from Table 4, the participating teachers were well experienced. Majority of the respondents (103) had up to fifteen years of language teaching experience while nine teachers had more than fifteen years of teaching experience, and small minority (8) teachers had up to two years teaching experience.

Table 4. Distribution of the participants according to teaching experience

	N	%
up to two years	8	6.7
3-5 years	29	24.1
6-10 years	48	40
11-15 years	26	21.7
more than 15 years	9	7.5
N	120	100

4.2.5 Age

As it is shown in Table 5 below, seventeen of the participants were in 25-35 of their age, seventy-eight of them are between 36-45 years old, nineteen of them are between 46-55 and only six of them are older than 55 years old. The overall mean age of the participants is 39.

Table 5. Distribution of the participants according to age

Age	25-35	17	14.2
	36-45	78	55
	46-55	19	25.8
	Older than 55	6	5
	N	120	100

4.2.6 Teaching load

In Kurdish universities, based on the academic title, the Ministry of Higher Education and Scientific Research, indicated the teaching loads of the teachers per week. According to the regulations, teaching loads fall into four categories: Assistant lecturer have to teach 12 hours per week, lecturer 10 hours per week, assistant professor 8 hours and professor 6 hours per week. However, the findings show a different result from the regulated categories imposed by the MOHE. Due to the lack of sufficient teachers in the departments of English languages, the teachers are obliged to teach more than they have to.

As it is noticeable from Table 6, the majority of the teachers in this study teach more hours than the recommended maximum load by the MOHE. As it is shown,

assistant lecturers (41%) teach between 12 to 18 hours per week. Lecturers teaching load is 10 to 15 hours per week. Assistant professors teach 8 to 10 hours per week and professors teaching load is 6 to 9 hours per week.

Table 6. Distribution of the participants

Academic title	Teaching loads per week/ hours	N	%
Assistant lecturer	12 to 18	65	54.2
Lecturer	10 to 15	45	37.5
Assistant Professor	8 to 12	7	5.8
Professor	6 to 9	3	2.5
	N	120	100

4.3 Instrument (questionnaire)

Creswel (2003) believes that questionnaire is an affordable and reasonable instrument for collecting data from a large sample. Dörnyei and Csizér (2012) also report that the "most common way of obtaining large amounts of data in a relatively short period of time in a cost-effective way is employing standardized questionnaires" (75). The questionnaire is also viewed as a useful instrument to collect information from a large number of research participants to get meaningful statistical analysis.

For the purpose of data collection for the first phase of the study, the researcher developed a self-reported questionnaire instead of adopting an existing questionnaire. The questionnaire includes 107 items which are narrowly related to the topic of the

study. The development of the questionnaire is based on the recommendation of Dörnyei and Csizér (2012), the researcher's experience and an extensive review of the literature used in deferent educational backgrounds for instance: Moganashwari, Parilah and Shah (2013), Erdoğan Tezci (2010), Papanastasiou, and Angeli, (2008), Asztalos (2016).

To ensure the validity of responses to the questions asked, the questionnaire and its creation involved the following four steps:

- A. Initial development of content and items
- B. Think-aloud protocol
- C. Piloting the questionnaire
- D. Final version

4.3.1 Initial development of content and items

The development of the questionnaire content, number and type of questions as well as its validation followed the procedures and recommendations of Dörnyei (2010) in the "questionnaires in second language research: Construction, administration, and processing (2nd ed.)" and "how to design and analyze surveys in second language acquisition research" by Dörnyei and Csizér (2012).

The first step in developing the questionnaire was to specify and define the main constructs of the questionnaire. This was important to avoid the threat to the validity of the instrument (Dörnyei & Csizér, 2012).

The constructs were six and defined as follows:

1. Skill: the purpose of this construct was to find out how well the participants can use ICT tools.
2. Use: this construct was intended to find out how often the participants use ICTs in their classroom teaching.
3. Access: this construct was intended to identify the level of ICTs access/availability in the teaching environment.
4. Activity: the purpose of this construct was to find out how ICTs use is reflected in their teaching.
5. Attitude: this construct aimed to identify how teachers feel about utilizing ICT tools in teaching English as a foreign language.
6. Difficulty: this construct aimed to find out the obstacles and challenges teachers face in their attempts to use ICT in their teaching.

After creating the main constructs of the questionnaire, I continued to compose the initial pool items based on reading an extensive review of the literature relating to each construct. I went through all the items and discussed each survey question with people such as PhD students and teachers who had rich knowledge or are experts on the topic of the study. The discussions were quite helpful to revise the pool items, for instance unifying the rating scales, deleting some items and generating some new, simplifying the language, reordering the items and the main sections of the questionnaire such as taking the demographic section to the end of the questionnaire.

After revising the pool items based on the feedback of in-class discussion, I carried out two think-aloud protocols.

4.3.2 Think-aloud protocol

In order to put together the final version of the questionnaire, I carried out two think-aloud protocols with a teacher and a PhD student who were similar to the target group of the participants for "whom it has been designed" (Dörnyei & Csizér, 2012, p. 79). The detailed feedbacks of the think-aloud protocols were important to put together the final version of the questionnaire and make sure that the participants will interpret the items in the way I intended.

I sent the teacher an email regarding his willingness as a volunteer participant; after two days, I received a positive reply. Then the think-aloud protocol was conducted via Skype because we live in two different countries. First of all, I greeted him and sent him the questionnaire. After emphasizing the objective of the think-aloud protocol, which is to evaluate the questionnaire items, not himself and he was also asked to indicate any error or suggest any improvement he considered necessary. His feedback resulted in rewording, replacing and deleting some items; for instance, one of the questions was:

Did you participate in any ICT training?

Yes NO

If Yes, where

At the university, abroad, another place, please identify....

The question was changed to *Yes No* question, and the participants were asked whether they are interested in participating in ICT training.

The think-aloud protocol took 50 minutes, which was quite long that the expected time to complete the questionnaire, which was expected to be completed in 25-30 minutes. The think-loud protocol took longer because the participant kept speaking and asking questions about the items of the questionnaire. After finishing the think-aloud protocol, I thanked him for his participation.

In addition, I carried out one more think-aloud protocol with a PhD student in order to verify whether the feedback of the first think-aloud protocol was useful to improve the quality of the questionnaire.

4.3.3 Final version

After the think-aloud protocols, I put together the final version of the questionnaire, which consisted of eight sections and two Yes/No questions.

In the first section, the teachers had to answer 19 items about how well they use ICT tools on a 5 Likert scale where 5 represented the highest level value (I can use it very well), and 1 represents the lowest level value (I cannot use it).

The second section was 19 items in which the teachers were asked how often they use ICT. They had to respond to the questions on a 5 Likert where 5 represented the highest level value "almost daily", and 1 represents the lowest level value "never".

The third section of the questionnaire included 26 items about using ICT tools for different teaching activities. The teachers rated their responses on a 5 Likert scale with 5 being "always" and 1 being "not at all" for each item.

The fourth section of the survey contained ten items about the availability of ICT tools in the teaching context. The teachers had to respond to the items on a 5 Likert scale, where 5 represented the highest level value "in all classrooms", and 1 represents the lowest level value (no classroom).

The fifth section included 16 items about the difficulties the teacher may face when they attempt to use ICT in the process of teaching. The participants rated their answers on a 5 Likert scale where 5 is "very difficult", and 1 is "no difficulty at all".

The sixth section included 17 items about the attitudes of the teachers towards the use of ICT in the process of teaching. The participants rated their answers on a 5 Likert scale where 5 represented the highest level value "absolutely agree" and 1 represents the lowest level value "absolutely disagree".

The seventh section of the questionnaire included two yes-no questions about taking ICT professional training courses. And the final section of the survey was a demographic section in which the teachers had to specify their gender, age, years of teaching experience, academic title, teaching load per week, education level and teaching hours/week (Appendix A). For each item, only one answer was required.

4.4 Data Collection Procedures for the teachers

The sample selection was purposefully limited for English language teachers. The participants were all full-time teachers teaching English subjects in the departments of English languages in teacher education programs at public universities in the four provinces of Iraqi Kurdistan region. In the beginning of June 2018 with the help of heads of English language departments and their coordinators, I distributed 250 questionnaires. In a follow-up letter, I requested the heads and coordinators to encourage their teachers to fill the questionnaire properly and return them. The teachers took the questionnaire home, and over a span of 10 working days, they returned to the heads or coordinators of their departments. A total of 120 questionnaires were returned.

4.5 Methods of data analysis

The quantitative data analysis process contains two main steps. First, the hardware questionnaires were prepared and organized through assigning an identification number from 1 to 120 and then the data was computed and moved into the Statistical Package for Social Sciences (SPSS) 17.0. The second step was conducting the data analysis, which included the following statistical techniques:

1. Cronbach Alpha was established to test the internal consistency coefficients of the constructed scales of the questionnaires and calculate their reliability. Dörnyei (2007) considered .70 and/or higher on a scale of .00 to 1.0 as a minimum acceptable range of Cronbach alpha value.

2. Descriptive statistical measures were applied to represent the mean and the standard deviation for the scales of the questionnaires (Hinkle, Wiersma, & Jurs, 2003).
3. Several statistical tests such as analysis of variance (ANOVA), independent t-tests and chi-square analyses were used to find out whether the relationship between independent variables and dependent variables are statistically significant.
4. Correlation analyses were applied in order to find out whether the relationships among the scales are statistically significant or not.
5. To provide a simple indication of the degree of the participants to each scale, an arbitrary three level (high, medium, low) was used to determine the level of the means associated with each response.

4.6 Results and discussion

4.6.1 The reliability of the scales

In order to find out whether I could “draw meaningful and useful inferences from scores on the instrument” (Creswell 2003b, p.157), and to know whether the items of the questionnaire were clear and did not cause any confusion to the teachers while they were answering them, I tested the questionnaire's reliability. According to Pallant (2001), reliability is “the degree to which the items that make up the scale are all measuring the same underlying attribute” (p.6).

In light of this and in the current study, reliability is a concept that shows how well the different items in a single scale combined to measure the same thing. To determine whether the items of the scales described in section 4.2.1 reliably measure the same latent variable, a Cronbach's alpha was run. Cronbach's alpha demonstrates the internal consistency by indicating whether “the items of a test or instrument measure the same attribute or dimension” (Kottner & Streiner 2010, p. 926). According to Dörnyei (2007), Cronbach Alpha Coefficient is a figure ranging between 0 and +1. Concerning the reliability, Cronbach alpha coefficient over $r=.70$ is viewed as satisfactory.

Table 7 shows that the results of the Cronbach's alpha of the six scales were higher than 0.7. The results suggest that the items of the scales have relatively high internal consistency and therefore, the scales were appropriate for use in statistical analysis.

Table 7. Cronbach's alpha of the six scales indicates a high level of internal consistency.

Scales	Number of items	Cronbach's alpha
Skill	19	.903
Use	19	.898
Access	10	.725
Activity	26	.945
Attitude	17	.742
Difficulty	16	.893

4.6.2 ICT skills of the participating teachers

Numerous studies have shown a clear reference to the relationship of teachers' ICT skills with the degree of its use in the processes of teaching (Fraillon et al. 2014, Drossel et al. 2015). On the one hand, an ICT skill deficiency of teachers, at the didactic and methodological level, is a major hindrance to distract teachers from using ICT tools in classroom teaching (Drossel et al., 2015; Eickelmann, 2011). On the other hand, ICT skills of teachers may also be a positive factor to motivate teachers to use new technologies in a sound pedagogical way in classroom teaching practices

In light of this argument, the utilization of ICT in the classroom will not be fruitful and the potential of ICT elements in the process of teaching and learning will remain ineffective unless teachers have a certain level of ICT skills (Rutten, Joolingen, & Veen, (2012), Newton & Rogers (2003).

In the current study, ICT skill is defined as being able to utilize a wide range of ICT tools for various teaching/ learning activities.

The first section of the questionnaire aimed at finding out how familiar and skilful the participating teachers are to use ICT tools. For this purpose, descriptive analysis (Means, Std. Deviations, and percentages of the participants' ICT skills) were run. Besides, to provide a simple indication of the degree of ICT skills the participating teachers possess, an arbitrary three level (high, medium, and low) was calculated to determine the level of the means associated with each response. The arbitrary level was based on the following equation:

$$\frac{\text{the highest value of the scale} - \text{the lowest value of the scale}}{\text{number of levels}} = \frac{5-1}{3} = 1.33$$

Al-harbi (2014) used a similar equation to determine the outcomes of his study. Using these intervals of 1.33, I recognize 3.67 to 5.00 as a high response level, 2.34 to 3.67 as a medium response level and any value below 2.34 as a low response level.

Thus, the level of skillfulness of the participating teachers is categorized as high if the mean value is between 3.68-5, medium when the mean value is between 2.34-3.67, and low when the mean value is below 2.33.

In order to find out how well the participating teachers use ICT tools, they were invited to respond to a 19 Likert-type statements dealing with their ICT skills using a 5-point scale including 5 (use it very well), 4 (use it well), 3 (use it satisfactory), 2 (**use it to a small extent**), 1 (**I cannot use it**).

Table 8 shows the descriptive statistics (Means, Std. Deviations, and percentages of the participants' ICT skills).

Table 8. Distribution of mean scores and percentage of teachers skills on ICT

ICT skills	Per cent (%)					Mean	Std	Level of ICT skill
	Use it very Well	Use it Well	Satisfactory Use it	Use it to a small Extent	I cannot use It			
Projector	61.3	29.0	3.2	0	6.5	4.39	1.054	High
Personal computer	77.4	16.1	6.5	0	0	4.71	.588	High
interactive whiteboard	3.3	6.1	10.1	17.2	70.2	1.30	1.361	Low
CD, VCD, DVD, Tape player	51.6	29.0	6.5	3.2	9.7	4.11	1.273	High
Word processing	25.5	35.8	28.9	3.6	6.2	3.71	1.101	High
Spreadsheet (Excel)	28.9	22.9	41.3	6.9	0	3.76	.963	High
Online library catalogue	15.8	26.1	19.6	19.3	19.1	3.00	1.390	Medium
Powerpoint	53.6	30.2	9.9	0	6.3	4.26	.999	High
Email	26.9	40.9	12.8	16.3	3.1	3.72	1.134	High
Internet	55.7	18.5	12.9	3.3	9.6	4.06	1.311	High
Learning Management Systems (Moodle, Edmodo, Canvas, Wikispaces, etc.)	20.0	19.2	25.7	16.2	19.0	3.05	1.400	Medium
Wikipedia	47.9	26.3	6.9	12.6	6.4	3.88	1.313	High
Social networking				16.2		4.11	1.118	

sites (Facebook, Twitter, snapshot, Whatsup, Linkedin)	54.0	27.8	3.1		0				High
Podcasts	3.4	6.8	13.1	17.4	59.2	1.77	1.117		Low
Skype	16.3	32.3	16.4	19.0	16.0	3.15	1.309		Medium
YouTube	35.9	38.3	6.7	12.6	6.8	3.81	1.247		High
Blogs	4.9	3.5	11.7	10.8	69.1	1.65	1.125		Low
Language teaching software	19.5	35.8	25.4	12.8	6.6	3.49	1.153		Medium
Language teaching/ learning website	29.8	25.9	16.1	12.1	16.0	3.49	1.253		Medium
Total						3.44	1.169		

Table 8 shows that the total mean value of ICT skill-related scale is 3.44 on a 5-point scale with a standard deviation of 1.169. Since the total mean value of ICT skills is less than 3.44, it indicates that the research participant EFL teachers had a moderate level of familiarity in using ICT tools. However, a closer examination of the findings indicate that the research participants are quite skillful with the most common tools of ICT which includes personal computer, word process, internet, email, YouTube and they are lack of knowledge or less skilful with the more complex or smart tools such as interactive whiteboard and Learning Management Systems (Moodle, Edmodo, Canvas, Wikispaces, etc.).

The results indicate that the highest mean score is 4.71 for the item "Personal computer" with the standard deviation .588, where 93.5% of the teachers responded that they use this function well or very well. The mean score for the item of word process is 3.71 with the standard deviation 1.101, where 61.3% of the participants reported that they use this function well or very well. The mean score for the item of PowerPoint is 4.26 with the standard deviation .999, where 83.8% of the respondents mentioned that they use this function well or very well. The mean score for the item of Spreadsheet (Excel) is 3.76 with the standard deviation .963, where 51.8% of the participants mentioned that they use this function well or very well.

These figures display that it becomes necessary for the participants to familiarize themselves with a variety of Microsoft office applications. At this point, suffice it to say that with these productive applications it is easy for teachers to handle a wide range of tasks such as creating, editing, sharing documents and presentations in order to improve the effectiveness of their teaching tasks and/or accomplish the academic and administrative tasks associated with their profession.

The outcomes shown in Table 8 reveal that teachers' ICT skill level highlights great disparity in using different ICT tools. The mean value for the item of YouTube is 3.81 with standard deviation 1.247, where 74.2% of the participants responded that they use this function well or very well. Fifty-four per cent of the participants reported that they could use social networking sites (Facebook, Twitter, snapshot, Whatsup, LinkedIn) very well.

More advanced technologies and smart tools such as blogs, interactive whiteboard, and Podcasts ranked the minimum mean score. The lowest mean value was

1.77 for the item of Podcasts with the standard deviation 1.117, where 59.2% of the participants mentioned that they could not use this function at all.

One key explanation for this is that the array of common ICT devices available to the teachers in teacher education programs may positively influence the competence of the teachers to use them well while lack of smart instruments in teaching context declined the degree of their skills.

4.6.3 Frequency use of ICT tools of the participating teachers

In order to find out how often the participating teachers use ICT tools, descriptive analysis (Means, Std. Deviations, and percentages of the participants' ICT frequency use) were calculated. Besides, a similar simple arbitrary three level (high, medium and low) equation, which was described in section 4.6.2 was calculated to indicate the level of the means associated with each response. To elicit information for this purpose, the participating teachers were asked to respond to a 19 Likert-type statements dealing with their ICT frequency use using a 5-point scale including: **(almost daily)**, **4 (weekly)**, **3 (1 or 2 times a month)**, **2 (once a term)**, **1 (never)**.

Table 9 shows the descriptive analysis (Means, Std. Deviations, and percentages of the participants' ICT frequency use).

Table 9. Distribution of mean scores and percentage of teachers frequency use of ICT

ICT frequency scale	Per cent (%)					Mean	Std	Level of ICT skill
	almost daily	Weekly	1 or 2 times a month	Once a term	Never			
Projector	61.6	32.1	6.4	0	0	4.56	.629	High
Personal computer/ laptop	49.6	31.0	0	15.9	3.5	4.21	.965	High
interactive whiteboard	5.3	3.2	11.8	10.1	69.7	1.63	.729	Low
CD, VCD, DVD, Tape player	21.5	33.4	35.8	6.2	3.2	3.72	.991	High
Word processing	13.9	44.2	31.9	10.1	0	3.64	.894	Medium
Spreadsheet (Excel)	16.4	32.0	16.2	19.3	16.0	3.15	.754	Medium
Online library catalogue	2.1	4.4	12.6	12.7	68.2	1.50	1.249	Low
Powerpoint	53.8	26.8	4.1	16.2	0	4.09	1.108	High
Email	39.7	34.5	16.4	6.2	3.2	4.06	1.063	High
Internet	55.8	20.4	10.2	3.7	9.9	4.11	1.305	High
Learning Management Systems (Moodle, Edmodo, Canvas, Wikispaces, etc.)	6.5	6.9	19.1	19.4	48.3	2.05	1.164	Low
Wikipedia	25.5	16.8	25.8	6.8	25.1	3.10	1.535	Medium
Social networking sites (Facebook, Twitter, snapshot, Whatsup, LinkedIn)	29.2	35.3	29.2	3.0	3.2	3.85	1.002	High
Podcasts	2.9	4.5	12.7	12.8	67.1	1.56	1.341	Low
Skype	17.2	18.1	16.4	24.7	23.6	2.79	1.469	Medium
YouTube	38.5	32.4	11.9	13.1	4.3	3.88	1.212	High
Blogs	4.9	3.5	11.7	10.8	69.1	1.65	1.125	Low

Language teaching software	15.8	25.1	19.7	19.8	19.7	2.86	1.341	Medium
Language teaching/ learning website	25.2	16.8	24.4	7.8	25.8	3.00	1.515	Medium
Total						3.13	1.125	

Table 9 shows that the frequency use of ICT by the participating teachers is at a moderate level with an overall mean value of 3.13 and a standard deviation of 1.125. Since the standard deviation is greater than one, it predicts disparity in the frequency of ICT use by the participating teachers.

As it is notable in Table 9, the top seven tools used by the participants were: Projector, personal computer, word processing, power point, email, internet and YouTube. There are also four functions that are rarely used by the participating teacher: Podcasts, online library catalogue, interactive whiteboard and blogs.

The results indicate that of all the ICT tools that are presented to teachers in the second section of the questionnaire, Personal computer/ laptop, projector and PowerPoint scored the highest mean score where the majority of the teachers responded that they use this function daily.

One possible explanation for this is that in the last ten years, these devices have become popular teaching devices in teacher education programs In Kurdish public universities. They are also extremely practical and very suitable instructional tools to enable teachers to improve their classroom experiences in terms of time management, holding the attention of the students and making the content and outline of their lectures more appealing.

Majority of the teachers (64.5%) use social networking sites daily or weekly. Teachers may use Web-based social networks daily for personal as well as professional purposes. It seems that social networks are the new avenue for Kurdish teachers to share their ideas with many people about different issues, including developing their teaching skills, getting information about workshops, conferences and online courses.

The mean value for the item of Internet is 4.11 with the standard deviation 1.305, where 55.8% of the participants mentioned that they use this function daily. A possible explanation is that by its very nature, the Internet has given wings to teachers in order to enhance the quality of their professions in a multitude of ways. Making use of the internet allows teachers to access a wealth of knowledge and a huge amount of online educational materials.

Using learning management systems is at a low level since the mean value is 2.05, with the standard deviation 1.164, where only 48.3% of the participants reported that they never use this function. Forty-two per cent of the participating teachers reported using language teaching/ learning website daily or weekly.

More advanced technologies and smart tools ranked the minimum mean score. Almost half of the participants reported that they could not use the interactive whiteboard, blogs and Podcasts at all. These results support the data gained in previous studies that these functions have been observed to be used very rarely (Bennett & Maton, 2010; Kennedy et al., 2009; Margaryan et al., 2011).

4.6.4 Pedagogical uses of ICT tools of the participating teachers

The third section of the questionnaire aims at finding out how far the participating teachers were successful to use ICT as a pedagogical tool in order to facilitate effective teaching practices and engage their students in their learning process. For this purpose, the respondents were asked to respond to 26 Likert-type statements dealing with their pedagogical uses of ICT using a 5-point scale including 5 (**always**), 4 (**usually**), 3 (**sometimes**), 2 (**rarely**), 1 (**not at all**).

The same arbitrary three level (high, medium, low) equation, which was described in section 4.6.2 was calculated to indicate the level of the means associated with each response.

Table 10 shows the descriptive analysis (Means, Std. Deviations, and percentages).

Table 10. Distribution of mean scores and the percentage of teachers' pedagogical uses of ICTs.

Pedagogical ICT use scale	Per cent (%)					Mean	Std	Level of ICT skill
	Always	Usually	Sometimes	Rarely	not at all			
Support different teaching styles.	6.4	28.9	38.9	20.9	4.9	3.90	.908	High
Generate students' interest.	7.9	29.7	40.4	16.0	6.0	4.00	.856	High
Develop students' technical skills	16.1	6.4	6.6	22.4	48.5	2.19	1.515	Low
Enhance student's speaking skills	12.9	45.1	22.7	19.4	12.9	4.00	1.095	High
Enhance student's writing skills	29.1	35.4	28.9	3.2	3.2	3.85	1.021	High
Enhance student's reading comprehension skills	22.8	54.9	12.8	9.6	0	3.90	.858	High

Enhance student's listening skill	12.6	51.9	29.2	6.3	0	3.74	.788	High
Constructing a term test	25.9	41.8	12.8	16.3	3.1	3.72	1.132	High
Provide an opportunity for passive students to enhance their motivation	35.4	32.2	19.6	6.7	6.3	3.84	1.184	High
Promote different teaching methodologies	13.5	51.0	29.1	6.4	0	3.70	.781	High
Provide an opportunity for self-study	19.1	16.4	42.2	19.1	3.2	3.30	1.131	Medium
Create personalized learning conditions for students.	23.0	28.6	29.4	9.4	9.6	3.40	1.231	Medium
Enhance group work	13.2	22.7	22.4	16.0	25.7	2.86	1.411	Medium
Enhance communication between students.	12.7	13.1	16.3	19.3	38.6	2.41	1.445	Medium
Preparing lessons	29.1	22.5	41.8	6.7	0	3.72	.965	High
Teach students to prepare their lesson assignments	6.7	19.2	22.8	12.8	38.6	2.44	1.362	Medium
Send and receive emails	16.7	25.3	19.5	19.3	19.1	3.10	1.390	Medium
Searching for online English teaching materials	35.8	38.4	6.8	12.7	6.3	3.86	1.244	High
Giving feedback to students	59.8	17.6	13.0	6.2	3.4	1.82	1.121	Low
Communicating with students	34.1	32.6	19.3	7.9	6.1	2.10	1.226	Low
Communicating with other teachers in and out of my universities	24.9	17.6	13.9	21.9	21.9	3.02	1.413	Medium
upload assignments via email	33.4	32.3	17.5	4.3	12.3	2.22	1.141	Low

Administrative record keeping (Student grades, student details, etc.)	19.2	35.3	25.9	12.9	6.9	3.45	1.131	Medium
Making a presentation	19.3	16.2	38.8	25.4	19.7	3.45	.996	Medium
Finding information and educational materials	54.5	25.7	3.5	16.2	0	4.15	1.208	High
Improving my English	19.0	19.8	25.2	16.8	19.2	3.01	1.402	Medium
Total						3.27	1.152	

Research findings in Table 10 suggest that because of different reasons which will be explained in the following sections, the majority of the participating teachers cannot achieve high levels of ICT use for pedagogical purposes. However, many of the respondents attempt to take benefit from ICT resources in order to improve various aspects of their teaching practices and ensure optimal learning opportunities for their students.

As it can be observed in Table 10, one of the main purposes of the ICT use by the participants is to promote different teaching methodologies in order to meet their student needs better. It is, therefore; some of the participants (51.6%) reported that they sometimes utilize ICT to create personalized learning conditions for students. Less than half of the respondents (40.4%) reported that they sometimes use ICT in order to generate students' interests and 77.6 % of them claimed to use ICT to provide an opportunity for passive students to enhance their motivation. This is in line with the findings of Donnelly et al. (2011) study that teachers use different ICT resources in order to cover the individual needs of their students and push them to learn. The outcome of this study is also in line with the findings of Project Tomorrow (2008),

where 51% of the teachers reported that they use ICT in order to facilitate student learning.

A group of the participants (45.1%) reported using ICT tools usually or sometimes to enhance group work, and communication between students. This is consistent with the results of Daniel and Cowan, (2012) that teachers take benefit from the availability of technology in the classroom to provide students many opportunities to "collaborate with classmates to complete interactive tasks that make good sense to them and result in language learning" (p. 99).

It is notable from Table 10 that there is a great disparity amongst the teachers regarding the utilization of ICT to give feedback to the students and communicate with them. The findings reveal that only 9.6% of the teachers use ICT tools for this purpose sometimes.

As far as English language skills are concerned, the results of the third section of the questionnaire show that one of the important pedagogical purposes of ICT use by the participating teachers is to provide their students with a great deal of language support and variety of valuable language experiences to enhance the four language skills. In this regard, ICT is used as a supplementary tool in language teaching. The results show that the use of ICT for this purpose is at a moderate level. Fifty-eight per cent of the respondents take benefit from ICT to enhance students' speaking skills where the mean value is 4.0, with a standard deviation of 1.095. The item of enhance student's reading comprehension skills rated a high response of "always" with a mean value of 3.9 and a standard deviation of .858. Almost half of the respondents (64.5%) always or usually use available ICT tool to assist the student to improve their writing skills. The teachers (51.9%) utilize ICT resources usually to enhance student's listening. The

findings of our study highlight that the teachers pay particular attention to the four skills of language learning while they are teaching in the classroom. The research findings are in line with complaints of Ducate and Lomicka, (2009), Bloch, 2007, Sun, (2009), and Akyel and Ercetin, (2009) that EFL teachers may use different ICT tools in order to influence the language skills of their students positively.

A group of teachers (51.6% and 35.5%) usually or always use ICT for preparing lessons and making presentations. These items ranked a moderate level response; the mean value is 3.72 and 3.45 with standard deviations of .965 and .996. This is not a surprising result since almost all the teachers use personal computers and projector to teach and deliver the content of their lectures. This confirms the complaint of Ofsted (2002), and Hammond (2014) that with the help of ICT tools, teachers create teaching materials and prepare their lesson plans better.

Examinations of the Means, Std. Deviations and Percentages in Table 10 confirm that there is a huge gap between the optimistic rhetoric of ICT integration and the actual level of ICT utilization for academic purposes. The overall pedagogical uses of ICT by the participating teachers do not seem to be sufficient since the average response rate of frequency use is "sometimes". The findings of this section are in an inverse relationship with the findings of the first and second section of the questionnaire where the participants reported to have a moderate level of skills and frequency of use ICT tools. The results are in line with findings of previous studies of Loveless (2003), Liu et al., (2017), Li and Walsh (2011) and Mueller et. al., (2008) that despite the teachers had an adequate level of technology literacy and access to technology, their technology use for academic activities has been far from satisfactory.

4.6.5 Access to ICT tools in the teaching context

Research shows that the availability of relevant resources in classroom teaching is one of the key factors to encourage teachers to use ICT in the process of teaching (Hermans et al., 2008). It is also confirmed that poor access to suitable and reliable quantities of ICT tools in teaching context is a major constraint to demotivate teachers to utilize technology in teaching practices (Hennessy et al., 2007; Lujara, 2008; Ndume et al., 2008, BECTA, 2004).

The fourth section of the questionnaire aims at finding out the level of ICT access in teacher education programs in general and in the foreign classroom teaching in particular. For this purpose, the participants were invited to respond to a 10 Likert-type given list of ICT tools that might be available in the teaching environments using a 5 Likert-scale where 5 represents the maximum score of the scale (**in all classrooms**) and 1 the minimum score of the scale (**in no classroom**).

Table 11. Distribution of mean scores and percentage of teachers access to of ICTs in the teaching environment

Scale	Per cent (%)					Mean	Std
	In all classrooms	In some classrooms	Upon request	laboratory language	classroom only in me		
Computer	12.2	29.5	29.4	9.4	19.5	2.80	1.334
Internet access	16.4	6.6	6.5	22.5	48.1	2.09	1.315
Technical staff support	6.2	3.7	38.5	19.4	35.3	2.15	1.034
Interactive whiteboard	3.8	3.7	12.2	9.1	71.1	1.46	1.061
Video conferencing systems	3.7	3.8	12.3	9.2	71.0	1.46	1.061
Audio equipment (including software)	3.1	15.2	32.6	32.5	16.7	2.32	1.032

Projector	74.9	12.2	3.7	0	10.1	4.25	1.060
CD, VCD, DVD, Tape player	3.6	14.1	34.7	31.7	16.5	2.20	1.125
digital audio recording	3.1	12.4	19.1	16.3	48.9	2.05	1.037
digital video recording	6.4	6.8	19.3	19.2	48.5	2.01	1.051
Total						2.28	1.111

Table 11 shows the descriptive analysis (Means, Std. Deviations, and percentages).

The results show that out of ten listed ICT resources, only one item "projector" is available in all the classrooms. The highest mean value is 4.25 for the item of projector with a standard deviation of 1.060, with a percentage of 74.9% of the respondents which highlights a significant level of its availability in the teaching context.

The results display that the teacher education programs where the study conducted failed to provide sufficient immediate technical staff support in case if the software or hardware programs stopped working since 38.5% reported that they might have technical support only upon request. As far as interactive whiteboard is concerned, the respondents (71.1%) rated the level of their access to this vital tool to nil as they reported that they do not have access to it in classrooms.

The participants (34.7%) reported that they could have access to "Audio equipment (including software), CD, VCD, DVD, Tape player, digital audio recording and digital video recording" upon request. One of the important ICT tools is Internet access. The participating teachers rated their access as low level since 48.1% of the participants reported that do not have access to internet in no classroom.

As it is observed from Table 11, the participants of the study are not satisfied with the level of ICT resources in their teaching context. It appears that the overall access of the respondents to ICT tools is limited to the very basic ICT tools in the context of teaching and their classrooms are not sufficiently accommodated with ICT tools. The results of this study are in line with the arguments of Drent and Meelissen (2008), where they found that in many developing countries, access to technology is not dealt with properly.

4.6.6 Difficulties participating teachers face when they attempt to use ICT

One of the key aims of this research is to investigate the circumstantial consideration of ICT employment in the process of teaching and learning. Thus, the study aims at investigating the obstacles the respondents face when they attempt to adopt technology in their classroom teaching. Therefore, the participants were asked to respond to 16 Likert-type statements dealing with their difficulties concerning the reasons why teachers cannot use ICT sufficiently in the teaching process, they reported their responses on a 5-point scale including 5 (**very difficult**), 4 (**difficult**), 3 (**neither difficult nor easy**), 2 (**not much difficulty**), 1 (**no difficulty at all**).

The same arbitrary three level (high, medium and low) equation, which was described in section 4.6.2 was calculated to indicate the level of the means associated with each response.

Table 12. Distribution of mean scores and percentage of teachers difficulty in their attempt to use ICTs

Pedagogical ICT use scale	Per cent (%)					Mean	Std
	very difficult	Difficult	difficult nor easy	neither difficult nor not much difficulty	no difficulty at all		
Lack of ICT tools in the classrooms	77.2	12.8	3.7	0	6.3	4.45	1.030
Limited knowledge on how to make full use of ICT	54.0	29.7	9.9	0	6.4	4.16	.996
Limited understanding of how to integrate ICT into teaching	51.2	29.1	0	16.0	3.6	4.21	.968
Shortage of class time hinders me from using ICT	32.1	48.2	16.3	3.4	0	4.08	.790
Little access to ICT prevents me from using it	38.6	35.6	16.2	6.4	3.2	4.00	1.065
Few ICT technical support in the classrooms discourage me from using it	51.0	29.4	0	16.2	3.3	4.16	.965
Unreliable computers and/or software	6.0	29.5	38.8	25.6	6.6	3.85	.918
Internet access is not easily accessible in the classrooms	6.9	41.6	35.3	16.2	6.0	4.03	.926
Lack of training on available computers and/or software	89.8	6.9	3.3	0	0	4.76	.498
Lack of administrative support	77.5	16.2	6.3	0	0	4.75	.588
Insufficient pedagogical support for teachers	48.8	26.3	6.3	12.4	6.2	4.00	1.243
Student's lack of ICT use	25.7	22.4	10.1	12.8	29.0	3.00	1.634
The pressure to prepare students for exams and tests	12.8	35.9	35.9	16.2	12.1	3.98	1.021
Using ICT in teaching not being a goal in our university	67.2	22.5	3.7	6.6	0	4.32	.858
Teaching with ICT required more time.	29.2	48.3	16.3	6.2	0	4.03	.851
Lack of pedagogical training on how to use technology in EFL teaching.	61.7	29.1	3.0	6.2	0	4.40	.850

Total	4.14	.950
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As it can be noticed from Table 12, the overall difficulties the participant face when they try to adopt ICT is at a high level, since the total mean value is 4.14 with standard deviation of .950. The respondents reported a lack of ICT tools, pedagogical as well as technical training, lack of time and administrative support as factors that inhibit them from using technology properly in their teaching practice.

The findings indicate that the lack of ICT tools in the classrooms scored a high mean value of 4.45 with a standard deviation of 1.030 which highlights a significant level of difficulties when the teachers use these different ICT tools. This is in line with findings of researches Bingimlas (2009); Mumtaz, (2000); Warschauer, (2002); Mahony, (2003); UNESCO, (2003); and O'Connor and Gatton (2004) that insufficient access to ICT in teaching context is a huge obstacle that may hinder teachers to use ICT in a sound way and preventing successful implementation in the process of teaching.

Majority of the respondents reported lack of pedagogical training on how to use technology in EFL teaching as the biggest problem which made using ICT properly in classroom teaching very difficult. The mean value for this issue is 4.40, with a standard deviation of .850. This is in line with the finding of Pelgrum's (2001) study that insufficient training for instructors in utilizing ICT in the context of teaching could limit its use. Similarly, Özden (2007) found that not enough training opportunities is an obstacle for teachers when they try to utilize technology. Gomes (2005) identifies the lack of pedagogical training on how to use ICT in classroom teaching as a critical obstacle teacher may face when they attempt to use it in the classroom. Researches

carried out by Alhamd et al., (2004) and Sager (2001) also reported a lack of training as reasons for failures of ICT use in the process of teaching.

Therefore, providing teachers with extensive training is crucial to enable them to use, evaluate and select the most appropriate resources to develop pedagogical practices. The content of the training should focus on the pedagogical practices required to apply ICT in the process of teaching with a little technical aspect. This means that after taking a course, the teacher should be able to amend their teaching practices and replace the traditional teaching style with new teaching methodologies.

The majority of the teachers (80.3%) found a shortage of class time to use ICT difficult or very difficult. This is in line with the findings of the previous research studies of Arnold, and Geser, (2007); Jones, (2002); and Pleasance, (2010) that lack of time is one of the main deterrents to use any kinds of technology in the classroom. Similarly, Kozma et al. (2004) identified insufficient time for lesson planning as the biggest obstacles for the teachers when they attempt to use technology in their classes. Al Alwani, (2005); and Becta, (2004) found that although many teachers are knowledgeable and skilful with ICT tools, they make little utilization of it since they do not have the sufficient time they need for its preparation in the classroom. Sicilia (2005) also found that lack of time as a big challenge for the teachers as they do not have time to schedule their lesson with technology, to look for and find proper authentic materials they are willing to include in the lesson they teach and dealing with technical problems they may face.

Lack of administrative support seems to be at a low level since the mean value is at a high level (4.75) with a standard deviation of .588 which highlights the convergence among the teachers at this level. The research confirmed that educational

institutions should supply sufficient and quick administrative support in order to encourage the teachers to adopt the technology. Pelgrum (2001) believes that for successful integration of technology, teachers should be provided many different kinds of support. Mumtaz (2000) found that lack of administrative is an obstacle that may hinder teachers from using technologies in their teaching. It is believed that teachers who receive sufficient administrative support utilize ICT resources in their teaching practice compare to those who do not receive it.

Almost all the participants (89.7%) reported using ICT in teaching and learning not being a goal in their university. The respondents also reported that limited understanding on how to integrate ICT into teaching is a huge problem. The mean value is 4.21, with a standard deviation of .968 and a percentage of 80.3%.

Despite the numerous benefits of the Internet and its impact on education, 48.5% of the teachers reported that lack of internet access in classroom teaching makes ICT use difficult or very difficult. The mean value for this item is 4.03 with a standard deviation of .926. It seems that if the teachers have access to the internet in the classrooms, they may transform their laptops or available computers into powerful teaching instrument with numerous teaching applications. Therefore, university decision makers and related individuals who are in charge of ICT integration need to invest in the installation of the internet in the classroom.

On the whole, the results suggest that participating teachers appear to face great difficulties when they try to using and integrating ICT in their teaching. Does this influence their attitudes to utilize ICT in teaching practices? The following segment shows the results of teachers' attitudes towards the use of ICT and its application in the process of language teaching.

4.6.7 Attitude of the participating teachers towards the use and application of ICT

In the debate on the integration of ICT into teaching practices, Albirini (2006) argues that successful integration of ICT tools into the teaching classroom largely depends on teachers attitudes/perceptions toward these tools. Naser et al. (2010) also believe that successful integration of technology into the process of teaching is influenced by many factors, including teachers' attitudes and perceptions. Thus, teachers' attitudes towards ICT have been identified as a critical factor to play a central role on the extent of ICT use in the process of teaching (Fullan, 2001, Alibon & Ertmer, 2002, Albirini, 2006; Chen et al. (2009); Kim et al., 2013). Drent and Meelissen, (2007) report that positive attitudes may play as an enabling factor to influence teachers' motivations to use ICT while negative attitudes may discourage them from avoiding using new technologies in teaching practices.

One of the key aims of this research is to find out the attitude of the teacher towards the use of ICT in the process of teaching practices. Therefore, the research participants were asked to respond to 17 Likert-type items that measure their agreement with statements dealing with their feelings and situation concerning the use of ICT in the teaching process, they reported their responses on a 5-point scale including 5 (**absolutely agree**), 4 (**mostly agree**), 3 (**partly agree partly disagree**), 2 (**disagree**), 1 (**absolutely disagree**).

The same arbitrary three level (high, medium and low) equation, which was described in section 4.6.2 was calculated to indicate the level of the means associated with each response.

Table 13. Distribution of mean scores and the percentage of teachers attitudes towards the use of ICT

Scale	Per cent (%)					Mean	Std	Level of ICT skill
	absolutely agree	mostly agree	partly agree	Disagree	absolutely disagree			
ICT supports my role as a teacher	61.7	19.7	9.3	9.4	0	4.35	1.032	High
ICT makes me feel more professional	3.6	38.5	35.7	22.2	3.2	4.10	.884	High
ICT positively changes the teaching atmosphere in my classroom	61.8	19.3	9.4	9.6	0	4.35	.999	High
ICT positively shifts the relationship between my students and me	6.3	42.6	35.1	16.4	6.6	4.08	.928	High
ICT makes the teaching profession more interesting for me	54.7	25.8	9.9	9.6	0	4.20	.999	High
ICT makes the teaching process more difficult	41.4	35.9	19.3	3.4	0	4.08	.860	High
ICT makes my teaching methodologies more diverse	54.9	32.8	12.3	0	0	4.43	.722	High
ICT enhances the presentation of material in my lessons	35.9	48.2	12.5	3.4	0	4.26	.779	High
ICT makes the lessons more fun for the students	51.0	38.0	11.00	0	0	4.22	.615	High
I feel comfortable working with ICT	19.2	35.1	35.7	6.2	3.4	3.56	.989	Medium
ICT is very helpful in the teaching process	32.2	48.1	16.4	3.3	0	4.08	.830	High
Teaching with ICT required more time	61.5	32.1	6.5	0	0	4.56	.624	High
It is the mission of my university to integrate ICT in EFL teaching	2.1	3.6	31.4	9.4	53.5	1.92	1.087	Low
No one cares in my university whether I use ICT or not	54.2	38.9	6.9	0	0	4.38	.629	High
No one from my university asked me to use ICT in EFL teaching	19.2	35.6	35.7	6.2	3.4	3.60	.989	Medium
My university provides technical training on the software	1.8	2.1	29.9	12.1	54.1	1.85	.558	

programs available in the classrooms/university									Low
My university provides pedagogical training on how to use ICT in EFL teaching	1.7	2.0	29.6	12.4	54.3	1.78	.667		Low
Total						4.02	0.835.		

The results of table 13 display that the teachers' overall attitudes towards the use of ICT in their professional life seem to be positive; this conclusion is supported by the total mean value score of 4.02 with a standard deviation of 0.835.

On examining the statements reflecting the attitudes of the research participants towards ICT use for teaching practices, the analysis of data identifies that under the right conditions the integration of ICT may influence the process of teaching and learning by changing the role and relationships between teachers and students. Fifty per cent of the participants agree or absolutely agreed that ICT positively shifts the relationship between them and their students. This is in line with the complaints of Mokhtar and Azura (2005) that the new roles that teachers must assume are changing from "knowledge-dispensers to knowledge-guides and creators" (p. 28). The findings of our study also supports the research findings of a study carried out in Finland where it was revealed that "the use of technology changes the role of the teacher from a traditional knowledge provider rather into a facilitator guiding the students' learning processes and engaging in joint problem-solving with the students" ("Technology changing teacher's role", 2015).

The majority of the respondents (54.3%) either strongly agree or agree that they feel comfortable working with ICT. And 87.7% per cent of the teachers agree that using

ICT is helpful to make their teaching methodologies more diverse and enhance the presentation of material in their lessons. In addition, almost all the participants (81.1%) agree or absolutely agreed that ICT positively changes the teaching atmosphere in their classroom and less half of the participants (38.5%) agreed that the ability to use ICT makes them feel more professional.

A group of teachers (89%) reported that adopting ICT makes their lesson more fun for the students. The mean value for this statement reached 4.22 with a standard deviation of .615 and a response rate of “agree”. Since the standard deviation is less than one, it confirms the convergence among the teachers concerning this point of view.

Respondents' perceptions towards the role of their universities regarding the process of ICT integration is not positive. The results reveal that the policymakers of teacher education programs do not seem to be successful in informing the faculty staff about the process of ICT integration in their institutions. The majority of the teachers (53.5%) reported that they do not know what the mission of their university regards ICT integration into EFL teaching. Surprisingly, the respondents (54.8%) reported that no one from their university asked them to use ICT in EFL teaching and 93.1% of the teachers agree or absolutely agree that no one cares in their university whether s/he uses ICT or not. In addition, 54.3% of the respondents mentioned that their universities did not provide pedagogical training on how to use ICT in EFL teaching or technical training (54.1%) on the software programs available in the classrooms/university.

4.6.8 Teachers' ICT training and their willingness to take part in training courses

In this section of the survey, the participants were invited to report about any pedagogical training they had received. As it is noticeable in Table 14, the majority of the teachers (77.3%) did not take part in any pedagogical regarding the use of ICT in the process of language teaching. However, the majority of respondents (84%) would be interested in training sessions about ICT use and its application in language teaching. This highlights that the language teachers are open to know more about how to use technology in a sound pedagogical approach in order to ensure that language teaching takes place successfully. It is only 16% who would not be willing to participate in a training session; perhaps they do not consider using ICT in their language teaching at all.

Table 14. Teachers' participation in ICT training and their willingness to take part.

	Per cent (%)	
	Yes	No
Did you take part in ICT training?	77.3	22.7
Would you like to take part in ICT training?	84	16

4.6.9 Individual characteristics influencing teachers' ICT use

In order to determine whether any of the five individual characteristics which were asked in the demographic section of the questionnaire would influence the teachers' ICT use in the process of language teaching, independent samples t-tests for questions with two possible answers and one-way ANOVA tests for questions with three choices were run.

Four factors (age, gender, academic title and where did the teacher do his/her education) were found to be influencing their answers on the use of ICT by the teachers. Female teachers and those who have lower academic titles (assistant lecturer and lecturer) use ICT more significantly for pedagogical purposes than male teachers and those who have a higher academic title (assistant professor and professor).

Table 15. Individual characteristics' influence on the scales

Scale affected	Individual characteristics		Mean	St. dev.	t.	P
Teachers pedagogical use of ICT	Male		3.9	.65	2.243	.033
	Female		4.2	.71		
Teachers pedagogical use of ICT	Took ICT training	Yes	4.4	.43	4.754	.000
		No	1.3	.68		

As it can be observed in Table 15, gender as an individual character may strongly influence the use of ICT by the teachers. The results show that female teachers use ICT more compare to male teachers. The findings are in line with the previous studies conducted by Kennedy et al. (2009).

Table 15 also shows that those teachers who took pedagogical ICT training are more enthusiastic about using ICT than those who did not.

Table 16 displays that academic title is also found to influence the use of ICT by the teachers in the process of language teaching. Surprisingly, the higher the academic title of the teacher, the lower s/he adopts ICT for pedagogical purposes.

Table 16. Individual characteristics' influence on the scales

Scale affected	Individual characteristics	Mean	St. dev.	F	P
Teachers pedagogical use of ICT	Assistant lecturer	4.20	.65	3.243	0.50
	Lecturer	3.80	.71		
	Assistant professor	3.25	.80		
	Professor	2.50	.92		

Age as an individual characteristic also influences the degree of ICT use in the classroom teaching by the instructors. As it is observed in Table 17 below, research participants between 25-35 are significantly employing ICT in their professional lives compare to the teachers over 55. This is in line with the findings of Bee and Chia (2008) that teachers under the age of 40 years are observed to be more skilled in ICT compared to those above 40. In result, they use more ICT compare to their older counterparts. Teachers between 36 and 45 are in the middle with a mean score of 3.93, which is significantly higher than teachers between 45-55, where the mean value is 3.43. The findings indicate that age significantly influences the teachers' use of ICT.

Table 17. Individual characteristics' influence on the scales

Scale affected	Individual characteristics	Mean	St. dev.	F	P
Teachers pedagogical use	Age 23-35	4.12	1.01	3.524	.050
	36-45	3.93	.87		

of ICT	46-55	3.43	.934
	Above 55	3.10	.876

4.6.10. Relationships among the scales

In order to analyze relationships among the scales, correlation analyses were carried out. Table 18 show significant correlations among the scales. As one of the aims of this study was to investigate teachers' attitudes towards the use of ICT and their willingness to use it for pedagogical purposes, relationships between the use of ICT and the other scales are important.

Table 18. Significant correlations among the scales

Scale	1	2	3	4	5	6
1 Skill			.417*		.512**	
2 Use				.508**	.424*	
3 Access			.508**			
4 Activities		.512**	.424*			
5 Attitude					.474**	
6 Difficulty		.937**				

*. Correlation is significant at the 0.05 level.

**. Correlation is significant at the 0.01 level.

The observed relationship between the use of ICT and the level of ICT skill is a strong positive relationship. A possible explanation for the correlation between the use of ICT and the level of ICT skill may be that the higher the levels of teachers' ICT skills the more the teachers use ICT in their language teaching. As it is noticeable in table 18, there is also a strong positive relationship between the actual level of use and access of ICT which means the more the teachers have access to the ICT tools the more they use it.

4.6.11 Conclusion

The first phase of the study aimed at investigating the conditional implementations and pedagogical considerations of FL teachers as well as their perceptions/attitudes towards the application of ICT in the process of language teaching in teacher education programs.

Concerning the level of teachers' ICT skills, the research findings revealed that the participants have a moderate level of ICT skills. The findings show that the research participants are more knowledgeable and skilful with the common ICT resources compare to complex or smart tools. These results support previous findings that in order to make the integration process effective the teacher should have a certain level of skills of ICT (Drossel et al., 2015; Eickelmann, 2011, Drent & Meelissen, 2007, Baylor & Ritchie, 2002, Newton & Rogers, 2003).

As far as the frequency of the use of ICT tools is concerned, the statistical analysis displayed that the frequency of the use of ICT by the participating teachers is at a moderate level. The results also predict disparity in the frequency of ICT use by the participating teachers. It is noted that the most common ICT elements used by the teachers were: Projector, personal computer, word processing, power point, email, internet and YouTube. More advanced technologies and smart tools are rarely used by the participants. The survey findings indicate that many teachers only use a limited range of ICT tools and their use stay at a personal, rather than pedagogical, level. There is also a mismatch between the results of this section of the questionnaire with the second and third sections where the participants reported to have a moderate level of ICT skills and ICT frequency use.

Focused on language teaching, the majority of the participants reported that they use ICT tools for different language teaching purposes as well as to provide their students with plenty of valuable language experiences. Commonly cited by teachers were making presentations, communication, delivering lectures, developing reading, listening, writing, speaking skills, and enhancing students motivation and meet their individual needs.

It is also found that the participating teachers are not satisfied with the level of ICT resources in their teaching context. The outcomes disclosed that the overall access of the respondents to ICT tools is limited to the very basic ICT tools and the classrooms are not sufficiently accommodated with ICT tools.

The research findings reveal that the participating teachers face various obstacle and challenges. One of the obstacles is their access to ICT tools in their teaching environment. They also mentioned that lack of ICT tools in the classrooms, limited knowledge on how to make full use of ICT, lack of training on available computers and/or software, insufficient pedagogical support for teachers, student's lack of ICT use, limited understanding on how to integrate ICT into teaching, administrative support and shortage of class time made the ICT integration difficult or very difficult for them.

With regard to the attitude of the participating teachers towards the use and application of ICT, the descriptive analysis revealed that generally, participants have positive perceptions about the use of ICT. They confirm that ICT use brings potential changes to their classroom practices; it raises the quality of teaching and supports different teaching styles.

The results of the study also display that individual characteristics such as gender, age and academic title of the participants positively or negatively influence the extent of ICT use in the process of language teaching. The analysis shows that female teachers are more enthusiastic about using technology than male partners. Those who are between the age of 25-35 employ more ICT in their professional lives compare to the teachers over 55. And the lower the academic title the participants have, the more they use technology.

5. Phase 2: The investigation of students' dispositions towards the use of ICT in learning/ teaching the English language.

The second phase of the present study aims at offering the students to voice their disposition towards the use of ICT by themselves in the process of language learning and how much they are satisfied with the use of ICT by their teachers in the process of classroom teaching. The participating students were expected to provide useful information about the practices of ICT use in language learning as well as shed light on the challenges they face when they attempt to use it. Thus, in order to gain a fundamental understanding of these aspects, the second phase of the study was guided by the following sub-research question of the first main research question:

What is the disposition of pre-service teachers (English major students) in teacher education programs at public universities in Iraqi Kurdistan towards the use of ICT in teaching EFL by their teachers?

5.1 Method

I developed a questionnaire as the main data collection instrument to investigate students' dispositions towards the use of ICT. The choice of the questionnaire was motivated by my intention to collect a large amount of data in order to investigate different underlying reasons of ICT use by the students as well as how they evaluate its implementation by their teachers.

In the following section, the characteristics of the participants will be described, then the detailed description of the questionnaire as well as the procedures of their administration, data analysis, results and discussions will be presented.

5.2 Participants

For the second phase of the study, convenience sampling was used to recruit the participants. Based on this type of sampling, 320 EFL students were selected. The rationale for their selection was that they possessed "certain key characteristics that are related to the purpose of the investigation" and they were "easily accessible" (Dörnyei & Csizér, 2012, p. 1).

The participants were second, third and fourth-year students of the department of English languages at the colleges of education or basic education. The participants study the English language at teacher education programs for four years. These students will receive a bachelor degree and will be entitled to work as teachers in primary and high schools. Table 19 shows the demographic characteristics of the participants.

Table 19. Distribution of the participants

		N	%
Gender	Male	131	37
	Female	189	63
	N	320	100
Age	19 years old	40	12.5
	20 years old	58	18.2
	21 years old	83	26.0
	22 years old	74	23.1
	23 years old	37	11.7
	24 years old	10	3.2
	25 years old	6	1.8
	26 years old	5	1.6
	Older than 26	7	1.9
	N	320	100
	How long have you been learning English?	1-2 years	0.0
3-5 years		0.0	0.0
6-9 years		235	73.4
more than 10 years		85	26.6
N		320	100
Level of study	2 nd	88	27.5
	3 rd	118	36.9
	4 th	114	35.6
	N	320	100

Table 19 illustrates the demographic profiles of participants according to variables of gender, age, how long they have studied English language and level of study.

As it is noticeable in Table 19, the gender distribution of the participants is not perfect. Contrary to the first phase of the study, female students outnumber males in the teacher education program. Female students are 63%, while male students consist of only 37%. A change in the gender imbalance could be regarded as a cultural change of the position of women in a society where girls nowadays have more chances to prolong their education in order to become teachers and later teach in the primary and/ or high schools. It seems that in the participating teacher education programs, teaching is no more a male profession anymore, and females overwhelmingly dominated this field of education. As a consequence, it is expected that in the coming years teaching in Iraqi Kurdistan like many western countries will be a female profession.

According to the variable age, the participants' age range from 19 to 26 years old. Most of the respondents are 20, 21 and 22 years old, respectively, with 18.2%, 26% and 23.1%.

Majority of participants (36.9%, N=118) are at the third year of their teacher education program; the second year students consist of 27.5% (N=88) and the fourth year students are as many as 35.6% (N=114). Majority of the students (N=235) reported that they studied the English language for 6-9 years, while 85 of the respondents studied the English language for more than 11 years.

5.3 Instrument (questionnaire)

Based on an intensive literature review and the recommendation of Dörnyei and Csizér (2012), I developed a questionnaire in order to find out how the students in the teacher education programs perceive the use of ICT for the purpose of foreign language learning. I employed the same techniques I described in section 4.2 of the first phase of the study. In another word, to gain accurate responses to the questions asked, the development of the questionnaire involved the following four main steps:

- A. Initial development of content and items
- B. Think-aloud protocol
- C. Piloting the questionnaire
- D. Final version

5.3.1 Initial development of content and items

The first step of creating the questionnaire was to develop the main constructs and define them. As a result, six constructs were written up and defined as follow:

1. Skill: the purpose of this construct was to find out how well the participants can use ICT tools.
2. Use: this construct was intended to find out how often the participants use ICT to learn English as a foreign language.
3. Access: this construct was intended to identify the level of ICTs access/availability in the teaching/learning environment.

4. Activity: the purpose of this construct was to find out how ICTs use is reflected in their learning.
5. Attitude: this construct aimed to identify how students feel about using ICT tools in learning English as a foreign language and how they perceive their teachers' use of ICT in classroom teaching.
6. Teacher: this construct aimed to find out how the students perceive the degree of ICT use in language teaching as well as encourage students to use it.

After creating the main constructs of the questionnaire, I continued to develop the initial pool items in consultant with an intensive research literature review. These questions were intended to cover the above mentioned six constructs. The creation of the items was peer-checked by two university professors who were expert in the field of the study and five PhD students who have deep knowledge about the topic of the study. I discussed all the items with these people in order to verify that each item is narrowly related to one of the main constructs of the questionnaire.

The peer-checking and discussions with university professors and PhD students were quite helpful to improve the quality of the pool items in terms of deleting some items and writing up some new and solving the language problem.

5.3.2 Think-aloud protocol

After revising the pool items based on the feedback of university professors and PhD students, I carried out a think aloud protocol. I applied the same techniques of carrying out the think-aloud protocol described in section 4.3.2 of the first phase of the study.

The main purpose of conducting the think-aloud protocol was to make sure that the participants will interpret the items in the same way I intended. Thus, I conducted a think-aloud protocol with a university student who studied in a teacher education program at a public university in Iraq Kurdistan. The student was similar to the sample of the study. The detailed feedback of the think-aloud protocol helped the researcher to make some changes to the questionnaire, such as rewording and re-ordering several items.

5.3.3 Final version

After the think-aloud protocols, I fine-tuned the final version of the questionnaire, which was divided into seven sections.

The first section of the questionnaire consisted of 18 items where the students were asked to rate their thoughts about how well they use ICT tools on a 5 Likert scale where 5 represented the highest level value (I can use it very well) and 1 represents the lowest level value (I cannot use it).

The second section included 18 items where the students were asked to rate their frequency of ICT tools. The participants had to rate their opinion of a 5 Likert-scale where 5 means "almost daily" and "never".

The third section of the questionnaire included 27 items about using ICT tools for different learning purposes. The students rated their responses on a 5 Likert scale with 5 being "always" and 1 being "not at all" for each item.

The fourth part of the questionnaire was about the availability and the level of access to ICT elements in the teaching environment. The participants were asked to indicate what kinds of ICT elements are available on a 5 Likert-scale represents almost "in all the classroom" while 1 means in "no classroom".

The fifth part of the questionnaire contained 11 items. The participants were asked to rate their opinion about their FL teachers' frequency uses of ICT tools for the purpose of teaching in/out of the classroom. The participants rated their answers on a 5 Likert scale where 5 is "almost daily", and 1 is "never".

The sixth section included 6 items about the attitudes of the students towards the use of ICT in the process of language learning. The participants rated their answers on a 5 Likert scale where 5 represented the highest level value "absolutely true", and 1 represents the lowest level value "not true at all".

Moreover, the final section of the survey was a demographic section in which the students had to specify their gender, age, years (level) of study, and years of English language study (Appendix B). For each item, only one answer was required.

5.4 Data Collection Procedures for the students

At the beginning of the winter semester of 2018, I contacted five heads of the English language department in five different teacher education programs. I first introduced myself and explained that as a part of my PhD study, I need to collect data from students in their teacher education programs. By the end of the 2018 winter semester, 500 questionnaires were distributed to students studying English as a foreign language at teacher education programs during their regular classes. The rationale for using the hard version of the questionnaire, instead of using the online version, was that I was not sure if all the students had access to internet, in addition, I was afraid to receive a small number of responses in case of using an online questionnaire which might leave me with limited data to analyze. Another issue is that if the participants do not understand an inquiry, there is no chance for them to have this cleared up, as they are not filling up the questionnaire with the researcher. (Schonlau, Fricker, & Elliott, 2002, Kumar, 2005).

I asked the heads of English departments or their coordinators to allow me and accompany me to visit the regular classes of the teachers in order to distribute the questionnaires to the students. All the heads of departments or coordinators were very helpful.

I pursued the following procedures to distribute and administer the questionnaire:

1. The head/ coordinator of the department took me to a regular class and introduced me to the teacher of the class and students then both the head and the teacher left the class.

2. I re-introduced myself and provided the students with all possible descriptions of administrating the questionnaire and clarify all the unexpected procedural issues that might arise while answering the items of the questionnaire.
3. Participation in completing the questionnaire was volunteer; therefore, those students who did not want to participate they were excused to leave the classroom.
4. I distributed the questionnaires and requested the students to fill the questionnaire and return it over a span of 10 days after answering the questions.
5. Finally, I thanked them for their participation.

Out Of 500 questionnaires administered, 320 valid ones were brought back.

5.5 Data analysis

The same data analysis techniques of the first phase of the study were applied to the analysis process of the second phase of the study. The quantitative data analysis process consisted of two main steps. In the first step, the hardware questionnaires were prepared and organized through assigning an identification number from 1 to 320, and then the data was computed and moved into the Statistical Package for Social Sciences (SPSS) 17.0.

The second step was conducting the data analysis, which included the following statistical techniques.

1. Cronbach Alpha was established to test the internal consistency coefficients of the constructed scales of the questionnaires and calculate their reliability. Dörnyei (2007) considered .70 and/or higher on a scale of .00 to 1.0 as a minimum acceptable range of Cronbach alpha value.
2. Descriptive statistical measures were applied to represent the mean and the standard deviation for the scales of the questionnaires (Hinkle, Wiersma, & Jurs, 2003).
3. Several statistical tests such as analysis of variance (ANOVA), independent t-tests and chi-square analyses were conducted to determine the degree of the relationship between independent variables and dependent variables and to find out whether the relationship is statistically significant.
4. Correlation analyses were applied in order to find out whether the relationships among the scales are statistically significant or not.
5. To provide a simple indication of the degree of the participants to each scale, an arbitrary three level (high, medium, low) was used to determine the level of the means associated with each response.

5.6 Results and discussions

The second phase of the study aims at investigating the disposition of the students who study their bachelor degree in the English department at teacher education programs at five public universities in Iraqi Kurdistan.

Here I found it significant to remind the main research question which guides the second phase of the study:

What is the disposition of pre-service teachers (English major students) in teacher education programs at public universities in Iraqi Kurdistan towards the use of ICT in teaching EFL by their teachers?

In attempting to answer this sub-research question, a questionnaire was developed to collect specific details regarding the skills, frequency uses, pedagogical uses and attitudes of the students towards the use of ICT by themselves and their teachers in the process of language learning and teaching

In what follows the results of the statistical analyses and discussions of the second phase of the study will be presented.

5.6.1 The reliability of the scales

In order to find out whether the scales are capable of measuring "the same underlying attribute" (Pallant 2001, p.6), an internal consistency analysis of the scales was tested. In Table 20, Cronbach Alpha values display the reliability of the scales. Furthermore, Table 20 shows the questionnaire items that were necessary to be

excluded from the scales in order to create more reliable scales. The presented Cronbach Alpha values are calculated after the exclusion of certain inadequate items.

The elimination of an item was decided based on two guidelines: a) if the item lowered the internal consistency of the scale by a minimum of 0.5, and b) if during the think-aloud-protocol the participants reported that two items seem to have the same meaning. In the view of these guidelines, items 47 and 60 were eliminated. Item 47 was excluded because during the think-aloud protocol, the participants reported meaning the same as item 53.

Item 60 was dropped because it lowered the Cronbach Alpha values of the scales by a minimum of 0.5. According to Dörnyei (2007), the accepted Cronbach Alpha values for statistical analysis should be at 0.7.

For easier understanding, these questionnaire items are highlighted in Appendix B.

As it can be observed in Table 20, the Cronbach's alpha of the five scales was higher than 0.7. The results suggest that the items of the scales have relatively high internal consistency; therefore, all the scales were appropriate for statistical analysis.

Table 20. Mean values and reliability of the scales

Scales	Number of items	Cronbach's alpha	Item deleted
Skill	18	.903	
Use	18	.898	
Access	8	.725	
Activity	29	.945	47, 60
Attitude	11	.893	
Teacher	6	.783	

5.6.2 ICT skills of the participating students

In order to find out how familiar and skilful the participating students to use ICT tools, they were invited to evaluate their level of ICT skills in using 18 selected applications. Thus, descriptive analysis (Means, Std. Deviations, and percentages of the participants' ICT skills) were run. In addition to providing a simple indication of the degree of ICT skills the participants possess, an arbitrary three level (high, medium, and low) which was described in 4.6.2 was used to determine the level of the means associated with each response.

The students were asked to respond to 18 Likert-type statements dealing with their ICT skills using a 5-point scale including 5 (**use it very well**), 4 (**use it well**), 3 (**use it satisfactory**), 2 (**use it to a small extent**), 1 (**I cannot use it**).

Table 21 presents the descriptive analysis (Means, Std. Deviations, and percentages of the participants' ICT skills).

Table 21. Distribution of mean scores and percentage of students skills on ICTs

ICT skills scale	Per cent (%)					Mean	Std	Level of ICT skill
	Use it very Well	Use it Well	Satisfactory Use it	Use it to a small Extent	I cannot use It			
Personal laptop/computer	35.4	48.5	12.8	3.3	0	4.12	.789	High
interactive whiteboard	3.1	3.3	12.8	9.9	70.9	1.49	1.047	High
CD, VCD, DVD, Cassette player	38.6	38.8	16.2	6.4	0	4.08	.908	High
Word processing	25.7	35.6	29.2	3.3	6.2	3.70	1.101	High
Spreadsheet (Excel)	12.8	25.9	32.5	29.1	12.6	3.74	1.016	Medium
Online library catalogue	16.2	6.4	6.7	22.5	48.3	2.10	.644	Low
Powerpoint	25.7	29.1	25.9	16.1	3.1	3.56	1.168	Medium
Email	6.2	29.1	48.1	16.4	6.2	3.98	.856	High
Internet	54.0	29.7	9.5	0	6.8	4.15	1.074	High
Learning Management Systems (Moodle, Edmodo, Canvas, Wikispaces etc.)	2.0	3.1	31.1	9.9	53.9	1.92	1.087	Low
Wikipedia	38.5	16.3	19.5	9.5	16.2	3.46	1.403	Medium
Podcasts	1.6	3.2	13.6	10.4	71.2	1.50	.963	Low
Social networking sites (Facebook, Twitter, Snapchat, LinkedIn, Whatsup, etc.)	61.4	22.7	9.8	6.2	0	4.42	.919	High
Skype	26.9	33.7	17.3	18.5	3.6	3.65	1.177	Medium
YouTube	38.9	35.7	16.2	6.2	3.0	4.00	1.045	High
Blogs	1.5	3.4	28.8	6.5	59.8	1.72	1.027	Low
Language learning software	25.7	29.1	25.6	16.4	3.1	3.52	1.048	Medium
Language learning website	22.4	29.2	29.1	9.8	9.5	3.40	1.234	Medium
Total						3.25	1.280	

Table 21 shows that the total mean value of ICT skill-related scale is 3.25 on a 5-point scale with a standard deviation of 1.280. Based on the total mean value (3.25, i.e. it is less than 3.68), it can be stated that the respondents possess a moderate level of familiarity in using ICT tools.

Interestingly enough, the results show that that the research participants claimed to possess highest skill levels in the areas of the most common tools of ICT which includes a personal computer, word process, internet, email, and YouTube. On the other hand, students reported having the lowest skill levels in complex or smart tools such as interactive whiteboard and Wikispaces.

The results indicate that social networking sites have received much attention from the research participants. They (84%) reported that they use social networking sites well or very well. The findings of this study support the results of the reports of TNS, (2016) focused on social media in the Middle East, it was found that in the Arab countries, social networking sites such as Facebook and Twitter are heavily used. Helou and Rahim (2014) also argued that social network sites attracted the attention of the students compare to other technologies.

The mean score for the item of "word process" is 3.70 with the standard deviation 1.101 where 61.3% of the participants mentioned that they use this function well or very well and 29.2% reported it to use it satisfactorily. One of the main reasons behind using word process is grammar checkers, spell checking and dictionary, which helps students to make correct sentences as well as texts.

More advanced technologies and smart tools ranked the minimum mean score. The majority of the students (70.9%) reported that they could not use the interactive

whiteboard at all. It seems that students do not use this tool because it is not available in the teaching/learning context due to the lack of fund by Kurdistan regional government since installing interactive whiteboards in the teaching/learning environment costs the universities much money.

Although blogs and podcasts are all relatively easy to use and there are many free and open source versions of these tools that may help the students to improve different language skills, still the participating students reported that they do not use these functions at all. Reinhold, (2006), Bull, (2005) and Wong and Hew (2010) found that the main reason is that students experience difficulties on how to design their blogs and use it properly.

As it can be noted in Table 21, the students' ICT skill level is greatly varied in using different ICT tools. The majority (74.6%) of the participants mentioned that they use YouTube well or very well. One explanation for this is that in YouTube students may find a huge amount of pedagogically authentic materials for foreign language learning which can provide a context to the students "through which they can interact, exchange ideas, share feelings, and participate in a web-based environment" (Kelsen, 2009, p.3).

Despite the fact that Learning Management Systems (Moodle, Edmodo, Canvas, Wikispaces etc.) may provide "an intuitive way for teachers and students to stay connected in a safe and secure learning environment" (Edmodo, 2010), for example, students may download the uploaded materials into Wiki at any time, the results show that students badly skilled since the mean value is 1.92 with a standard deviation of 1.087. As far as the standard deviation is greater than 1, it depicts the disparity of the participants towards the level of use of this function. Since the mean value is less than

2.33, it indicates that the participating students had a low level of competence in using this function. It is evident that lack of access or the unavailability of Learning Management Systems in the teacher education programs negatively influences the research participants not to use it.

The results show that students are highly skilled in using the World Wide Web. Almost all the students (83.7%) reported that they use the internet well or very well. It seems that the participants find internet as a "virtual library at one's fingertips" where they can find a great deal of useful authentic materials to support their English language studies (Singhal 1997, p., 4).

Majority of the participants (54.8%) use PowerPoint well or very well. The mean value is 3.56, with a standard deviation of 1.168. Since the mean value is less than 3.68, it highlights that the students have a moderate level of familiarity with PowerPoint use. It can be explained that the students need to have a high skill of using this software program in order to carefully plan and structure the venue of their presentation during their studies in teacher education programs.

5.6.3 Frequency use of ICT tools of the participating students

In order to find out how often the participating students use ICT tools in the process of their foreign language learning, descriptive analysis (Means, Std. Deviations, and percentages of the participants' ICT skills) were calculated. The same arbitrary three level (high, medium, low) equation, which was described in section 4.6.2 was used to find out the level of the means associated with each response. To gain necessary information for this purpose, the participating students were asked to answer to 18

Likert-type statements dealing with their ICT frequency use using a 5-point scale including 5 (**almost daily**), 4 (**weekly**), 3 (**1 or 2 times a month**), 2 (**once a term**), 1 (**never**).

Table 22 shows the descriptive analysis (Means, Std. Deviations, and percentages of the participants' ICT skills).

Table 22. Distribution of mean scores and percentage of students frequency use of ICT uses

ICT frequency scale	Per cent (%)					Mean	Std	Level of ICT skill
	almost daily	Weekly	1 or 2 times a month	Once a term	Never			
Personal laptop/computer	61.2	29.1	3.7	0	6.0	4.30	1.024	Medium
interactive whiteboard	0.0	17.9	29.7	12.9	38.6	2.15	1.361	High
CD, VCD, DVD, Cassette player	54.7	29.1	9.8	0	6.4	4.20	1.084	Low
Word processing	29.2	29.1	19.3	6.4	16.0	3.50	1.123	Medium
Spreadsheet (Excel)	13.1	22.8	22.7	16.2	25.2	2.90	1.400	Medium
Online library catalogue	6.2	11.7	28.9	13.6	38.7	2.35	1.012	Low
Powerpoint	19.3	19.5	25.9	16.2	19.2	3.02	1.302	Medium
Email	29.1	29.2	19.1	6.4	16.2	3.42	1.311	Medium
Internet	54.2	29.6	9.8	0	6.4	4.21	1.014	High
Learning Management Systems (Moodle, Edmodo, Canvas, Wikispaces etc.)	1.7	1.5	29.2	7.1	59.4	1.60	1.051	Low
Wikipedia	32.0	26.1	12.7	12.6	16.6	3.30	1.080	Medium
Podcasts	0.0	2.1	10.4	9.9	77.6	1.25	1.057	Low
Social networking sites (Facebook, Twitter, Snapchat, LinkedIn, Whatsup, etc.)	77.2	16.3	6.5	0	0	4.65	.582	High

Skype	32.4	25.7	12.8	12.7	16.4	3.40	1.460	Medium
YouTube	51.2	29.4	6.6	3.3	9.5	4.10	1.274	High
Blogs	2.6	2.4	29.5	9.0	56.5	1.72	1.014	Low
Language learning software	6.4	19.5	22.7	12.9	38.6	2.35	1.461	Low
Language learning website	25.4	16.5	25.7	6.6	25.8	3.00	1.235	Low
Total						3.08	1.158	

Table 22 shows the frequency use of ICT by the participating students is at a moderate level with an overall mean value of 3.08 and a standard deviation of 1.158. Since the standard deviation is greater than one, it highlights disparity in the frequency of ICT use by the participating students.

As it is notable in table 22, the social networking sites are top used tools by the research participants. The mean value for this item is 4.65 with a standard deviation of .582. Understanding why students use social networking sites is important for the academic community as emerging these tools may positively or negatively influence the academic achievement of students (Campus Quad, 2014). Cheng (2012) argues that social networking sites may "facilitate collaborative discussion, exchange of opinions, and critical thinking" (p.2). Valenzuela, Park and Kee's study (2009) indicated that college students use social networking sites daily. Kemp (2015) claims that these sites occupy an important place in students' everyday lives in which they spend 2 hours and 25 minutes per day.

Personal laptop/computer, word processing, power point, email and YouTube are six elements that are used by the students more commonly. The mean value for the item "personal computer/laptop" is 4.30 with a standard deviation of 1.024. Majority of the students (61.2%) reported that they use their personal computers/laptops daily.

The results indicate that 54.2% of the students use the Internet daily. The mean value for this item is 4.21, with a standard deviation of 1.014. Since the standard deviation is more than 1, it indicates the disparity of students towards the degree of using this tool. This is in line with the findings of Andrew and Maeve (2015), where it was found that 95% with a college degree or higher were internet users. It seems that Kurdish students in the current study find the internet as an open platform where they can access a huge amount of rich and useful materials for different learning purposes (McNeely, 2005). This is also in line with the perception of Yang and Chen (2007) who argued that Internet is an important tool for EFL learners in order to access authentic language resources and the de-contextualize predicament of English learning in order to keep in touch with native and non-native English speakers.

The findings reveal that the frequency use of complex or advanced ICT tools such as Podcasts, interactive whiteboard and blogs by the participating students is at a low level. Podcast scored the minimum mean value, which is 1.25 with a standard deviation of 1.057. The findings of the current study are in line with previous research findings of Kennedy et al., (2009), Maton and Bennet, t(2010) and Margaryan et al., (2011) where they found that advanced ICT tools which require active involvements are only used by the minority of students.

Only five per cent of the participants reported using "blog" daily or weekly while 56.5% reported that they never use blog at all. This is an evidence to prove that the findings of this study are in line with the same study conducted by Kennedy et al., (2009) where it was found that the majority of the students did not know what exactly an item like blogs was.

The majority of the participants (16.2 %) reported that they use PowerPoint once a term. It seems that students use this application for presentation of their assignments in each semester.

These findings indicate that the more ICT tools suit the needs of the students, the more they use them.

5.6.4 ICT tools used for learning activates by the participating students

In order to find out for which kind of (language) learning activities ICT is used, the students were invited to respond to 27 Likert-type list of statements dealing with different pedagogical utilization of ICT using a 5-point scale including 5 (**always**), 4 (**usually**), 3 (**sometimes**), 2 (**rarely**), 1 (**not at all**).

The same arbitrary three level (high, medium, and low) equation, which was described in section 4.6.2 was calculated to indicate the level of the means associated with each response.

Table 23 shows the descriptive analysis (Means, Std. Deviations, and percentages).

Table 23. Distribution of mean scores and percentage of students' ICT uses for learning purposes.

Activity Scale	Per cent (%)					Mean	Std	Level of ICT skill
	Always	Usually	sometimes	Rarely	not at all			

Develop technical skills (e.g. how to use Wikispaces,...)	19.3	19.5	25.7	16.3	19.3	3.02	1.102	Medium
Enhance speaking skills	54.7	29.1	9.8	0	6.4	4.25	1.092	High
Enhance writing skills	38.9	16.1	19.2	9.5	16.1	3.52	1.508	Medium
Enhance reading comprehension skills	29.2	25.8	19.5	12.8	12.7	3.50	1.381	Medium
Enhance listening skill	32.2	25.9	12.7	12.8	16.4	3.42	1.482	Medium
Prepare for a term test	19.5	35.3	25.9	12.7	6.7	3.45	1.131	Medium
Provide an opportunity for self-study.	29.3	29.1	19.1	6.3	16.2	3.52	1.211	Medium
Enhance group work.	19.3	16.2	38.9	25.5	19.5	3.50	1.355	Medium
Prepare lesson assignments	25.1	16.7	25.9	6.7	25.6	3.02	1.535	Medium
Send and receive emails	3.4	3.0	12.8	9.6	71.2	1.55	1.046	Low
Search for online English materials	12.3	25.9	32.8	29.5	12.4	3.65	1.016	Medium
Communicate with my teachers	3.1	2.9	12.4	9.9	71.7	1.50	1.017	Low
Communicate with other students in and out of my university	3.0	3.1	12.9	9.9	71.1	1.52	1.057	Low
upload assignments via email	6.2	6.3	19.6	19.6	48.1	1.99	1.244	Low
download music files	25.7	29.2	25.7	16.2	3.1	3.55	1.108	Medium
Make presentation/ seminars	3.3	38.6	35.4	22.8	3.1	4.12	.870	High
Use the internet to play games	38.9	9.9	12.8	25.9	12.5	3.45	1.529	Medium
Use chat applications with friends	77.3	16.2	6.5	0	0	4.70	.588	High
Learn vocabularies	29.5	25.3	16.2	12.7	16.2	3.45	1.453	High
Perform grammatical exercises	48.6	25.6	6.8	12.6	6.4	3.98	1.303	High

Translating (look up words or phrases online)	25.3	22.9	9.8	12.8	29.1	3.01	1.522	Medium
Take part in online group discussions or forums	19.5	45.5	12.5	19.3	3.2	3.60	1.109	Medium
Listen to music	61.4	19.3	9.5	9.9	0	4.33	1.012	Medium
instant messaging (e.g. MSN, Skype, Viber, Whatsup, Facebook Messenger, etc.)	67.2	22.2	3.1	7.5	0	4.25	.851	High
reading newspapers, magazines online	3.7	12.8	19.2	16.1	48.2	2.16	1.207	Low
using language learning websites (e.g. BBC learning English)	25.7	12.8	16.3	16.0	29.1	2.85	1.569	Medium
Watch English movies/ series online	38.0	35.8	16.5	6.4	3.3	3.95	1.062	Medium
Total						3.29	1.120	

The results in Table 23 reveal that overall uses of ICT by the participating students for (language) learning activities are at a moderate level since the total mean value is 3.29 with a standard deviation of 1.120.

As far as English language skills concerned, the results of the study disclosed that the majority of the research participants take benefit from different ICT tools in order to enrich their learning experiences and improve the four language skills.

As it can be observed in Table 23, more than half of the students (58.1%) reported that they usually get benefit from ICT resources to enhance their listening skill. The result of our study is in line with a bulk of literature review regarding the use of a wide range of technological resources such as podcast, online dictionaries, audiobooks,

and MP3 recordings may offer them opportunities to improve listening skills (Yuksel & Tanriverdi, 2009, Karakaş & Sariçoban, 2012).

Three-quarters of the research participants (83.8%) mentioned that they usually utilize ICT resources to improve their speaking skill. The mean value for this item is 4.25 with a standard deviation of .1.092. Since the standard deviation is less than one, it highlights convergence towards this point of use. The result of the study are in line with the arguments of Patrick (2012) and Vannestal (2009) who believe that students can use a wide variety of educational tools to improve their speaking performance. The self-report of the research participants of the current study are also in accordance with the findings of Jung (2006) who carried out a study about the frequency of ICT use for general and English learning purposes by Chinese university students where forty-six per cent of the participants agreed over the advantages of using ICT to improve speaking skill. Volle (2005) also conducted a study to explore the acquisition of oral skills in an online course for Spanish learners. In the study, the students were asked to use audio e-mails to record two speaking activities, one before the start of the course and the other when they finish the course. Then the two recorded speaking activities were compared in order to find out whether the students' oral performance was improved. The analysis of the data obtained shows that students' oral proficiency had significantly got great progress.

Fifty-five per cent of the participants reported that with the help of using ICT, they might improve their reading skill. Research shows that the availability of a wide range of ICT resources through the Internet is a wonderful feature for English language learners where they may find ample opportunities to improve their reading comprehension experiences (Høigaard, B. et al., 2010, Utgård, T., et al., 2008, Fälth, L.,

et al., 2013, Engenes, (2011). The findings also support the results of Meihami and Varmaghani (2013) study where they compared the reading skill between the experimental and the control group and it was found that technology use promotes the reading comprehension skill of the EFL students.

With a mean score of 3.52 and a standard deviation of 1.508, 38.9% of the participants reported to use of ICT usually to improve their writing skill. It is not surprising to find English language students take benefit from ICT tools for improving writing skill. One of the most well-known of ICT tools which change the nature of the writing process is the Microsoft Word software program. The editing features of the word processor makes the writing process easier and increase the quality of writing because it allows the students to correct errors, check punctuation, grammar, and make frequent revisions of their writings.

Interestingly more than half of the students (58.4%) reported that they use ICT usually to provide an opportunity for self-study. Gilakjani (2017) also argues that having access to many authentic learning materials is useful for students to adjust their study experiences. The results of this study confirm the complaints of Morrone et al., (2012) that students may get benefit from using technologies in order to “create new kinds of learning environments and activities, and the ability to extend learning opportunities outside of the classroom” (p. 2).

ICT is used at a high level by the students (89.4%) for instant messaging. The mean value for this item is 4.25, with a standard deviation of .851. It seems that using instant messaging tools such as Facebook, Whatsup, Twitter and Instagram have received much attention by the participant Kurdish university students where they have

opportunities to exchange information, share their thoughts, and ask questions (Sotillo, 2005).

Thirty-eight per cent of the students reported that they usually use ICT to watch English movies online. The mean value for this item is 3.95, with a standard deviation of 1.062. Since the mean value is more than 3.68, it signifies that the use of ICT is at a high level. The findings of numerous previous studies suggest that watching movies in English language is a powerful instructional tool to provide sources of authentic language learning experiences and help students to develop their vocabulary acquisition, enhance reading and listening comprehension (Pezdeck, et al., 1984, Yuksel & Tanriverdi, 2009, Karakaş & Sariçoban, 2012, and Considine, et al., 2009).

Almost half of the students (48.6%) reported that they use ICT to perform grammatical exercises. It is notable from table 23 that the level of using ICT by the student for "translating (look up words or phrases online)" is at the moderate level since the mean is 3.01 with a standard deviation of 1.522.

The result shows that 54.8% of the participants sometimes use ICT to learn vocabulary. The mean value for this purpose is 3.45, with a standard deviation of 1.453. The results are in line with Jung (2006) study, where he also found that (40%) of study's participants use ICT in order to learn new vocabulary.

The students (38.9%) always use the internet sometimes to play games. This is in line with the results of Bullen et al., (2011a) study that the internet is used by students for entertainment. Wright et al., (2006) state that "games provide one way of helping the learners to experience language rather than merely study it." (p. 2). Jung (2006) has also noted that games may provide a useful and meaningful context for

English language learners where they can make significant effort to enhance various language skills.

As it is shown in table 23, some of the respondents (45.5%) usually take benefit from ICT to take part in online group discussions or forums. Zhou, H. (2015) conducted a meta-analysis of studies of online discussion over the past 15 years and he found that using online discussions is an important virtual learning environment where students have opportunity to communicate with teachers and students in and out of their teaching context and express themselves, ask questions and give or receive feedback.

As it is shown in Table 23, the results indicate that the students rarely use ICT for reading newspapers, magazines online, and 38.2% of the participants sometimes use ICT to search for online English materials.

The items "download music files" and "listen to music" is reported to be used usually by the participating students (54.9%, 80.7%). A large amount of research studies (Salcedo, 2010, Huy Le, 1999, Moticoe, 2008, Lynch, 2006, Oats & Grayson, 2004, Le Roux, 1992) have proven that listening to songs can have a dramatic effect on English language learners to learn new vocabularies quickly, improve listening and speaking and pronounce English words correctly.

The item "using a language learning website" scored a moderate mean value, which is 2.85 with a standard deviation of 1.569. The results suggest that the research participants may take benefit from limitless English language teaching/ learning websites in order to help themselves with language learning

The use of ICT to communicate with other students in and out of university is at a low level since the mean value is 1.52, with a standard deviation of 1.057. This is in

contrast with previous results gained by Law, Pelgrum and Plomp, (2008) who found that ICT plays a crucial role to help students to communicate and learn from peers in order to become lifelong learners.

Surprisingly the lowest mean value is for the items of "send and receive emails, communicate with my teachers; and upload assignments via email". The overall results highlight that the students rarely or never use ICT for these aspects. The results affirm that using ICT by the students to communicate with their teachers is at the lowest level; one explanation might be the fact that the teacher education programs do not have an educational platform or Learning Management Systems such as Moodle, Edmodo, Canvas, or Wikispaces in order to facilitate these functions. Less than half of the students (41.8%) reported that they usually use ICT to prepare their lesson assignment and 41.9% to make presentation/ seminars. Deaney et al. (2003) found that students consider ICT resources that help them with doing their assignments.

5.6.5 Access to ICT tools in teaching/ learning context

According to Al-Ruz and Khasawneh (2011) and Srivastava et al. (2014), there are scientific shreds of evidence which show that accessibility of ICT infrastructures play a critical role in the meaningful utilization of ICT in the process of teaching and learning. It is also found that for teacher education programs to integrate ICT into the context of the teaching/ learning in an effective way, they need to provide their students a wide range of access to ICT tools. Experts have confirmed that education institutions should consider the availability of these tools as a critical issue, and they need to provide adequate and appropriate ICT tools in the context of teaching/ learning (Trowler, 2010, Kling, 2000).

In order to find out the level of ICT access in the foreign classroom teaching, the participants were invited to respond to 8 Likert-type given list of ICT tools might be available in the teaching environments using a 5 Likert-scale where 5 represents the maximum score of the scale (in all classrooms) and 1 the minimum score of the scale (in no classroom).

Table 24. Distribution of mean scores and percentage of students access to of ICTs in the learning environment

Scale	Per cent (%)					Mean	Std
	In all classrooms	In some classrooms	Upon request	Laboratory language	Only in the all available at		
Projector	38.1	38.3	16.7	6.9	0	4.02	.928
Computer	15.8	6.2	6.9	22.8	48.5	2.10	1.529
interactive whiteboard	1.5	2.1	29.9	22.4	54.1	1.82	1.034
Audio/Video equipments (CD, VCD, DVD, Tape player)	8.6	3.6	38.8	19.0	30.3	2.25	1.204
Online library catalogue	3.0	3.1	12.4	9.6	71.9	1.50	1.053
Internet	16.7	9.9	22.4	16.0	35.0	2.65	1.482
Learning Management Systems (Moodle, Edmodo, Canvas, etc.)	9.2	3.1	38.6	19.5	29.6	2.35	1.204
video conferencing systems	2.0	3.7	31.1	9.8	63.4	1.92	1.087
Total						2.32	1.190

Table 24 shows the descriptive analysis (Means, Std. Deviations, and percentages).

As it is noticeable from Table 24, the overall access of the participating students to ICT tools is at a low level. The total mean value is 2.32 with a standard deviation of 1.190, which indicates the classrooms are not sufficiently accommodated with ICT tools.

The results reveal that students like teachers have a significant level of access to the projector in their context. The mean value for this item is 4.02, with a standard deviation of 0.928. Less than half of the participants (22.8%) reported that computer is only available in the language laboratory. They also (54.1%) reported that Interactive whiteboard is not available at all in any classroom. They reported (38.8%) that audio equipment (including software) items such as CD, VCD, DVD, Tape player, digital audio recording and the digital video recording can be accessed upon request.

The majority of the students (71.9%) reported that their institutions did not provide online library catalogue service at all. The students have low limited access to the internet in their teacher education institutions. They (22.4%) reported that they have access to the internet upon request and 29.6% of the participants reported that Learning Management Systems (Moodle, Edmodo, Canvas, etc.) is not available at all. The respondents (31.1%) have access to video conferencing systems only in the language laboratory.

Despite of the fact of having direct access to a wide range of adequate ICT tools is one of the most important preconditions that contribute to effective use of the students; the result of the study reveals that teacher education programs badly lagged in

providing their students satisfactory educational technologies for language learning and in most cases, the availability of ICT resources is limited to specific language classrooms during specific hours and under the supervision of a language teacher.

5.6.6 Attitude of the participating students towards the use of ICT in the process of language learning

In the process of foreign language learning, many researchers explained that attitude is one of the key factors which may positively or negatively influence students to use ICT for target language study (Abedalaziz et al., 2013, Teo, 2008: Zhang, 2011; Vishwanath et al., 2009). One of the major aims of this study is to examine the relationship between students' attitudes towards ICT use and its influence on their language learning process practices.

Thus, the participating students were invited to respond to 11 Likert-type statements dealing with their attitudes and perceptions towards the use of ICT in the foreign language learning process. They reported their responses on a 5-point scale including 5 (**absolutely agree**), 4 (**mostly agree**), 3 (**partly agree partly disagree**), 2 (**disagree**), 1 (**absolutely disagree**).

The same arbitrary three level (high, medium, and low) equation, which was described in section 4.6.2 was calculated to indicate the level of the means associated with each response.

Table 25. Distribution of mean scores and percentage of students attitudes towards the use of ICT

Scale	Per cent (%)					Mean	Std.	Level of ICT skill
	absolutely agree	mostly agree	partly agree	Disagree	absolutely disagree			
Today it is not possible to learn the English language without the Internet.	25.9	35.6	29.0	3.2	6.3	3.78	1.102	High
I like learning languages with the help of ICT tools.	12.8	35.8	35.5	16.1	12.8	3.90	1.030	High
It is easy to learn languages using ICT tools	6.9	41.5	35.3	16.4	6.4	4.10	.921	High
I like to use ICT in my lessons.	9.5	35.7	32.5	22.5	9.4	3.90	.997	High
ICT helps me to experience things more actively.	22.5	29.1	29.2	9.5	9.7	3.40	1.216	Medium
ICT makes the course content more lively.	29.5	45.3	16.1	6.0	3.1	3.94	1.010	High
ICT makes things easier for the students.	19.5	32.4	32.1	16.1	0	3.58	.993	Medium
Merging ICT with other teaching methods is crucial.	9.4	35.4	32.1	22.9	9.7	3.90	.994	High
I enjoy lessons with ICT	32.4	32.2	12.8	19.6	3.1	3.68	1.206	Medium
Using ICT facilitates my English language learning	12.8	35.6	35.6	16.2	12.7	3.90	1.032	High
Learning with ICT offers real advantages over traditional learning strategies.	38.8	38.6	16.2	6.4	0	4.11	.903	High
Total						3.83	1.037	

As it is noticeable in Table 25, the findings of this research show that the majority of the participating students possess a positive attitude towards the use of ICT and its relationship with their foreign language learning.

The majority of the respondents (41.5%) agreed that it is easy to learn languages using ICT tools. This is in line with a bulk of research studies findings where it was found that ICT may bring many advantages to EFL learners while they are learning the English language. The benefits may include enhancing motivation to promoting independent learning, enhance critical thinking, and problem-solving skills, boosting communication, encourage creating an active learning environment (Warschauer, 1996; Dörnyei, 1998; Reksten, 2000; Seiltad, 2012). It is because of these advantages students feel that learning the English language with ICT is easy.

More than half of the students (32.4%) agreed that ICT makes things too easy for them. A group of the students (35.7%) reported that they like to use ICT in their lessons. Many of the respondents (45.3%) agree that the use of ICT makes the course content more lively. They (35.4%) also agree that the mixture of ICT use with other teaching formats is important to be used in order to learn a foreign language. More interestingly, 64.6% of the participants agreed or absolutely agreed that they enjoy lessons with ICT. There are many reasons which make EFL learners to enjoy their lessons when ICT is used. Dang (2011) argues that through the use of ICT tools, students may have access to a huge amount of sound pedagogical materials inside and outside the classroom to make English learning more enjoyable. Tondeur, et al., (2008) and Scott and Mouza (2007) also believe it is the physical use of technology that attracts the attention of the students and makes them feel an enjoyable experience.

More than half of the participants (35.6%) reported that the use of ICT facilitates their English language learning. The participants (51.6%) absolutely agree or mostly strongly that ICT helps them to experience things more actively. The majority of the

students (77.4%) absolutely agree or mostly strongly agree that learning with ICT offers real advantages over traditional learning strategies.

5.6.7 Attitude of the participating students towards teacher's ICT Skills and uses in the process of language teaching

This section of the questionnaire aims at investigating the attitude of the research participants towards the use of ICT by their teachers in the process of language teaching.

Thus, the participating students were invited to respond to 6 Likert-type statements dealing with their attitudes and perceptions towards the use of ICT in foreign language learning process, they reported their responses on a 5-point scale including 5 (**absolutely agree**), 4 (**mostly agree**), 3 (**partly agree partly disagree**), 2 (**disagree**), 1 (**absolutely disagree**).

The same arbitrary three level (high, medium, low) equation, which was described in section 4.6.2 was used to indicate the level of the means associated with each response.

Table 26. Distribution of means and Standard Deviations of teacher's ICT Skills/uses perceived by students

Scale	Per cent (%)					Mean	Std	Level of ICT skill
	absolutely agree	mostly agree	partly agree	Disagree	absolutely disagree			
The teachers' use of ICT in classroom teaching has increased my interest in the subject matter	25.7	45.3	19.2	6.6	3.3	3.80	1.001	Medium
Teachers regularly communicate with the students via email.	6.3	6.4	19.3	19.3	48.9	2.00	1.201	High
Teachers can use the available ICT tools well in the classroom	9.2	3.6	30.8	19.1	37.3	2.30	1.204	Medium
My teachers encourage the students to use ICT tools for learning purposes	38.2	9.5	12.8	25.9	13.6	3.15	1.531	Medium
Some of the teachers share with us useful links and language learning websites	25.4	12.5	16.8	16.0	29.2	2.84	1.509	Medium
Teachers do not use ICT tools in classroom teaching sufficiently	38.6	38.5	16.5	6.4	0	4.05	.903	Medium
Total						3.04	1.225	

Table 26 shows the distribution of means and Standard Deviations of students' attitudes towards their teacher's ICT skills/uses in the process of language teaching. Although the majority of the students (71%) agree or strongly agree that teachers' use of ICT in the classroom has increased their interest in the subject matter, they rated the use of ICT by their teachers very low. These results support previous studies where it was found that students are interested in the moderate use of ICT in the classroom. (Jones & Shao, 2011; Schulmeister, 2008). The research participants reported that their teachers do not have high competency in using ICT elements, 12.8% absolutely or mostly agreed with the statement of "teachers can use the available ICT tools well in the classroom",

and the mean value is 2.30 with a standard deviation of 1.204. Since the mean value is less than 2.33, it highlights that the disposition of the students is at a low level towards this point of view. The majority (77.1%) of the students reported that their teachers do not use ICT tools in classroom teaching sufficiently.

Some of the students (25.4%) reported that some of their teachers share with them useful links and language learning websites and 38.2% absolutely agree that their teachers encourage the students to use ICT tools for learning purposes.

Overall, as it can be noticed from these results that the attitude of the students towards how their teachers ICT use in classroom teaching is not positive.

5.6.8 Individual characteristics influencing students' dispositions

In order to find out whether any of the individual characteristics which were asked in the demographic section of the questionnaire have an impact on the students' dispositions towards the frequency use of ICT for language learning activities, a series of independent t-tests with two possible answers were carried out.

As it is noticeable in Table 27, statistically significant differences were found between gender and ten uses of ICT. As it is noticeable in Table 27, there is a significant relationship between male and female on several cases relating to the frequency use of ICT for learning activities. On the one hand, the frequency use of ICT by female students is higher than male students to utilize ICT as an opportunity for self-study, listen to music, search for online English materials, prepare my lesson assignments, perform grammatical exercises and learn vocabularies. On the other hand,

the frequency use of ICT by male students is higher to use the internet to play games, watch movies online, instant messaging, and translating (look up words or phrases online).

Table 27. Individual characteristics' influence on the scales

	Gender	N	Mean	St. dev.	t.	p.	Interpretation
Provide an opportunity for self-study	Male		3.20	.954	2.266	.027	F > M
	Female		3.65	.910			
Listen to music	Male		3.15	.959	2.576	.037	F > M
	Female		3.50	.875			
Search for online English materials	Male		3.05	.370	4.351	.001	F > M
	Female		4.15	.331			
Use the internet to play games	Male		4.0	.963	5.721	.003	M > F
	Female		2.88	1.437			
Watch English movies online	Male		3.55	.621	4.312	.002	M > F
	Female		3.05	.680			
instant messaging	Male		4.55	.765	4.742	.000	M > F
	Female		3.80	.856			
Prepare my lesson assignments	Male		2.95	1.35	2.135	.004	F > M
	Female		3.05	.985			
Learn vocabularies	Male		3.61	1.731	5.577	.001	F > M
	Female		4.0	1.330			
Perform grammatical exercises	Male		3.90	.715	2.253	.024	F > M
	Female		4.25	.630			
Translating (look up words or phrases online)	Male		4.45	.801	4.854	.000	M > F
	Female		4.25	.840			

The influence of gender is interesting since the findings indicate that female students use ICT tools for educational purposes, and male students use ICT for communication and recreational purposes. This result is in line with those of Asztalos (2015) who found that gender influences the disposition of students towards technology use.

5.6.9 Chi-square test

A chi-square test of independence was run to examine the relationship between the frequency use of ICT and the year of study. Based on the results shown in Table 28 we can reject the null hypothesis that there is a significant association between frequency use of ICT and the year of study since the p-value is less than our chosen significance level $\alpha = 0.05$. It is therefore possible to conclude that the relation between these variables is significant, $\chi^2 (N = 320) = 7.486, p < .001$. In other word, frequency use of ICT independent from how long they study English language, it is dependent on the year of their study.

Table 28. Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.486 ^a	2	.000
Likelihood Ratio	7.417	2	.000
Linear-by-Linear Association	.114	1	.001
N of Valid Cases	320		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 37.10.

5.6.10 Relationships among the scales

In order to analyze relationships among the scales, correlation analyses were conducted. Table 29 show significant correlations among the scales.

As one of the purposes of this research study is to investigate students' dispositions towards the use of ICT and their willingness to use it for language learning purposes, relationships between the use of ICT and the other scales are important.

Table 29. Significant correlations among the scales

Scale	1	2	3	4	5	6
1 Use			.605**	302*		
2 Skill		268*				
3 Attitude	.605**					
4 Access	302*					
5 Activities					.521**	
6 Difficulty	.421*					

* Correlation is significant at the .05 level.
** Correlation is significant at the .01 level.

The findings of the study show that there is a strong positive relationship between access to ICT and the level of ICT use. This is evidence to prove that the availability of digital resources directly influences the degree of ICT use by the students for the purpose of language learning. There is also a strong positive relationship between the attitudes of the students with the actual use of ICT, which means that the more the students use the ICT tools, the more positive their attitude is.

5.6.11 Conclusion

The second phase of the study aimed at investigating the disposition of the students, who do their bachelor degree programs in the English language at teacher education programs in five public universities in Iraqi Kurdistan, towards the use of ICT in the process of language learning. The study also aims at finding out how much the students are satisfied with the use of ICT by their teachers in the process of classroom teaching.

The result of the study reveals that research participants have a moderate level of ICT skills. The findings display that the participants possess high skill levels in the areas of the most common tools of ICT, which includes a personal computer, word process, internet, email, social network sites and YouTube. Students reported having the lowest skill levels in the complex or smart tools such as interactive whiteboard and Wikispaces the lowest.

Concerning the frequency use of ICT tools, the statistical analysis proves that the frequency of the use of ICT by the participating student is at a high level. The results also predict disparity in the frequency of ICT use by the students, for example, social networking sites are the top used ICT elements by the participant Kurdish students in the teacher education programs compare to advanced ICT elements such as Podcasts, interactive whiteboard and blogs which may have more academic benefits.

As far as the use of ICT tools is concerned for language learning purposes, the majority of the participants reported that ICT provides a lot of valuable language materials which facilitates the process of their language learning. The statistical analysis reveals that research participants take benefit from available educational technologies in order to improve the four English language skills as well as develop grammatical

performance and learn new vocabularies. The findings of the study are in line with research findings of Volle (2005), Fälth, L., (2013), Vannestal (2009), Høigaard, B., et al. (2010), Engenes, (2011), and Meihami & Varmaghani (2013).

The results of the current study suggest that the majority of the participating students have a positive attitude towards the use of ICT and its relationship with their foreign language learning. Although the majority of the students agreed that teachers' use of ICT in the classroom language teaching had increased their interest in the subject matter, they rated the use of ICT by their teachers very low and their attitude towards how their teachers ICT use in classroom teaching is highly negative. The results of independent t-test show that there is significant between male and female on several cases relating to the frequency use of ICT for learning activities. The frequency use of ICT by female students is higher than male students to provide an opportunity for self-study, listen to music, Search for online English materials, prepare lesson assignments, reading newspapers and magazines online. On the other hand, the frequency use of ICT by male students is more to use the internet to play games, instant messaging, watch movies online, instant messaging, learn vocabularies and translating (look up words or phrases online).

6. Phase 3 – The role of policymakers in integrating and implementing ICT in teacher education programs

The third phase of the study aimed to gain in-depth experience about how policymakers at Kurdish universities influence the process of ICT integration and what short and long term plans do they have to succeed in the process. The study also seeks to find out how the policymakers evaluate the process of ICT integration and what they have done to enhance the challenges the related individuals might face when they attempt to use technology in the process of teaching/ learning.

6.1 Research questions

The third phase of the study was guided by the sixth sub-research questions of the main first research question and three sub-research questions of the main second research question of the study:

How do university officials perceive the use of ICT in teaching EFL in teacher education programs at their universities in Iraqi Kurdistan?

What pedagogical steps need to be taken in order to integrate ICT in FL teaching meaningfully?

What needs to be done technically in order to integrate ICT in FL teaching effectively?

What financial considerations should be taken into account in order to integrate ICT in TEFL in teacher education programs at public universities in Iraqi Kurdistan?

6.2 Qualitative research design

Creswell (2009) defines research design as “the plan or proposal to conduct research, (it) involves the intersection of philosophy, strategies of inquiry, and specific methods” (p.5). Research design evaluates and justifies the employment of a particular method(s) and gives an acceptable justification of the decision of a specific method and links it to the coveted results (Wellington, 2000; Crotty, 2003). Creswell (2012) explains that researchers may build up the overall validity of a study by unmistakably justifying the research methodologies adapted to carry it out.

The research design in this study connects the collected data and draws conclusions out of it to verify whether the research questions raised at the outline of the study have been answered or not. (Yin, 2003). It is, therefore, as Punch (2005) explains that creating accurate research questions and linking the data collection and data analysis require careful planning. For this reason, this chapter includes details about why the design was considered well suited to elicit information for the research questions. First, I explain the specific strategies that were used to select the participants to take part in this study and justify the techniques that were applied to collect the data. Second, I report on how the interview-protocol was developed and how the interview sessions were conducted. Third, I explain in detail how I tried to ensure the trustworthiness of the study and how the researcher's bias was minimized, as well as how ethical issues were determined. Finally, I give a comprehensive description of the data analysis process, results and discussions.

6.3 Sampling

6.3.1 Sampling method

Unlike quantitative, in qualitative research studies, selecting the individuals to participate in a research study is purposeful rather than random and “the goal is to understand a phenomenon, rather than to enable generalizations from study samples to populations” (Forman & Damschroder, 2008, p. 43).

In the current study, purposive sampling techniques were used to recruit and select participants (Creswell, 2013; Maxwell, 2013; Patton, 2015). According to Maxwell (2013), purposeful sampling "is a strategy in which particular settings, persons, or activities are selected deliberately in order to provide information that can't be gotten as well from other choices" (Maxwell, 2013, p. 97).

Patton (2015) further argued that:

[the] power of purposeful sampling lies in selecting information-rich cases for in depth study. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry, thus the term purposeful sampling. (p. 264)

Purposive sampling is deliberately selective and one-sided (Patton, 2002). Thus, the rationale for employing purposeful sampling is to pick individuals who have knowledge which is related to issues of focal significance to the study's objectives.

Teddle and Tashakkori (2009) defined purposive sampling as techniques that are "primarily used in qualitative studies and may be defined as selecting units based on specific purposes associated with answering a research study's questions" (p. 170).

Besides, purposive sampling is a key in getting to people who, by the uprightness of

their professional roles and experiences, have in-depth information about a specific subject of interest (Cohen et al., 2007, Patton 1990).

6.3.2 Sample selection

It is worth emphasizing that qualitative research does not intend to gear towards generalization. Sampling in this unique circumstance has been utilized as pragmatic contemplations because recruiting the entire population is a staggering task (Marshall 1996). Thus, Dörnyei (2007) states:

Qualitative inquiry is not concerned with how representative the respondent sample is or how the experience is distributed in the population. Instead, the main goal of sampling is to find individuals who can provide rich and varied insights into the phenomenon under investigation to maximise what we can learn. The goal is best achieved employing some sort of "purposeful" or "purposive" sampling. (p.126)

As far as I did not seek generalization, I used my judgment to select the participants purposefully that had rich information about the topic of the proposed study in order to contribute and help to answer my research questions best.

Building on similar approaches already utilized by Kleinman (2008), this study explored a selective sample of Kurdish public universities policymakers positioned to be engaged in the process of ICT integration in the teacher education program. The participants were also expected to be knowledgeable in the field of ICT use and integration in the educational system and had sufficient experience regarding the technical as well as financial and pedagogical trends of ICT integration.

To ensure I attained sufficient background on the process of ICT integration in Kurdish universities in general and in teacher education programs in particular, I had

planned to compare the experiences of related policymakers at five public universities: Halabja University, Sulaimani University, Raperin University, Salahadin University, and Koye University.

The size of the sample in the current PhD project was determined by whether or not the data obtained from the sample adequately answered the research questions that the research project sought to address (Marshal 1996) and the "prevailing norm is to sample to theoretical saturation" (Back, 2016, p. 160). Kvale (2008) has contended that 5 to 25 respondents are adequate for "common interview studies" (p. 43). I decided to conduct 15 interviews with university policymakers. My research plan called for interviewing university officials who had held the position of vice-presidents for scientific affairs, deans of faculty of education, heads of English language department, directors of quality assurance and directors of finance unit. I chose these positions in light of the high likelihood that people holding these positions would have sufficient knowledge and practical experience concerning ICT integration at their universities (Beitin, 2012). To meet all requirements for the interview, respondents needed to have served in the last seven years, or have been in office for no less than one academic year.

6.3.3 Participants

I interviewed 15 university policymakers in person at five public universities, namely: Halabja University, Sulaimani University, Raperin University, Salahadin University, and Koye University. Three of the participants held the position of vice-president for scientific affairs. Three of the participants held the position of dean of the college of basic education. Five held the position of head of English departments. Two were directors of quality assurance. And two were directors of finance units. Nine of the

interviewees held doctoral degrees; two with whom I spoke earned their doctorates from Iraqi universities, four from the Kurdish universities in the Iraqi Kurdistan region, one from the U.K., two from different universities in Europe. Five of the respondents earned master's degrees; three of them studied for their master degrees in the UK and two of them at Kurdish universities. One of the respondents earned a bachelor's degree from a Kurdish university. The mean age of the participants was 42.6 years. All of the interviewees served in the office at the time of the interview for at least one academic year.

The four groups of participants consisted of individuals with different majors (Engineering, English language, Chemistry, Agriculture, Physical education, Law, Media, Information technology (IT), economy, accounting and History).

All of the respondents whom I interviewed at the target universities were male. The male bias was unavoidable because the dominant part of individuals who work in university high-rank positions were men at the time of the study conducted.

Table 30 summarizes the biographical information of the interviewees who participated in the qualitative phase of the study.

Table 300. Characteristics of the research participants

Policymakers/ pseudonym	Position	Where Educated	Qualification	Academic Title	Status	Age	Gender
Ahmad	Vice-president	Iraq	PhD	Professor	2 years in the position	52	Male
Jalal	Vice-president	Kurdistan Region	PhD	Professor	4 years in the position	47	Male
Qasim	Vice-president	Kurdistan Region	PhD	Assistant Professor	1 year in the position	46	Male
Fuad	Dean	Iraq	PhD	Assistant Professor	2 years in the position	40	Male
Hardi	Dean	UK	PhD	Assistant Professor	4 years in the position	45	Male
Amanj	Dean	Kurdistan Region	PhD	Lecturer	4 years in the position	48	Male
Jamshid	Department Head	Europe	PhD	Assistant Professor	2 years in the position	46	Male
Ziad	Department Head	Kurdistan Region	PhD	Lecturer	3 years in the position	40	Male
Bnar	Department Head	Europe	PhD	Assistant Lecturer	4 years in the position	38	Male
Sardar	Department Head	UK	Master	Assistant Lecturer	2 years in the position	35	Male
Awat	Department Head	UK	Master	Lecturer	3 years in the position	39	Male
Azad	Director of quality assurance	UK	Master	Lecturer	5 years in the position	38	Male
Hawar	Director of quality assurance	Kurdistan Region	Master	Lecturer	2 years in the position	34	Male
Akram	Director of finance	Kurdistan Region	Master	Assistant Lecturer	4 years in the position	40	Male
Jamal	Director of finance	Kurdistan Region	Bachelor	Director	3 years in the position	51	Male

6.3.4 Instrumentation

The data collection instrument was selected and designed based on the sample of the study and its connection with the culture of ICT integration in the Iraqi Kurdistan region. For qualitative data collection, I employed a semi-structured interview. The main aim of using semi-structured interviews was to gain detailed information and possible explanations that might not have been fully achieved through other methods (Hinds, 2000). Semi-structured interviews also enabled participants to elaborate in depth and breadth on the issues raised (Dörnyei, 2007). Furthermore, the instrument helped me to have a "...deeper understanding of experience from the perspectives of the participants" (Maykut & Morehouse, 1994, p. 44).

According to Kvale (2008), the semi-structured interview "attempts to understand themes of the lived daily world from the subject's perspective" (p. 10). In light of this, the researcher discovered interviewing alluring due to its flexibility in permitting him a great deal of freedom in what questions to ask and the opportunity to follow up on what the interviewee says that may not be in the interview protocol. Besides, the semi-structured interviews permit the interviewee a considerable leeway on how to answer the inquiries (Bryman, 2012). Arksey and Knight (1999) believe that "interviewing is a powerful way of helping people to make explicit things that have hitherto been implicit-to articulating their perceptions, feeling and understandings" (p. 32).

Patton (1990) provides other compelling reasons for using interviews:

We interview people to find out from them those things we cannot directly observe....We cannot observe feelings, thoughts and intentions. We cannot observe behaviours that took place at some previous points in time. We cannot observe situations that preclude the presence of an observer. We cannot observe how people have organised the world and the meanings they attach to what goes on in the world. We have to ask people questions about those things. The purpose

of interviewing, then, is to allow us to enter into the other person's perspectives.
(p. 196)

Thus, the semi-structured interview was used to find out about how and what the participants feel, believe and think about the topic of the study. This enabled the researcher to obtain elucidation and profound explanation in order to answer the research questions. According to Kvale & Brinkmann (2008):

...in an interview conversation, the researcher asks about and listens to what people themselves tell about their lived world. The interviewer listens to their dreams, fears, and hopes; hears their views and opinions in their own words; and learns about their school and work situation, their family and social life" (p. 1)

I used one-on-one interviews to address the research questions of the study. I followed the recommendation of Kvale's *Doing Interviews* as an asset concerning how such inquiry ought to be carried out (Kvale, 2008). I used semi-structured interview protocols in order to explore the research questions flexibly and to pick up as much knowledge as plausible from each interviewee.

Based on the brainstorming of the topics fall within the scope of the study, I created an interview protocol in order to elicit information to answer the sub-questions of the second main research question. The interview protocols appear as Appendices (C). The interview protocol items in this study were composed specifically to elicit rich information from interviewees who have in-depth knowledge about the incorporation of ICT into the teacher education programs in public universities in Iraqi Kurdistan region.

Each interview protocol contains three parts: introduction, demographic information, and the actual questions. Each interview was intended to last for 45 minutes to one hour.

The introduction part and demographic sections of the interview protocol began with compound questions intended to relax the interviewees and garner details about their backgrounds: where they studied, how they became involved in higher education, how long they had been employed in their current roles and their current position responsibilities.

I constructed the actual questions of the interview protocol for university policymakers to solicit specific details significant to the process of initiating ICT integration at their universities. The interview protocol included seven questions. Question 1 was directed to explore the participants' perceptions of ICT use in their universities. Question 2 concerned the decision-making process to provide specific ICT hardware infrastructures and software programs to teacher education programs. Question 3 inquired about the interviewee's views on the degree of success of ICT integration into teacher education programs. Question 4 explored possible pedagogical as well as technical ICT training for the faculty staff in teacher education programs. Question 5 investigated the challenges that might slow down the process of ICT integration. Question 6 concerned financial issues and technical challenges regarding ICT integration. Finally, in question 7, I asked the participants about what should be done in order to improve the current situation of ICT in the teacher education programs, financially, technically and pedagogically at your university.

An interview guide was used to give direction to the sessions and to avoid deviations. The respondents were informed beforehand about the need to record the interviews, and their consent was sought before doing so. Notes were taken in addition to tape recordings.

Special attention was paid not only to what was said but also to how it was said. Despite having an interview guide, it was at the researcher's discretion to follow up interesting points and to prompt and probe when it was deemed necessary not just for the sake of getting information but also in a bid to draw attention to any inconsistencies in the responses given by the interviewees.

6.3.5 Interview Procedure

Myers and Newman (2007) suggest that authors should describe the actual interview process in detail because qualitative interviewing is not as simple and straightforward process as often assumed.

Before carrying out any research study at public higher education institutions, it is obligatory in the Iraqi Kurdistan region to acquire consent from the Ministry of Higher Education and Scientific Research (MOHE). Through my home university (Halabja university), a request letter was sent to the MOHE in order to issue an approval letter. Although the acceptance of the request letter was delayed for a while, a copy of it being sent to the MOHE was helpful to start data collection. A copy of both the request and approval letters appear as Appendices (D, and E).

I initially reached the fifteen-research-participants in person or by telephone, and then I sent them an email where I introduced the aim of the study, clarified the interview procedures and asked for their agreement to take part. I informed the interviewees that the interview sessions would be recorded and it was explained that they might answer the questions in their mother tongue (Kurdish) or English. I additionally asked for contact details and asked the interviewees to confirm whether they met contemplate

criteria to participate in this project. I gave each interviewee ten days to reply. A copy of the message I sent to the respondents appears as Appendix (F). If I had not received a reply within ten days, I sent a reminder. If I did not receive a response to that second reminder within an extra ten days, I assumed the prospect interviewee was not keen on taking part in the study. A sample of the reminder message I sent to the respondents appears as Appendix (G).

After I received the positive response from each potential interviewee, I reviewed the criteria for participation in order to verify that the respondents were eligible for participation in this study and I sent an informed consent authorization form to be signed by the participant then I requested an interview session time and date.

I made sure to get a signed informed consent authorization form for each respondent before conducting the actual interview session (see Appendix H). If the potential prospects did not send back the signed informed consent authorization form, in person, I requested that the respondent check and finish the form prior to starting the interview session.

I started conducting the interview sessions of this research study from the beginning of April to the end of June 2018. All the interviews were one-on-one and took place in the workplaces of interviewees or at a suitable venue, which was conveniently close and easily accessible for the participants during normal office hours. To avoid any predisposition that could influence data collection, there were no personal relationships between the researcher and the respondents.

As I mentioned already, an interview guide was used to arrange the questions of the interview protocols ahead of time. Morse (2012) explains that this strategy is proper when the researcher "knows the limits of the topic and what is and what is not pertinent to the research question ... but does not know and cannot anticipate all of the answers"

(p. 197). This method suited this study as its goal was accurately defined to gain a holistic view of current ICT use in teacher education programs and describe possible challenges of its integration and suggest useful proposals to overcome the difficulties of its integration.

According to Gray (2009), the first task of the interviewer is to explain the purpose of the interview such as what the information is for and "how the information is going to be handled, why the information is being collected and how it will be used (p. 379). Therefore, before asking the actual questions, I gave a brief introduction about the purpose of the study. Each interviewee was ensured about the confidentiality and their privacy and whenever for any reason, they could terminate the interview, and that the interviewee would have the final research report to double check.

The study follows the principles recommended by Patton (2002) for audio recording the data of interviews. At the time of the interview, the respondent and the interviewee had to speak clearly, and at any time the recorder was switched off if the respondent wished it. I clarified that they could pick not to answer any question with which they were not comfortable with, or they could ask the researcher not to record the whole or a part of the interview session and they could end the interview at any time for any reason. After gaining consent from the respondents, I started recording the interviews with the help of an iPhone application recorder, and each interview lasted for 45 minutes to one hour.

During the interview process, the researcher took notes as well for later use, Patton (2002) states "when a tape recorder is being used during the interview, notes will consist primarily of key phrases, lists of major points made by the respondent" (p.381). Patton believes that taking notes may help the interviewer to compose new questions, assist in focusing transcription and facilitate later analysis.

At the end of the interview, interviewees were appreciated for their participation, and they were asked to add remarks or comments to enhance the use of ICT in teacher education programs.

Although I had planned to transcribe all the interviews personally within two weeks of each interview, it took three to four weeks. To verify that transcriptions were exact, I sent them to interviewees for member checking and asked them to rectify any errors.

6.3.6 Research setting

As I mentioned before, the interviews for this study were conducted in five public universities in Sulaimani City, Halabja City, Koye City, Erbil City, and Rania City, Iraqi Kurdistan region in April, May and June 2018.

These universities are managed according to the related regulations issued by the Ministry of Higher Education and Scientific Research of Iraqi Kurdistan and are funded by the Ministry of Finance.

Sulaimani, Salahaddin and Douhok universities are categorized as the oldest and biggest universities in the region; Halabja and Raperin were founded in 2011, and they are called new or rural universities. Koye was found in 2003, and it is considered to be a developing university. I selected these three types of public universities in order to gather a broad set of views concerning the process of integrating ICT and to garner an understanding of the current situation in each institution as well as the barriers that inhibit each university from integrating ICT successfully.

6.3.7 Reliability, credibility, and trustworthiness

Kvale and Brinkmann (2009) defined reliability in research interview methods as “the consistent and trustworthiness of research findings; it is often treated in relation to the issue of whether a finding is reproducible at other times and by other researchers” (p. 245).

In order to increase the trust of the reader in the results and make sure that the qualitative phase of the study was conducted correctly, the researcher described all the steps that were taken in this study as much as possible in terms of what kind of data was collected, how, where and from whom it was collected. At the same time, the advantages and shortcomings of the study were reported.

To ensure the “credibility, plausibility, and trustworthiness of the findings” (Kvale 2008, 123), the first draft of the interview protocols was sent to three university professors who were expert on the topic of the study in order to evaluate the content of the questions expected to be asked from the interviewees in relation to the research questions. After rephrasing the interview questions based on the revision of the experts, the final interview schedule was produced. In addition, the interview protocol was piloted with two individuals who were similar to the actual respondent of this phase of the study. The pilot was conducted in order to estimate the approximate interview time and find out proper solutions for potential problems with the questions.

Member checking was employed to ensure the trustworthiness, credibility, and ethical compliance of the study (Lincoln & Guba, 1985; Merriam, 2009). This involves returning the researcher's interpretations of the data to the interviewees so that they were able to confirm the accuracy of the analysis and rectify potential misinterpretations and misrepresentations (Maxwell, 2013; Savin-Baden & Major, 2013; Lazaraton, 2003). I

customized Creswell's strategies to increase the trustworthiness and transparency of the qualitative phase of the study:

1. Peer review or debriefing as an external check of the research process
2. Clarifying researcher bias from the outset of the study;
3. Member checking in which the researcher solicits participants' views of the credibility of the findings and interpretations;
4. Rich, thick description allows readers to make decisions regarding transferability. With rich descriptions, the researcher enables the readers to transfer information to other settings and to determine whether the findings can be transferred; and
5. External audits which allow external consultant, the auditor to examine both the process and the product.

(p. 207- 208)

6.3.8 Researcher bias

Becker (1967) contended that research studies could never be free of predisposition since it is unavoidably carried out from the perspective of the researcher. With respect to biases and methodology, Miles et al., (2014) recorded two kinds of researcher biases: 1) "the effects of the researcher on the case", and 2) "the effects of the case on the researcher" (p. 296).

In this study, the potential for the researcher's perspectives, predispositions, and biases has been limited all through the researcher's practice of reflexivity. (Alvesson & Sköldböck, 2009). In the investigation context, the researcher held the position of

"insider" and in addition "pariah " (Kvernbekk, 2005, p. 22). This is because of the researcher's past status as an English teacher and coordinator of a teacher education program in one of those universities where the research was conducted. One advantage of being an insider is that the researcher "has considerable knowledge that an outsider does not" (Savin-Baden & Major, 2013, p. 343.)

Savin-Baden and Major (2013) also noted that boundaries might wind up between the researcher and the study participants, therefore; they suggested that the researcher need to be aware of his subjectivity, points of view, practices, and interpretations. Patton (2015) argued that "the challenge is to combine participation and observation so as to become capable of understanding the setting as an insider while describing it to and for outsiders" (p. 338).

For PhD research projects, including insider research, Drake (2010) noticed that the "validity of insider research requires reflexive considerations of the researcher's position" (p. 85). In any case, this epistemological position likewise recognizes that "one need not be Caesar to understand Caesar" (Merton & Sztompka, 1996, p. 258).

In this manner, it is not a vital prerequisite to be an insider (e.g., a former lecturer at a university or a coordinator of a teacher education program) to study a phenomenon such as ICT integration in teacher education programs. However, this dualism in positioning should be pronounced and made explicit to the participants of the study and the audience of the research to elucidate issues encompassing potential research biases.

According to Wood-Sherif, (1987), gender difference between the researcher and the respondent may bring biases. As for policymakers, gender differences did not appear to influence because female participants were underrepresented in the sample

since males overwhelmingly dominate high ranking administrative positions in the Iraqi Kurdistan.

One method for reducing the chance of researcher bias is to conduct peer debriefing (Creswell, 2009). According to Lodico et al. (2010), peer debriefing is a process whereby the researcher requests an exploratory examination of the overall research process and outcomes from a peer who is not associated with or participating in the research project itself. Peer debriefers typically examine the study methodology and the results of data analysis, specifically the researcher's interpretations of the study findings (Lodico et al., 2010).

6.3.9 Ethical Considerations

Johnson and Christensen (2008) state that ethics are "principles and guidelines that help us uphold the things we value" (p. 101). According to Walliman (2011), for researchers, ethics is an important consideration as on the novelty of its discoveries.

Schostak (2006) has recommended that ethical protocols ought to emphasize the significance of researcher's independence in recording, publishing the results, and additionally introducing respondents' views "in ways that do not privilege one or more over others " (p. 54).

The current study has been carried out according to the ethical guidelines proposed by the ELTE PPK Doctoral School of Education – Language Pedagogy Doctoral Programme. ELTE PPK Doctoral School of Education granted ethical approval for the research project in the winter of 2018 before the researcher started

recruiting study participants and collecting data (Appendix I). At the same time and before the data collection, the researcher through the University of Halabja asked the Ministry of Higher Education and Scientific Research-Iraqi Kurdistan in order to issue an approval letter to collect data. The approval letter informed the teacher education programs and the related departments and individuals within the public universities to facilitate the process of data collection for the researcher.

I have employed ethical practices in all parts of this study. I looked to give every interviewee the option to take part or not as they wished. In order to develop the sense of trust between the researcher and the participants, I provided all interviewees a brief introduction about myself as the researcher and the purpose of the study (Miles et al., 2014). Although, as a result of the sample size of the study, and because many of the participants knew each other, the researcher did not promise 100% anonymity in this study. To ensure the confidentiality of the participants, I assigned pseudonyms to their identities in interview transcripts. Additionally, I was aware of references to places in my analysis so as not accidentally to uncover any interviewee's identity (Creswell 2009).

Before conducting the actual interviews, the researcher emphasized that participation in the study was voluntary, all data would be made anonymous and treated with confidentiality and privacy, and that the participants could withdraw their consent during the interview session (Miles et al., 2014). This was the case with one university official (Kardo) who withdrew midway through the interview because of unknown reason.

In brief, I adapted the following ten ethical issues recommended by Kvale and Brinkmann (2009) to maximize ethical issues in the current study before conducting any interview session:

1. What are the beneficial consequences of the study?
2. How can the study contribute to enhancing the situation of the participating subjects? Of the group, they represent? Of the human condition?
3. How can informed consent of the participating subjects be obtained?
4. How much information about the study needs to be given in advance, and what can wait until a debriefing after the interview?
5. How can the confidentiality of the interview subjects be protected?
6. How important is it that the subjects remain anonymous? Can his or her identity be disguised?
7. Who will have access to the interviews?
8. What are the consequences of the study for the participants?
9. What is the potential for harm, and is it outweighed by the potential benefits?
10. How does the researcher's role affect the study?

(p. 69)

6.4 Qualitative data analysis

Partington (2003) advised the researchers to remain mindful of the fact that unlike quantitative data analysis; there are no quick fix techniques in qualitative data analysis to determine where a particular type of qualitative data belongs to a particular type of analysis.

Although there is no limit in the number of steps for the process of analyzing qualitative data, there are some theoretical approaches which specify some common processes, no matter which approaches the research will take (Schurink et al., 2011)

Tuckman and Harper (2012), Rabiee, (2004), and Creswell, (2003) believe that qualitative data analysis does not occur in a linear fashion rather it is considered to be a circular process where the data analysis concurrently takes place during and after the data collection stage in order to produce a coherent interpretation out of the collected data. Nieuwenhuis (2007) also confirms this by stating that "...qualitative data analysis tends to be an ongoing and iterative process, implying that data collection, processing, analysis, and reporting are intertwined, and not necessarily a successive process" (p. 99-100).

In view of these recommendations, I approached the qualitative data process as a recursive process rather than a fixed linear action. This means once I finished the interview with each participant I undertook the necessity to start the data analysis and this proceeded as an inseparable process to gather more data from the other respondents until all data had been analyzed (Gay, 1996).

Denscombe (2007) succinctly states that researchers " who use qualitative data are now expected to include in their accounts of research a description of the processes they

used to move from the raw data to their findings" (p. 302). Thus, drawing a clear picture of data analysis procedure is not an easy task because it does not continue in a linear form and it involves moving forward and backwards in order to elicit information to questions the study seeks to answer. In light of the views of Descombe (2007), I pursued using thematic content analysis to provide sufficient detail of how I conducted the data analysis in the current study. Braun and Clarke (2006) argued that thematic analysis techniques could be used for the purpose of "identifying, analysing, and reporting patterns (themes) within the data" (p.79). I used thematic content analysis in order to "produce an insightful analysis that answers particular research questions" (Braun & Clarke, 2006, p.97). Besides, the reason I chose this method was its flexibility in relation to how it is used to derive the most virile bunch of data and verify if the collected data generated sufficient information to answer the research questions raised in the outline of the study.

Thus, understanding the phenomenon in question in great detail is vital to ensure the thoroughness of the research on the one hand and enable another researcher to corroborate the results of the study on the other hand (McLeod, 2001).

According to Creswell and Plano (2007), the overall data analysis process can be conceptualized in the three-stage procedure: preparing and organizing the data for analysis as in transcripts, reducing the data into themes through a process of coding and "representing the data in figures, tables or in discussion." (p. 148) In the current study, the plan for the data analysis carefully followed this strategy in order to identify the tentative themes and sub-themes to discover meaning connections, relationships and develop meaningful conclusions in line to the research questions of the study (Sarantakos, 2005).

6.4.1 Procedures of data analysis

6.4.1.1 Preparing and organizing the data for analysis by transcribing

The first step to prepare and organize the data for analysis was to transcribe fifteen audio-recorded interviews. According to Johnson and Christensen (2004), transcription is an approach to convert qualitative research data, such as audio recordings of interviews, into typed text. In order to align with the research goals, the researcher of this study considered transcription as an interpretive act rather than just converting interviews into written forms of that data (Hammersley, 2010). Lichtman (2006) explains that the researcher ought to transcribe the full interview, not summarize it. Therefore, in this study, the fifteen interviews were transcribed entirely. Three out of fifteen interviews were directly transcribed from English, while 12 interviews were transcribed from the Kurdish language. All the ethical issues related to recording and transcription of the data were ensured for each interview.

One criticism of open-ended interview is that "both parties (interviewer and participants) bring biases, predispositions, attitudes, and physical characteristics that colour the interaction and the data elicited" (Holstein & Gubrium, 2004, p87). To avoid potential issues of researcher bias and to become more acquainted with the information included in the transcript, I personally made a verbatim (word-for-word) transcript for the fifteen interviews (Braun & Clark, 2006).

Passages and excerpts from the interviews that were relevant for the project's research questions were translated from Kurdish Sorani dialect and Hawrami dialect into English. Kapborg and Bertero (2002) complain that "translating from one language to another can be very complex because of subtle differences in meaning, some languages are similar to the English language, but others are not" (p. 54). To verify that

meaning of interview discussion translation was reliable in the two languages, the interview dialogue and the English translation was compared and certified by three teachers from the department of translation at the University of Sulaimani.

The transcripts were organized into files under each participant's pseudonym and saved in my PC for easy retrieval.

I read the entire transcribed texts line by line and listened to the recordings as many times as I needed in order to become familiar with the context of the interview and to get more insight into the content of the study and glean inside of how interviewees made sense of their experiences and made any corrections to the transcripts (Lichtman, 2006). While I was conducting interviews and later reading each transcript, I found it useful to make notes for my decisions during the coding process. The whole process took twenty weeks, which helped the researcher to glean insight and get a deeper understanding of the content of the study.

6.4.1.2 Reducing the data into themes through a process of coding

The coding process for the transcripts consisted of two steps: open coding and axial coding.

Open coding

The first stage in the process of analyzing the raw data was to employ open coding (Charmaz & Belgrave 2012). The open coding was a set of activities used to review the qualitative raw data and break it apart into distinct parts in order to find out similar words, phrases, passages or lines in the texts which made sense to the research

in the context of the data in relation to the research topic (Bradley, Curry & Devers, 2007, Strauss & Corbin, 2006).

I first coded each transcript to the appropriate participants, and assigned a pseudonym in order to shield the actual identity of the interviewee. The individual characteristics of the respondents coded according to the institution, position the interviewee held (e.g. university president, vice-president for scientific affairs, dean, head of the department,, director of quality assurance and director of finance unit), education level, academic title, where educated, gender, and date of interview.

I broke down the qualitative data into distinct parts in order to generate a list of the key ideas or themes about the data in relation to the second research question raised at the outline of the study (Braun & Clarke, 2006).

After reading the transcripts several times and gaining a deep understanding of the materials, the researcher decided which themes should be applied to the parts which included potentially valuable information. Consequently, a list of similar categories was identified, which expressed the research participants' perspectives about the process of ICT integration in their institutions. The data was organized and managed by using manual methods within Microsoft Word 2010 programs.

One of the objectives of ICT integration in teacher education programs is to enhance the quality of education through providing our teacher with up-to-date necessary information and knowledge in order to deliver the content of their subject matter in a pedagogical sound way.

This was quoted in an interview session by the dean of the College of Basic Education at a rural university to whom I had given the pseudonym "Amanj". The first thing that strikes me in this statement was the phrase "quality education", so I created the code 'quality education' and attached the statement to it.

I continued to create codes for new themes in this preliminary analysis, until 'informational redundancy' or 'theoretical saturation' is achieved (Glaser, 1978). According to Auerbach and Silverstein (2003), theoretical saturation is achieved when "research participants fail to provide new data that expand and refine the theory" of the study" (p. 19).

Axial coding

Once I completed the open coding of all the interview transcripts, I started to work on the second kind of coding, which was labelled as "axial coding" (Saldana, 2013, p. 100). At this stage, axial coding was employed in order to reassemble the data in a new way after open coding (Creswell, 1998). Thus, axial coding served to refine and re-fit the created categories that are already available based on their common properties and seek relationships (similarities, differences, patterns) among them.

One of the reasons for integrating technology into classroom teaching is to change the teacher-centred system into a student-centred system. In other word, with the help of ICT tools, teachers are expected to give a voice to the students and engage them in the class discussions.

When technology is used in the teaching process, the role of the teacher is as a facilitator, and the students have a good opportunity to express themselves by asking questions and take part in the discussions.

These two expressions were stated by two heads of English language departments, one from a rural university, and from a big university which I connected them as related phenomena, i.e., role of the teacher in classroom teaching. I recorded each under the created sub-categories "merits of ICT use in teacher education programs". I pursued the process of refining similar codes and categories throughout the analysis of data until reaching a point of saturation in relation to themes across participants' accounts where all significant relationships within the data were established.

Through this process, manageable category headings were produced from large text data. The researcher created a set of sub-categories from the codes then linked to categories in order to focus on the different dimensions and perspectives that each of these categories represented.

Table 31 presents a sample set of categories and sub-categories that are arisen from the themes.

Table 31. A sample set of categories and sub-categories that are arisen from the themes.

A set of categories and subcategories generated from the themes		
Theme	Categories	Sub-categories
ICT integration in teacher education programs	Significance of ICT use in teacher education programs	Merits of ICT use in teacher education programs Values of ICT use in teaching EFL
	Circumstantial considerations regarding ICT integration in teacher education programs	Top-down organizational structure Attitude towards ICT integration Insufficient access to ICT tools in the teaching context Inadequate funding from government Inadequate ICT software programs Lack of technical staff support

6.5 Results and discussions of the third phase of the study

This section discusses the results of the third phase of the study. Findings that are presented below emerged in interviews with fifteen policymakers from five public universities in the context of Iraqi Kurdistan.

The aim of this phase of the study is to obtain as clear a picture of the current status of ICT integration as possible from the perspectives, experiences and personal involvement of varied decision makers in the selected universities. This is why rather lengthy excerpts are quoted in order to constitute a foundation for better understanding behind any highlighted trends that are related to the topic of the study.

Here I find it significant to recall the main research question that this phase of the study sought to respond to:

What needs to be done in order to improve the situation of ICT use in TEFL in teacher education programs at public universities in Iraqi Kurdistan?

In attempting to answer this research question, an interview protocol was constructed to solicit specific details significant to the process of initiating ICT integration at the participants' universities.

I constructed the actual questions of the interview protocol for university policymakers to solicit specific details significant to the process of initiating ICT integration at their universities. The interview protocol included seven questions. Question 1 was directed to explore the participants' perceptions of ICT use in their universities. Question 2 concerned the decision-making process to provide specific ICT

hardware infrastructures and software programs to teacher education programs. Question 3 inquired about the interviewee's views on the degree of success of ICT integration into teacher education programs. Question 4 explored possible pedagogical as well as technical ICT training for the faculty staff in teacher education programs. Question 5 investigated the challenges that might slow down the process of ICT integration. Question 6 concerned financial issues and technical challenges regarding ICT integration. Finally, in the course of asking each interview session, I asked the participants about what should be done in order to minimize the obstacles and improve the current situation of ICT in the teacher education programs, financially, technically and pedagogically at your university.

In this section, the results follow the order of the questions presented in the interview protocol.

6.5.1 The perceptions of the participants about ICT integration in teacher education programs

To put it simply, ICT, like many other things, does not penetrate an educational institution by itself; rather, it is brought by its individuals, especially its decision makers. A number of studies have found that the decision makers are increasingly able to influence the degree of ICT integration into education by taking up a 'gatekeeper' role, they may have a pivotal role to play in the successful implementation of ICT as well as the failure of the process (Bebetsos & Antoniou, 2009, Moyle, 2006, Schiller, 2003).

In the context of higher education in Iraqi Kurdistan, there is a widespread belief that the perception of university authorities is one of the most influential factors on the habits and practices of their universities. Thus, the researcher of this study found it significant to give decision makers of the selected universities a chance to express their broad perceptions on the current status of ICT integration in their institutions.

It is observed from the analysis of the interview transcripts that all the university authorities have an understanding of the nature of ICT's contribution to improving the quality of education. The data obtained from the analysis show that fourteen out of fifteen interviewees perceive the use of ICT in higher education context positively, but a closer examination of the data reveals that the degree of their perceptions is varied, partly related to educational experiences.

An important point to keep in mind is that there is a tendency from the respondents to put a strong emphasis on the need for integrating ICT into their institutions. Comments from the research participants revealed that they seemed to have a similar emphasis on finding different ways to bring a wide range of digital resources into the context of their universities for the purpose of teaching and learning practices.

According to the research participants whether to integrate technology into education or not is out-of-date, how to integrate it is what should be concentrated on.

The following excerpts illustrate that the research participants made repeated references to provide their institutions with a wide range of resources in order to initiate ICT based activities in teaching, learning and administrating.

Since I started working as the dean of my college, a part of my job is to look for new approaches in order to enhance the quality of teaching in our college through increasing the use of necessary and possible ICT tools with best pedagogical practices. (Int. Fuad, dean of the College of Basic Education at a big university).

Based on my personal experiences, today's education is impossible without having technology in the classrooms. It is, therefore, I as the head of English language department with my colleges in the department working hard to modify instructional practices through bringing in appropriate ICT tools to meet the needs of our students (Int. Ziad, head of English department at a big university).

I believe that providing a good deal of hardware infrastructures and software programs into teaching context is significant to help our teachers and students search for the kind of information they need in the process of their studies in a timely manner. Having access to knowledge is important to engage the students to interact with their learning content as well as improve their academic achievements. (Int. Ahmad, vice-president for scientific affairs of a big university).

Hawar (director of quality assurance at a big university): I strongly believe that using appropriate ICT tools is fundamental to bring about pedagogical changes and convert the traditional teacher-centred approach into a student-centred approach. Availability of technology in the teaching context is important for the students in order to access the kind of information they need for the course of their study. Therefore, ICT integration into teaching context is necessary for better quality education.

Awat who is the head of English department at a rural university argues that tech-services are an extremely important part of the daily life of all the aspects of human beings in the 21st century and the educational institutions need to be prepared for that. Awat noted that education institutions should not lag. He recognizes ICT as one of the major drivers for changes in teaching and learning habits and to promote the quality of education in higher education.

I do believe that integrating technology into education is an important step in order to access up-to-date knowledge to be used in the process of teaching, learning, and research in our institutions.

Azad was the only interviewee who was critical and hesitant about ICT integration into teacher education programs in his university. He was mainly concerned about the valid educational assumptions.

The main purpose of introducing technology into the field of education is to narrow down the scientific gap between the educational institutions of a third world country like Iraq and the developed countries (European countries). While I have faith in technologies as such to bridge this gap, I am disappointed to see that pieces of evidence show the opposite in our situation. In our context, ICT use is highly limited to non-educational venues such as social network sites. Therefore, it is essential for the universities to arrange professional support and they need to identify when, how, and under what circumstances ICT should be integrated to help both students and teachers in order to support teaching/ learning practices.

The above-mentioned excerpts from the interview transcripts suggest that fourteen out of fifteen policy-makers are completely uncritical of the use of ICT and on

the whole, they reacted favourably to integrate appropriate forms of technologies in their universities. It seems to be also clear that there are two specific reasons behind their positive perceptions towards the use of technology in higher education.

On the one hand, the general rationale of the policymakers is the assumption that technology is penetrated every field, including education. They felt that there is a continuous pressure on the Kurdish educational institutions, which creates a situation where it is not possible to ignore the importance of ICT in education.

On the other hand, the policymakers hypothesize that capitalizing on certain forms of ICT tools have strong implications for introducing fundamental and lasting positive changes into the process of teaching and learning practices. They consider ICT as a suitable vehicle to switch the conservative paradigms of education into a neo-liberal model of education where the students can obtain lifelong-learning skills such as creativity, problem-solving abilities, informational reasoning skills, communication skills, and other higher-order thinking skills they need to cope with rapid changes in the 21st century era.

6.5.2 Decision-making process

According to Granger, et al., (2002), ICT integration is "shaped by pedagogical philosophies, curricular requirements, and the proliferation of ICT in society at large" (p. 480). Haddad (2002) argues that integrating ICTs into the educational process is a multifaceted and complex process. Thus, in order for a university to integrate ICT into teacher education programs smoothly, the policymakers need to make constantly serious responsive decisions which specify how to use ICT step by step in order to realize the

educational objectives of the university regarding ICT integration (Haddad & Draxler, 2002). The style of the decision making the policymakers (bottom-up' or the 'top-down) follows may heavily influence outlining, evaluating and measuring the integration process (Reed et al., 2006).

In order to elicit detailed information about how the university policymakers come up with conclusion to integrate ICT into higher education institutions in Iraqi Kurdistan in general, and in teacher education programs in particular, the second question of the interview protocol addressed the research participants who have different ranking positions to describe the decision-making process in their universities.

This phase of the study also seeks to identify the decisive decision factors which determine the degree of integrating, maintaining and renewing a particular type of ICT tool into the scientific departments for the purpose of instruction. The interviewees were asked to explain whether their universities follow a more or less comprehensive and transparent model of decision-making, or whether their universities have developed strategy documents or long-range integrating plans to guide the prerequisite conditions of ICT to be integrated effectively into all aspects of the teaching and learning practices. The participants were also asked to explain how they react to technology issues, concepts and proposals submitted by the teacher education programs.

One of the most congruent findings obtained from the transcript analysis is that there is little consensus among policymakers regarding the type of decision-making style (bottom-up or top-down). When the interviewees were asked what kind of decision-making model their universities pursued in the process of decision making, the responses were varied from the respondents based on the rank they held.

On the one side, the research participants who held the high-rank position, such as vice-president for scientific affairs and deans of colleges, mentioned that in an ideal situation the process of decision making development in the universities should be a bottom-up style where the faculty members are involved and given input into the decision-making process.

According to Jalal, the vice president for scientific affairs of a rural university:

In our university, we have two different decision-making procedures: Administrative and scientific. The decisions regarding administration are passed from the top to the bottom to be followed, while those regarding scientific affairs are suggested from the bottom, I mean from scientific departments, and we at the top study their suggestions, modify or accept them and send them back to be implemented.

He further explained that the individuals who participate in making the administrative decisions are mainly members of the college councils, deans of the colleges, executive members of the university councils, vice presidents and the president of the universities. As far as scientific decision making is concerned, councils of departments or scientific committees from the department propose their ideas and send them to the dean of the college in order to be regarded. Based on the type of the proposal being sent, the dean will involve the people concerned at different units and committees from his/her college to study the proposal and make practical suggestions.

Amanj, the dean of the college of basic education at a developing university explained that in Kurdish universities, authority is not vested centrally in one individual rather it is embedded in different organizational settings within university communities. He states:

Power is not located in one person in our university; it is rather dispersed among several people, for example, the presidents of the University relinquishes many of the powers to vice-presidents, deans, directors, and head of departments in order to involve them at multiple levels in the process of decision making.

On the other hand, the interviewees who held less high ranking positions such as the head of departments and director of the quality assurance explained that the function in which the decisions are made is top-down and decisions are passed down to the faculty members to be implemented.

A comment stated by Hawar, the director of quality assurance of a big university, technically, suggests that the decision-making process includes four steps in a time-ordered manner: request, persuasion, decision, and implementation. This process is a bottom-up style. He described the process of decision making in his university in this way:

In many cases, I, the director of quality assurance at my university, do not have the authority to make any decision without getting permission from either vice-president for scientific affairs or the president of the university. In order to get permission, I have to write a request letter where I have to compellingly present all the necessary information in order to persuade them to obtain their favour of action. Technically, the process is bottom-up, but in reality, is top-down. In any of these steps, the prior experiences of the president (his vice) may influence them to refuse or accept the request.

In line with this idea, Jamshid, the head of English department at a developing university supports the explanation of the director of quality of assurance and points out that the decision-making process in his university is top-down. He explains:

Within our university, organizational communities have a low level of contribution in the decision-making process, and they are not necessarily involved.

Based on the analysis of information emerged from the interviews, the researcher found that there is a salient homogeneity among Kurdish public universities in terms of top-down decision-making model which might have a high level of uncertainty on the attitudes of the faculty members towards the acceptance of the decisions being made.

In order to generate inclusive and responsive decisions, universities need to apply decentralization of authority to cultivate more channels of effective communication with respect to the decision making process. In order for this to happen, the presidents and his vices need to have deep commitment to relinquish power to the related departments within the university and foster the efforts of the faculty members in the process through involving them at multiple levels of the decision-making process.

Although it is important to recognize that ICT integration in teacher education is at an early point, it is apparent that the Kurdish policymakers in public universities strongly support the integration of ICT in both teaching and administration. For this to happen, they invested significant amounts of time and energy in facilitating different forms of provision of significant hardware and software resources so that ICT would have a visible profile within their institutions.

At the same time it is important to mention that the participant universities generally do not seem to have particular policy documents on ICT integration where the goals, mission, vision, finance, plans for renewal and maintenance of ICT equipment,

and strategies of the integration of ICT in their institutions are shared with communities within the university. According to the policymakers interviewed in this study, in the vast majority of cases, integration of ICT depends on the needs of the academic departments (Kozma, 2003, Vandelinde et al., 2012a).

In answering this question, a policymaker at the University of Koye explained that he is unaware of any documented policy regarding ICT integration being provided by the Ministry of Higher Education and Scientific Affairs. He insists that it is the responsibility of the academic departments to list their needs of ICT tools to be used in the process of teaching. He states:

We at the presidency of the university have not received any policy documents, plans or whatsoever regarding the objectives of ICT integration in teacher education programs or any other colleges from the Ministry of Higher Education and Scientific Research but as a de facto our colleges use various types of technology for teaching purposes. Therefore, it is the academic departments which make a list of ICT tools based on their priorities to be used by their teachers.

During the course of this study, interviewees suggested that their universities have to develop a policy plan which is widely understood and carefully explained, about how and why universities might provide the most appropriate amount of ICT equipment for teacher education programs.

Hardi, dean of the College of Basic Education at a rural university, explains this issue as:

It is unfortunate to say this, but today people accuse others of their failures or delays in doing something. The main reason behind this, as far as I experience, is

the lack of a clear statement or document where the responsibilities of individuals within the teacher education programs are specified.

Azad, the director of quality assurance at a rural university, also confirms this by stating:

At the moment, we do not have such a plan or document; therefore, it all depends on the head of the departments in the teacher education programs as well as the dean of the College of Basic Education to convince the university in order to let them buy necessary tools for their purposes. Under such circumstances, the individuals' variables such as their attitudes towards ICT integration into teacher education programs, prior experiences of ICT use in teaching as well as their ICT competence and frequency of use may positively or negatively influence the process of decision making.

Sardar, the head of the English department at a rural university, underpinned that teacher education programs do not have a written document to guide them on how to purchase the necessary ICT services and maintain them, he also reported that the decision for bringing ICT tools into classroom utilization is based on the initiation of the academic department within the teacher education program. He states:

It happened some times; we bought some hardware and software programs to be used by our teachers. In these cases, we did not have a particular rule to specify how and why we bought these programs! All we had was a request letter from a teacher or a group of teachers in our departments wherein the request letter they explained why they need these programs to be used preferably in their classrooms to enhance their practices. I, as the head of the department, tried to make a deep commitment to pursue the dean of the college in order to buy them for our department.

According to Fuad (the dean of the College of Basic Education at a big university), his university invested a great deal of money to equip the teacher education programs with three types of education technologies such as: language laboratory, projectors, limited number of computers by necessity for their daily management purposes as well as WIFI for the teachers and an internet hall for the students.

Examined more closely, teacher education programs in public universities have not yet figured out how to formulate clear objectives and good policies for the function of the current and emerging ICT equipment in the process of teaching and learning. It could be argued that the lack of a carefully designed plan creates a situation where policymakers feel significant challenges in how to find innovative ways of introducing ICT tools for teaching and learning practices.

According to UNESCO (2007) and Hinostroza and Mario (2009), the availability of a policy document with proper guidelines is the precondition for a successful ICT integration. Thus, non-existent policies for ICT implementation created a situation where policymakers and academic staff put the blames on each other. To solve this problem and improve the current situation of ICT integration in teacher education programs, the university officials need to develop a policy document where the mission, vision, and expectations are clearly reported.

6.5.3 Participants' views on the degree of success of ICT integration and their short and long term evaluation of how ICT influences the process of teaching/ learning in their teacher education programs

In order to draw a clearer picture regarding of ICT integration success or failure in teacher education programs at public universities in Iraqi Kurdistan, the third questions of the interview protocol called on the policymakers to express their views and perspective on the current status of ICT use in teaching and learning practices and what kind of measurement criteria do they use to evaluate the process of ICT integration in their universities.

Through asking this question, the researcher attempted to find out how the policymakers view the performance of the current ICT use in their universities and what approaches do they arrange/ provide to reframe the discourse of ICT integration. In particular, the researcher found it significant to indicate what kind of performance measurement framework is used by decision makers in the teacher education program as a policy lever that would review and evaluate the level of ICT integration. Moreover, how the performance measurement framework is used to allow decent comprehension and gain knowledge of how well selected ICT elements are being used in teaching and learning practices.

Despite the fact that policymakers recognized the potential value of ICTs to change the traditional teaching methodologies into a more contemporary, open, responsive and adaptable learning system, the analysis of the transcripts reveal that there is substantial concern over the degree of ICT integration success into teacher education programs.

When asked about how far teacher education programs were successful in the process of ICT integration, all the interviewees reported that they were uncertain about indicating how far their programs could successfully integrate ICT. The analyses of the transcript show that there are several reasons for this uncertainty. According to Qasim, the vice-president of a developing university, there is no policy document to require them to review and evaluate the process of ICT integration; therefore, it is not possible to find out concretely how much the process of ICT integration is carried out in teaching and learning practices. He reported:

I cannot verify the degree of success or failure of technology adoption in our teacher education programs. The simplest explanation for this is that we do not review and evaluate the process at all. We do not do it because there is no policy document to demand us to review and evaluate the process.

In line with this statement, Hardi, the dean of the College of Basic Education in a rural university, declared:

At this stage, we are attempting to bring various types of adequate ICT equipment to our college. We do that because we feel that our programs should not be lagged anymore. However, how far the ICT equipment used purposefully to enhance the quality of education is unclear. It is unclear and vague because we do not have any evaluation strategy to lead us to the point where we can ensure whether the integration progress is successful or not.

This was also confirmed by Bnar, the head of English language department at a big university that using technology in teaching practices should bring positive changes

to the teaching environment and help the student to achieve better academic results.

According to him:

I, as a decision maker as well as a teacher, expect technology to facilitate the process of teaching and learning for both teachers and students. However, I do not see any plan, and I cannot indicate how much they are satisfied or disappointed. The main reason behind this is the lack of a plan to do it.

Indeed, Azad, the quality assurance director at a rural university was the only research participant who mentioned that there is annual feedback at the end of the second semester of each academic year for the students to rate the performance of their teachers. He mentioned that two out of twelve questions are about technology use by the teachers in the classroom teaching (A copy of the feedback is found as Appendix (J) where the two questions are crossed).

There is no concrete plan or strategy at our university to evaluate the process of technology adoption, what is available is the feedback from the students to their teachers at the end of the second semester of the academic year. There are two out of twelve regarding technology uses by the teachers. The questions are very general and vague.

When he was asked what the university does with the result of these two questions, he states:

I cannot mention anything important. Like many other things, the results are put on the shelves. The main reason is that the university considers the overall result of the feedback, not the results for each section of the feedback. In such a case, we even do not know how our students perceive the use of ICT by their teachers.

In order to indicate the degree of success of ICT and how much these technologies influence the process of teaching and learning, the research participants suggested several approaches that might be valuable for reviewing and evaluating the current status of ICT and helpful for future planning and implementation of ICT use in teacher education programs.

The first step for the policymakers is to develop a performance measurement framework as an important tool which is solid and entails certain guidelines to identify gaps in different stages of ICT adoption and offer strategies to address them. Hawar, the director of quality assurance at a big university, underlines the significance of the evaluation framework to know how far ICT is being used in teaching and learning practices. He explained:

Reporting on the current situation of ICT use in teacher education programs on a range of standardized measures in different stages of ICT integration is a helpful mechanism for policymakers to gain insight into how ICT is integrated and it is vital to reinforce continuous improvement of ICT use and provide extra-input to allow dramatic changes in teaching and learning practices.

Awat, head of English department at a rural university explains that collecting data on the current situation of ICT is a catalyst to provide reports on the performance of ICT use in the teaching context and provide feedback to minimize the internal and external challenges in the process of integration. He further states:

Policy-makers can use this data to analyze performance and distinguish priority areas for reviewing and intervention.

Jalal, vice-president for scientific affairs, believes that the Kurdish universities need to develop a policy document in the form of an advanced framework evaluation which includes a reflection on the diverse segments of the ICT integration and how the diverse segments should be interrelated in order to define responsibilities in the integration process. He also reports that formulating a policy on ICT in education requires taking a set of variables into account, such as objectives, the availability of technologies, applications, content, and teacher competency.

Sardar, head of the English department at a developing university, believes that developing a measurement framework should be the priority of the decision-makers within the teacher education programs. He goes further by pointing out:

The question is not about whether we could bring technology into our teaching context, the real question is what the academic advantages of this equipment are to enhance the quality of education in general and how much we have learned from the mistakes being made during the integration process. It is our responsibility to find innovative approaches in order to develop a kind of framework in the form of an official policy document for the process of ICT integration. Without this, ICT integration would not have any value if we do not know its impact on classroom practice and student learning, and why should we put more efforts into investing more technologies?

From the research participants' responses, it was clear that there is a consensus among policymakers that an advanced measurement framework is required in order to determine the current status of ICT uses and develop strategic plan to avoid re-making mistakes and view ICT as a vehicle for improving teaching and learning. Successful

policy implementation is also dependent on the effectiveness of implementing officials (Howlett, 2009).

More importantly, Azad, the director of quality assurance at a rural university, argues that it is important for each university to have the mandate to lead the reviewing and evaluation of ICT integration. The main goal of the committee is to emphasize developing an ICT policy document for the university. He explains that the committee may include the main decision-makers such as vice-presidents for scientific affairs, vice-president for financial affairs, director of quality assurance, director of the finance unit, dean of the college of basic education and heads of English department. The committee should meet three times a year: at the beginning of the academic year, at the end of the first semester, and the end of the second semester. The committee will be in charge of formulating ICT policy documents where necessary conditions of ICT integration are concentrated and the measures that need to be adopted to guarantee potential impacts of ICT on teaching and learning. This should be done by providing broad impulse inspection reports on the institutional level as well as on the instructional level regarding specific ICT issues in order to address the challenges experienced in a cost-effective and manageable way.

6.5.4 The current status of possible pedagogical and technical ICT training related to ICT integration

A large body of existing literature confirms that since the beginning of 21st century quality teaching has become an issue of importance by many countries around the world (Trilling & Fidel, 2009, Vavouraki 2004, Braslavskyy, 2003). Much of the effort made in the last two decades by these countries was to invest a huge amount of money in order to make ICT an integral element of their education system.

These countries integrate ICT in order to reshape education and reduce the existing problems and enhance educational outcomes "through vanishing ICT into the background of the classroom learning activity" (Fluck, 2003, p. 28).

ICT is a dominating force in education, and its existence has caused a great number of changes in educational institutions, a great deal of literature confirms that ICT is just a tool and it cannot do a thing by itself. Experiences show that that filling the classrooms with ICT resources cannot make a bad teacher into a good one as they cannot fix a bad educational philosophy or compensate for bad practice (Haddad & Draxler, 2002).

In order to realize the potential of ICT for knowledge dissemination to better ways of teaching and learning, educational institutions need to provide right and possible conditions for using adequate ICT tools. According to O'Bannon and Judge (2004), among the most significant variables adding to the accomplishment of ICT adoption in teaching context is the availability of technical as well as ongoing pedagogical training for teachers.

The fourth and fifth questions of the interview protocol constructed to find out how teacher education programs highlight the pros and cons of ICT and explore how these programs prepare and offer adequate technical and pedagogical training for teachers. The questions also aim at examining what kind of plan do policy-makers have in order to improve the current situation.

Surprisingly, the results of the analysis of the transcripts reveal that teacher education programs within Kurdish public universities simply do not provide ongoing pedagogical as well as technical training. The majority of the policymakers who are teachers at the same time with the minimum teaching-load per week confirm that it is not obligatory for their institution to provide these trainings.

Vice-president of a developing university (Qasm) reported that despite many efforts being made towards the use of technology and recognizing the importance of its integration in teaching, it is unfortunate that his university and in particular teacher education program fails to provide appropriate ICT training courses for teachers to develop their pedagogical as well as technical ICT skills. He states:

Teacher education programs are at an early point of integrating ICT in teaching practices; we (policymakers) have limited knowledge on the process of ICT integration. As far as I understand at the moment the priority of the policymakers is the scale of ICT tools to be available for the teachers in a teaching context in order to be used to improve the quality of teaching. To be honest, many of us believed that access to technology resources is enough as the first step to help our teachers do their teaching better. It is unfortunate to say this, but we were not aware of the fact that the existence of technology alone cannot promise a better quality of education. Nowadays, the lack of training is a barrier to the successful implementation of ICT in the process of teaching and learning.

According to Azad the director of quality assurance of a rural university, Kurdish public universities were not successful in providing ongoing training and continuous professional development for their teachers to keep up with the rapidly evolving digital technologies. He explained that his university is lagged in ICT integration at almost every level. He explains that they do not provide adequate ICT training for their teachers to prepare themselves to use technology effectively in teaching. According to him, there are several possibilities from the Ministry of Higher Education and Scientific Research as well as other organizations such as British council and USA embassy to provide some certain ICT training for the teachers of the Kurdish universities to train teachers for enhancing teaching experiences. He further explained:

There are only two ways for a teacher to get training. When a teacher wants to get an academic title for the first time, he has to take a course called "teacher development course" which is an obligatory course. A part of the course, which is a session or maximum of two sessions, is devoted to integrating technology into classroom teaching. The focus of this session is on providing the participants very basic details about the usage of the technology itself rather than developing the methodologies and skills related to pedagogy for using technology in the teaching process. Also, the teachers have to take this course once in their academic lives. Another opportunity is the types of courses which are offered by the embassy of USA, British Council or other organizations. These courses are rare, and just several teachers will be allowed to participate.

In line with this, Amanj, dean of the College of Basic Education in a developing university confirms that teacher education programs invested in ICT in isolation, they do not consider that successful integration of ICT in education is complicated and multifaceted. The process of integration failed to provide the necessary conditions in

order to reap the potential advantages of what ICT can offer. He further described the current situation as:

The main focus in the process of technology integration is to deploy a certain number of adequate hard infrastructures as well as software programs in the teaching context. We failed to recognize that well-designed-training programs should be in line with access to technology.

The arguments of Amanj is in line with the report of Makrakis (2005) who states that in many Arab countries the focus of ICT integration into education is on supplying of digital resources without providing adequate pedagogical training on how to use these resources.

In answer to a question (probe-question) why universities do not provide adequate ICT training, the participants mentioned different factors. Jalal (the vice-president of a rural university) indicates:

There are many barriers which hinder the teacher education programs not to provide technical and ongoing professional development courses related to ICT training to ensure that teachers use available tools correctly. One of the main reasons is the lack of sufficient fund to buy software and hardware programs in order to train our teachers on them. Since 2015 there is a general deficit by KRG, and there is no allocated grant for training or buying technology resources. With the little amount of budget we have, we cannot afford to allocate a part of it to buy ICT tools or provide training.

Bnar, the head of the English department at a big university recognized lack of technology resources and professional academic staffs to conduct training as two factors which discourages university authorities to provide proper training programs.

I think two of the biggest things are the lack of appropriate technology resources and the limited number of professional academic staff who could conduct training courses. We have a shortage of ICT experts to figure out the best way to aid the faculty members to understand the potential benefits of ICT uses to deliver effective and creative lesson content in the teaching process.

The research participants were asked what can be done in order to reduce the existing problems and improve the current situation of ICT integration in the teacher education programs. The participants proposed several suggestions which might lead to a better situation of technology adoption in the process of teaching and learning. They insisted that the Ministry of Higher Education and Scientific Research with other educational institutions need to have a comprehensive approach where the provision of ICT hardware and software programs, technical staff support, and technological as well as pedagogical training are viewed as a package.

Hardi, the dean of the College of Basic Education in a rural university, believes that teacher education programs have a disappointing history with on-going development courses. He further explains that we (the university officials) failed to highlight the importance of providing adequate training in order to place the faculty members in a better position to make full use of ICT. He believes that in order for effective utilization of ICT in the teaching and learning process, teacher education programs need to provide training courses where teachers will get new techniques, tips, and procedures that give them the strength to become confident users of ICT in the teaching process. He states:

Our teacher education program failed to understand that putting technology resources in teaching context is insufficient without providing proper training for the teachers on how to use these resources as teaching and learning devices in a pedagogical sound way. In order to assist instructors to comprehend the potential of ICT in education and learn how to use technology into teaching practices successfully, teacher education programs are urgently required to offer ongoing professional training where teachers can obtain knowledge to avoid pitfalls of ICT use and increase their experiences to apply ICT to support teaching practices.

Hawar, director of quality assurance at a big university, argues that those teachers who do not utilize technology in teaching practices are not technophobic. He explains that many of the teachers do not have the necessary skills and knowledge to use ICT tools due to the lack of proper trainings. According to him, teacher education programs need to employ different approaches in the form of technical and pedagogical training courses as well as workshops on how to promote teachers' performances to use different types ICT equipment innovatively better.

Jamshid, the head of English department at a developing university asserted that offering ICT training is a significant indicator to encourage teachers to use technology in teaching practices, but the most important is the type and structure of the trainings. He confirms that the training should not simply emphasize teaching basic technology literacy, but to serve the needs of teaching that will help teachers to reinforce the actual use of ICT in teaching practices in a pedagogically sound way.

As I reflect on my experience as a policymaker and a teacher at the same time, the development of appropriate pedagogical practices is as important as technical mastery of ICT. Therefore, what stands out for me is not just providing a training course, but the type and the structure of the training which may have

enormous potential to ensure successful integration of ICT in the process of teaching. Trainings should not be about ICT basic skills; rather, it should be about pedagogy.

Ziad, the head of the English department at a big university, pointed out that for a teacher education program to reap the benefits that ICT promises, provision of adequate training is a daunting task. He further explains that giving teachers opportunities for extensive technical and pedagogical trainings is a key element that they need in order to ensure academic performance and raise the quality of teaching.

6.5.5 Financial challenges regarding ICT integration.

One of the huge issues for educational institutions to achieve their goals with technology is financing, i.e. what budget size is required annually to properly plan and finance the integration of ICT in teacher education programs. According to Almalki and Williams (2012), the degree of ICT success is equal to the amount of money invested in technology use in the teaching context.

In order to explore how the teacher education programs are financially supported by Kurdistan Regional government, the sixth question of the interview protocol aims at describing university budgeting practices, with special attention to finding out how the assigned budget for ICT integration in teacher education programs looks like.

Through asking this question, the research participants were asked to explain how a properly planned budget with adequate funds or a limited budget reflects on the teacher education programs to provide necessary preconditions for an effective ICT

implementation and catch up with rapid changes in the process of ICT integration. The researcher also found it significant to find out what other financial resources are available in Kurdish universities to contribute to technology adoption.

The analysis of the transcripts reveals that similar to other public sectors, higher education sector is entirely financed by the Kurdistan Regional Government. KRG sets the budgetary framework of every university through both the Ministry of Higher Education and Scientific Research and the Ministry of Finance. The interviewees reported that the university budget is highly dependent on government and whatever they ask for; it should go to the Ministry of Finance in order to be paid for. The participants explained that the regulations of the Ministry of Finance do not pay explicit attention and special treatment to higher education institutions.

The research participants cited high dependency on the state budget as one of the major obstacles for teacher education programs against the effective introduction of ICT in the teaching and learning process. The interviewees reported that the impacts of the under-funding of the ICT integration process are immediate; for example, it results in the inability to purchase state-of-the-art ICT learning and teaching tools (proper hardware infrastructures and software programs), not offering ongoing technical/ pedagogical trainings as well as holding workshops and seminars for faculty members about the merits that ICT promise to bring into teaching practices.

The findings emerged from the transcript analysis display that although policymakers have been searching for appropriate strategies to diversifying their income bases and reduce the extent of their dependency on government funds, the universities are unlikely to accomplish this objective and replace the government subsidy income stream.

In line with this, Akram, the director of the finance unit at a rural university emphasized that decision makers made extraordinary efforts in order to generate extra funds for the universities, but they were not successful for many reasons. According to him, the main reason is the critical financial crisis which KRG faced since 2015.

In the last three years, KRG faced a financial crisis which caused precipitous declines in almost all classes of financial assets. Ministry of Finance was badly in need of funds to support other sectors of government. As a result, the annual state budget was shrank, and cuts are made to funding in all sectors, including higher education institutions.

To avoid further financial crisis issues, KRG forced universities to adapt to a variety of shortfalls, and this has put financial pressure on universities to shrink annual ICT expenditures on purchasing hardware, software, and programs.

Jamal, the director of the finance unit at a big university, explains that the universities are ruled and controlled by the regulations of the Ministry of Finance. He believed that these regulations are poor and could not match the needs of university needs. He further complains that the annual budget of the university should be planned according to these regulations where there is no specific field for funding ICT infrastructure. He states:

Since the beginning of the severe financial difficulty, there is no fixed annual budget from KRG to our universities. Due to severe under-funding, the key goal of the government, in general, is to ensure that the limited resources are allocated to pay the salary of the employees.

Lack of financial resources for ICT integration in teacher education is seen as one of the critical elements to lag the process of ICT integration in the teaching context. Ahmad (the vice-president of a big university) reports that limited financial support has made it far more difficult for universities to properly integrate technology into teaching practices. He believes that with a sizeable budget and systematic planning, the universities will be able to improve the current situation they are stuck in.

According to Amanj, the dean of College of Basic Education in a developing university, the Ministry of Finance failed to acknowledge the higher education sector as one of the top national priorities, and it inadequately responded to the demands and needs of the universities. He highlighted that cyclical shrinking-allocated-budget and pressure to minimize the expenditures have massive effects on the teacher education programs to devise effective plans and invest human development capacity as pre-conditions of successful ICT implementation.

In support of this, Akram, the director of finance unit at a rural university explain that due to failure of getting a sufficient-fixed-allocated-annual budget, the universities are simply not able to cover necessary facilities such as maintaining present hardware infrastructures and software programs, equipping classrooms with adequate ICT tools as well as providing technical and pedagogical trainings for the academic staff.

When the participants asked what should be done in order to improve the current financial situation in terms of ICT integration in teacher education programs, several suggestions were offered.

According to Hardi, the dean of Basic Education at a rural university, higher education institutions should have a kind of autonomy in terms of making purchasing decisions in order to decide which ICT tools are best suited their needs and how to support and enhance faculty members skills. He argued that the government has to understand that ICT integration is a long-term and complex process where ICT has to be considered as an ongoing budget item. He believed that with a significant amount of money, the universities would be able to purchase necessary hardware and software programs as well as provide academic training for the teachers.

Jamal, the director of the finance unit further explains that sufficient funding is a crucial element, but the restriction of public funds has a profound impact on every sector, including higher education. Due to the financial crisis, the Kurdish government has made deep budget cuts, and as a result, more than 85% of the total allocated budget is spent on salaries, and the rest is spent on daily routines of the university. He reported:

It sounds a bit strange when the government faced financial difficulties in 2014; the higher education sector was the first place in which its budget was cut by more than 85%. What is left was enough to pay only 25-35% of the salaries of the employees and some other daily routines.

He also sheds light on the current financial situation and calls KRG to treat higher education institutions differently compare to other sectors through providing significant funds, and he asks the universities to have a clear vision and coherent strategy regarding ICT integration.

6.5.6 Conclusion

The third phase of the study aimed at obtaining a deeper understanding of the current status of ICT integration in five Kurdish public universities in general and in teacher education programs in particular from the perspective of the policymakers within these universities.

During the course of the study, the researcher explored how the policymakers perceive and evaluate the current situation of ICT integration concerning pedagogical, circumstantial, educational policy, and financial considerations. Investigation of these issues which are strictly related to each other is considered essential to elicit detailed information in order to gain a holistic view of the bigger picture of ICT integration.

In view of the findings derived from interview transcripts, almost all the policymakers reported positive perceptions towards the use of technology in teaching, learning and administration practices. The data obtained from the analysis discloses that the research participants pursue various approaches in order to bring a wide range of digital resources to initiate ICT based activities. The arguments arose during the interviews with the interviewees confirm the complaint of Jim Knight, the British minister for schools and learners that "technology in learning is no longer optional" (BECTA, 2008) but how to integrate it is what should be concentrated.

University authorities assumed that investing in certain forms of ICT tools have substantial implications in converting the conservative paradigms of education into a neo-liberal model of education where the teachers assist students to obtain lifelong-learning skills they need to cope with rapid changes in the 21st century.

As far as the decision-making process is concerned, the research participants were asked whether their institutions pursue a more or less comprehensive and transparent model of decision-making which may guide the prerequisite conditions of ICT to be integrated effectively into teacher education programs. The study findings revealed that there is very little agreement among policymakers regarding the type of decision-making style (bottom-up or top-down). The interviewees who held high rank position such as dean, and vice-president for scientific affairs reported that in an ideal situation the process of decision making development in the universities should be bottom-up while the respondents who held lower ranking position such as head of departments and director of the quality assurance mentioned that the decision making follows top-down model. The interviewees suggested that cultivating more channels of effective communication is significant to foster the engagement of faculty members at multiple levels of the decision-making process.

In this phase of the study, policymakers revealed lack of an educational policy document as a significant factor which hinders ICT integration in the teacher education programs. The research participants reported that the integration of ICT into teacher education programs had not been guided by a written and detailed educational policy document where the objectives, mission, vision, finance, and strategies of the integration of ICT in their institutions are provided and prioritized.

As it is noticed from the analysis of the transcripts, teacher education programs in public universities have not yet figured out how to formulate specific objectives and sound policies and combine them "into sets of documents, guidelines, advice, targets and indicators" (Dale et al., 2004, p.459) to facilitate ICT use. Deficiency of an educational policy document to facilitate the uniform integration of ICT has a seriously

detrimental effect on the teachers' attitudes and the level of ICT use in teaching practices. To bridge the gaps, the interviewees believed that the availability of good quality written educational policy which guides the policymakers at different ICT integration process is vital to "move from technology push (i.e. actions that are driven by the necessity to make the technology available and usable) to "demand-pull" (i.e. actions that are driven by users' needs and pedagogical opportunities)" (Bottino, 2003, p.45).

In this phase of the study, the researcher sought to find out how the policymakers view and evaluate the actual level of the current situation of ICT integration at their universities and what kind of performance measurement framework is used to rate the degree of success or failure of ICT in teaching and learning practices. All the research participants state that teacher education programs do not review and measure the degree of ICT use. The main reason is the lack of a policy document that requires the teacher education programs to measure how far the objectives of ICT integration is achieved. In order to indicate the degree of success of ICT and how much these technologies influence the process of teaching and learning, the interviewees suggested several approaches that might be valuable for reviewing and evaluating the current status of ICT and helpful for future planning and implementation of ICT use in teacher education programs. The policymakers underline the importance of developing a solid and detailed performance measurement framework which entails a range of standardized measures to determine the current status of ICT uses and reinforce continuous improvement of ICT use and avoid existing problems and provide extra-input to allow dramatic changes in teaching and learning practices.

Although the policymakers believed in the importance of ICT integration to increase the quality of education at their institutions, it is somewhat surprising how little effort these individuals put in to provide right and possible conditions to realize the potential of the ICT for knowledge dissemination.

The research findings emerged from the analysis of the transcripts display that teacher education programs within Kurdish public universities failed to provide ongoing pedagogical as well as technical ICT-training courses for teachers. To minimize the current obstacles of the situation of ICT integration and to reap the benefits that ICT integration promises, the interviewees proposed several suggestions which might lead to a better situation of technology adoption in the process of teaching and learning experiences. They believe that teacher education programs need to provide a wide range of adequate ICT hardware and software programs, technical staff support, on-going technological and pedagogical trainings.

With regard to financing, findings show that the annual budget of the selected public institutions is highly dependent on government. The interviewees reported that the high dependency on a limited governmental budget does not necessarily reflect the demands of teacher education programs to provide necessary preconditions for an effective ICT implementation and catch up with rapid changes in the process of ICT integration.

Although policymakers have been searching for different financial resources in order to cover the budget deficit, they were not successful because of the inadequate rules and regulations of the Ministry of Finance. The interviewees reported that lack of financial resources negatively influences the process of ICT process; for instance, the universities cannot provide excellent quality of hardware and software programs and

pedagogical training which will have forceful impacts on the process of ICT implementation.

Although the policymakers recognized the potential value of ICTs to change the traditional teaching methodologies into a more contemporary, responsive learning system, the analysis of the transcripts reveal that policymakers have a relatively little experience and knowledge on the quantity and quality of systematic integration of ICT in teacher education programs. Even though policymakers positively perceive the integration of technology in teaching context and they invested significant amounts of time and energy in providing different kinds of ICT resources, the results show that teacher education programs are lagged in almost every aspect of a systematic ICT integration. The interview analysis reveals that the process of ICT integration is stronger in rhetoric than in practice.

7. Conclusion

This chapter presents a summary of the key findings of the three phases of the study. This is followed by a presentation of the limitations of the study. After that possible directions for future research will be outlined.

7.1 The key findings of the research

The study was designed to explore the current status of ICT integration in teacher education programs at five public universities in the region of Iraqi Kurdistan. The study attempted to investigate how the Kurdish EFL teachers, EFL learners, and educational policymakers perceive the use of ICT in teaching and learning practices as well as what pedagogical and circumstantial considerations facilitate or inhibit the integration of ICT in these programs.

The thesis began with an introduction where the main reasons behind conducting this study are explained. After that a review of relevant literature that fall within the scope of the study is reviewed in order to provide a theoretical framework that explains the professional development of ICT integration in the process of EFL teaching/learning within the teacher education programs and what measurement considerations should be taken into account in order to minimize the problems that may emerge during the course of ICT integration as well as maximize the benefits that ICT promises for the purpose of teaching and learning.

Complementarity concurrent mixed method data collection strategies was employed in this study in order to produce as much information as possible to answer

the research questions of the study. Two data collection instruments were used in the current study to adjust the strengths and shortcomings of both quantitative and qualitative approaches.

Two quantitative self-reporting survey questionnaires were developed to elicit sufficient information in relation to the conditional implementation and pedagogical consideration of ICT integration in teacher education programs as well as to examine how/why FL teachers/ students perceive and consider the utilization of ICT in the process of language teaching/ learning and what kind of conditional implementation and/or pedagogical considerations should be provided for a successful ICT integration.

The semi-structured interview protocol was used to elicit enriched information about how policymakers at Kurdish universities influence the process of ICT integration and what short and long term plans they have to succeed in the process. How they evaluate the process of ICT integration and what they have done to enhance the challenges the related individuals might face when they attempt to use technology in the process of teaching. Data collection have been undertaken in three phases.

Statistical Package for Social Sciences (SPSS) 17.0 is used to analyze the quantitative data. First Cronbach Alpha was utilized to estimate the internal consistency coefficients of the scales of the questionnaire and calculate their reliability. After ensuring the validity and reliability issues of the questionnaires, descriptive statistics were run to represent the mean and the standard deviation for the whole scale of the questionnaires. Several statistical tests such as analysis of variance (ANOVA), independent t-tests and chi-square analyses were used to find out whether the relationship between independent variables and dependent variables are statistically

significant. Finally, to analyze the relationships among the scales, correlation analyses were carried out.

Second, the qualitative data gathered through semi-structured interviews required the researcher to use qualitative techniques. Dörnyei (2007) argues that "the first step in data analysis is to transfer the recording into a textual form." (p.246). Therefore, immediately after the interviews, the researcher transcribed them.

Member checking was employed to ensure the trustworthiness, credibility, and ethical compliance of the study (Lincoln & Guba, 1985; Merriam, 2009). This involves returning the researcher's interpretations of the data to the interviewees so that they were able to confirm the accuracy of the analysis and rectify potential misinterpretations and misrepresentations (Maxwell, 2013; Savin-Baden & Major, 2013; Lazaraton, 2003).

In analyzing the interview transcripts, the researcher pursued using thematic content analysis to provide sufficient details of how the data analysis in the current study is conducted.

The data collection of the first phase of the study was purposefully limited to full-time FL teachers who teach in English departments in teacher education programs at public universities in Iraqi Kurdistan. For the purpose of sample selection, convenience sampling was used to recruit 120 EFL teachers.

The gender balance of the participating teachers for the first phase of the study was not perfect. It seems that teaching in teacher education programs is an overwhelmingly male profession. The imbalance of gender in the Kurdish public university in Iraqi Kurdistan might be a cultural reflection where male teachers had more opportunity to prolong their education and become university teachers compare to

their female partners. Thus, 65% of the participants are male while only 33% are female.

The results of the first phase of the study display that the participants have a moderate level of ICT skills. However, the results indicate that the teachers did not seem to have extensive and advanced skills of ICT, but their overall digital competencies were rather basic. The statistical analysis displayed that the top seven ICT tools used by the participants were: Projector, personal computer, word processing, power point, email, internet, and YouTube. More advanced technologies and smart tools are rarely used by the participating teachers. The survey findings indicate that many teachers only use a limited range of ICT tools and their use stays at a personal, rather than pedagogical, level.

Focused on language teaching, the majority of the participants reported that they use ICT tools for different language teaching activities such as making presentations, communication, delivering lectures, developing reading, listening, writing, speaking skills, and enhancing students motivation and meet their individual needs.

The participating teachers mentioned some crucial issues that might make the use of ICT difficult when they attempt to use ICT in their teaching. They reported lack of ICT tools in the classrooms, limited knowledge on how to make full use of ICT, lack of training on available computers and/or software, lack of training, lack of technical staff support, lack of time, insufficient ICT skills, lack of motivation, limited understanding on how to integrate ICT into teaching and shortage of class time made the ICT integration difficult or very difficult for them.

Finally, despite the internal and external factors that might slow down the employment of ICT use for the purpose of teaching exercises, descriptive analysis reveals that teachers perceive the adoption of ICT tools in foreign language teaching positively and they use these tools for different teaching purposes.

The data collection of the second phase of the present study was limited to recruit 320 EFL students of the second, third and fourth years of English language departments in teacher education programs. The main purpose of the second phase of the study was to offer the students a chance in order to express their views towards the utilization of ICT in the process of language learning by themselves and how much they are satisfied with the use of ICT by their teachers in the process of language teaching.

Contrary to the first phase of the study, it seems that teaching is no more a male profession anymore and female overwhelmingly dominated this field of education. The description statistics show that the number of female participants is twice more compared to the number of male students. Like many western countries, the gender imbalance of the participants could be regarded as a cultural reflection of the position of women in Kurdish society where girls nowadays have more opportunity to study and later become teachers in the schools.

The result of the statistical analysis of the second phase of the study discloses that the research participants' ICT skill level is greatly varied in using different ICT tools. They have a moderate level of ICT skills in the areas of the most common tools of ICT which includes personal computer, word process, internet, email, and YouTube and low-level skills in the complex or smart tools such as interactive whiteboard, blogs, and podcasts.

In relation to language learning, the majority of the students claimed to use ICT tools for different language learning purposes. The statistical analysis displays that the participating students use available educational technologies to improve reading, listening, writing, speaking skills as well as develop grammatical performance and learn new vocabulary.

Regarding to the attitude of the students towards the use of ICT, the descriptive analysis suggests that the majority of the participating students have a positive attitude towards the use of ICT and its relationship with their foreign language learning. Although the research findings also reveal that teachers' use of ICT in language teaching has increased students' interests in the subject matter, they rated the use of ICT by their teachers very low and their attitude towards how their teachers ICT use in classroom teaching is not positive.

The data collection of the third phase of the present study was limited to conduct 15 interviews with 15 university policymakers who had held the position of vice-presidents for scientific affairs, deans of faculty of education, heads of English language department, directors of quality assurance and directors of finance unit and they served in the last seven years, or have been in office for no less than one academic year.

The aim of the third phase of the study was to obtain a deeper understanding of how university officials perceive the process of ICT integration in their institutions and what short and long term plans they have to evaluate the process with regard to pedagogical, circumstantial, educational policy, and financial considerations and what they have done to minimize the challenges the related individuals might face when they attempt to use technology in the process of teaching

The research findings emerged from the analysis of the interview transcripts display that almost all the policymakers possess positive attitudes towards the integration of ICT in teaching, learning and administration practices. The data obtained from the analysis discloses that the participating policymakers believe that integrating ICT resources have strong implications for changing the conservative paradigms of education into a neo-liberal model of education.

As far as the decision-making process is concerned, the study findings revealed that there is very little agreement among university authorities regarding the kind of decision-making model (bottom-up or top-down). The respondents who held a high-rank position such as dean and vice-president for scientific affairs reported that in an ideal situation the process of decision making is a bottom-up while the interviewees who held lower ranking position such as the head of departments and director of quality assurance reported that decision making follows the top-down model. The policymakers also reported that they failed to provide teacher education programs with a detailed educational policy document where the objectives, mission, vision, finance, and strategies of the integration of ICT are provided.

Surprisingly, all the interviewees reported that the teacher education programs do not review and measure how far the objectives of ICT integration are achieved due to the lack of a policy document in the form of a performance measurement framework which entails a range of standardized measures to determine the degree of success or failure the current status of ICT in teaching and learning practices.

With regard to financing, the result of the study shows that the annual budget of the universities is highly dependent on a limited governmental budget which does not necessarily reflect the needs and demands of the teacher education programs to provide

necessary preconditions such as adequate ICT hardware/ software programs, technical staff support, ongoing pedagogical as well as technical ICT-training courses for an effective ICT implementation and catch up with rapid changes in the process of ICT integration.

Despite the fact that policymakers positively perceive the integration of technology into education to change the traditional teaching/ learning system into a more contemporary and responsive learning system, and invested significant amounts of time and energy in providing different kinds of ICT resources the results prove that teacher education programs are lagged in almost every aspect of a systematic ICT integration.

7.2 Contribution to literature

There is little evidence of any research being undertaken on the topic of integrating ICT into English as a foreign language teaching in teacher education programs in Iraqi Kurdistan's' public universities. Consequently, the present study is potentially of considerable importance and a valuable contribution to the literature in a number of different ways on the use of ICT in the Kurdish tertiary environment for a number of reasons:

1. it is considered to be the first study on the issue of ICT in Iraqi Kurdistan and it can bridge the gap in the Kurdish research context by providing a deep description of integrating ICT in teacher education programs.

2. it compares the perspectives of students, teachers and university officials on ICT use in teacher education programs in Kurdish public universities
3. it can help university officials to map and gain a deeper understanding of the contextual factors that facilitate or impede the teachers and the students when they attempt to use ICT.
4. further, the results of the study will enrich and provide the university officials as well as teachers to have a holistic view on the current of ICT landscape both pedagogically as well as technically in Kurdish educational environment.

7.3 Pedagogical and theoretical implications

Although there is a common consensus among teachers, students and policymakers towards the integration of ICT into education in order to increase the quality of teaching and learning practices, the overall results of the study indicate that the process of ICT application in teaching English as a foreign language in Kurdish context is very problematic and it is lagged behind from all the perspectives. Based on the findings of the study the following guidelines will be helpful to be considered in order to improve the current status of ICT integration in teacher education programs at public universities in Iraqi Kurdistan:

1. Policymakers need to formulate a detailed policy document where the goals, mission, vision, and finance are well described in order to integrate ICT in the teacher education programs step by step.

2. As far as integrating ICT into the educational process is a multifaceted and complex process, university officials need to follow a comprehensive and transparent model of decision-making where many channels of effective communication are cultivated in order to foster the engagement of faculty members at multiple levels of the decision-making the process.
3. Universities need to develop a detailed performance measurement framework which includes a range of standardized measures to review and rate the degree of success and/or failure of ICT, reinforce continuous improvement of ICT use and provide extra-input to minimize existing problems of the integration process.
4. Teacher education programs need to offer their teachers ongoing technical/ pedagogical trainings, workshops, and seminars. The training services should focus on the technical aspects as well as the pedagogical practices where the teachers receive adequate skills and sufficient knowledge on how to use ICT in the process of teaching in a sound pedagogical way.
5. Policymakers within the universities need to make extraordinary efforts in order to obtain a kind of autonomy from the poor rules and regulations of the Ministry of Finance that do not match the needs of their institutions.

7.4 Limitations and suggestions for further research

One of the limitations of the study is related to the type of data collection which was highly dependent on interview and self-reported surveys and the study entirely based on what the participants reported. The threats here is whether consciously or not, the participating teachers may have over-reported their use of ICT in teaching practices, students may have underestimated the use of ICT by their teachers and policymakers may have ended up over-reporting their engagement in the process of ICT integration and describe the current situation of ICT in teacher education programs.

To address this problem, more research is needed to be carried out using different data collections techniques such as classroom observations and field trips to elicit specific information from primary sources in the department of English languages in teacher education programs.

I also intended to collect data from foreign experts on the topic of ICT from four well-known universities around the world where ICT is properly integrated as well as fifteen EFL teachers from teacher education programs for the qualitative part of the current study but due to time and financial consideration I could not do so.

All in all, despite the above limitations, the current research is a valuable contribution to language pedagogy in Iraqi Kurdistan in particular and to our existing knowledge in language pedagogy more generally because this research is an attempt to describe the context of the current situation of ICT use in EFL as well as figure out the majority of the obstacles the teachers and students face when they attempt to integrate or use ICT in the process of English language teaching and learning. The study also

comes out with practical and useful suggestions to solve these problems and improve the current situation.

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Appendix A

Teacher Questionnaire

Dear Teacher,

I would like to ask you to help my research, which is not market research, but I need it for my PhD research project. The survey is about teachers' opinion of Information Communication Technology (ICT) use in teaching English as a foreign language.

This is not a test so there are no "right" or "wrong" answers and you don't even have to write your name on it. I am interested in your personal opinion. Please give your answers sincerely as only this will guarantee the success of the investigation. Thank you very much for your help.

I. To what extent can you use the followings?

In the first part, please circle a number on the frequency scale from 1 to 5. You can choose any number in the scale.

**5= I can use it very well, 4= I can use it well,
3= I can use it satisfactorily, 2= I can use it to a small extent
1= I cannot use it**

To what extent can you use the followings?

Projector	5	4	3	2	1
Personal computer	5	4	3	2	1
interactive whiteboard	5	4	3	2	1
CD, VCD, DVD, Tape player	5	4	3	2	1
Word processing	5	4	3	2	1
Spreadsheet (Excel)	5	4	3	2	1
Online library catalogue	5	4	3	2	1
Power point	5	4	3	2	1
Email	5	4	3	2	1
Internet	5	4	3	2	1
Learning Management Systems (Moodle, Edmodo, Canvas, Wikispaces, etc.)	5	4	3	2	1

Wikipedia	5	4	3	2	1
Social networking sites (Facebook, Twitter, snapshot, Whatsup, LinkedIn)	5	4	3	2	1
Podcasts	5	4	3	2	1
Skype	5	4	3	2	1
YouTube	5	4	3	2	1
Blogs	5	4	3	2	1
Language teaching software	5	4	3	2	1
Language teaching/ learning website	5	4	3	2	1

II. How often do you use the followings for teaching purposes?

In the second part, please circle a number on the frequency scale from 1 to 5. You can choose any number in the scale.

5 = almost daily, 4 = weekly, 3 = 1 or 2 times a month,

2 = once a term, 1 = never

How often do you use the followings for teaching purposes?

Projector	5	4	3	2	1
Personal computer	5	4	3	2	1
interactive whiteboard	5	4	3	2	1
CD, VCD, DVD, Tape player	5	4	3	2	1
Word processing	5	4	3	2	1
Spreadsheet (Excel)	5	4	3	2	1
Online library catalogue	5	4	3	2	1
Power point	5	4	3	2	1
Email	5	4	3	2	1
Internet	5	4	3	2	1

Learning Management Systems (Moodle, Edmodo, Canvas, Wikispaces, etc.)	5	4	3	2	1
Wikipedia	5	4	3	2	1
Social networking sites (Facebook, Twitter, snapshot, Whatsup, Linkedin)	5	4	3	2	1
Podcasts	5	4	3	2	1
Skype	5	4	3	2	1
YouTube	5	4	3	2	1
Blogs	5	4	3	2	1
Language teaching software	5	4	3	2	1
Language teaching/ learning website	5	4	3	2	1

III. To what extent do you use the ICT tools for the following activities?

In the third part, please circle a number on the frequency scale from 1 to 5. You can choose any number in the scale.

5 = always, 4 = usually, 3 = sometimes, 2= rarely, 1= not at all

To what extent do you use the ICT tools for the following activities?

Support different learning styles.	5	4	3	2	1
Generate students' interest.	5	4	3	2	1
Develop students' technical skills	5	4	3	2	1
Enhance student's speaking skills	5	4	3	2	1
Enhance student's writing skills	5	4	3	2	1
Enhance student's reading comprehension skills	5	4	3	2	1

Enhance student's listening skill	5	4	3	2	1
Constructing a term test	5	4	3	2	1
Provide an opportunity for passive students to enhance their motivation	5	4	3	2	1
Promote different teaching methodologies	5	4	3	2	1
Provide an opportunity for self-study	5	4	3	2	1
Create personalized learning conditions for students.	5	4	3	2	1
Enhance group work	5	4	3	2	1
Enhance communication between students.	5	4	3	2	1
Preparing lessons	5	4	3	2	1
Teach students to prepare their lesson assignments	5	4	3	2	1
Send and receive emails	5	4	3	2	1
Searching for online English teaching materials	5	4	3	2	1
Giving feedback to students	5	4	3	2	1
Communicating with students	5	4	3	2	1
Communicating with other teachers in and out of my universities	5	4	3	2	1
upload assignments via email	5	4	3	2	1
Administrative record keeping (Student grades, student details, etc.)	5	4	3	2	1
Making presentation	5	4	3	2	1
Finding information and educational materials	5	4	3	2	1
Improving my English	5	4	3	2	1

IV. What kind of technological equipment is available in your department?

In the fourth part, please circle a number on the frequency scale from 1 to 5. You can choose any number in the scale.

**5= In all classrooms, 4= In some classrooms, 3= Upon request,
2= only in language laboratory, 1= In no class-room**

What kind of technological equipment is available in your department?

Computer	5	4	3	2	1
Internet access	5	4	3	2	1
Technical staff support	5	4	3	2	1
Interactive whiteboard	5	4	3	2	1
Video conferencing systems	5	4	3	2	1
Audio equipment (including software)	5	4	3	2	1
Projector	5	4	3	2	1
CD, VCD, DVD, Tape player	5	4	3	2	1
digital audio recording	5	4	3	2	1
digital video recording	5	4	3	2	1

V. How much difficulty do the following items give you in your teaching?

In the fifth part, please circle a number on the frequency scale from 1 to 5. You can choose any number in the scale.

5= very difficulty, 4= difficult, 3= not much difficulty, 2=neither difficult nor easy, 1= no difficulty at all

How much difficulty do the following items give you in your teaching?

Lack of ICT tools in the classrooms	5	4	3	2	1
Limited knowledge on how to make full use of ICT	5	4	3	2	1
Limited understanding of how to integrate ICT into teaching	5	4	3	2	1
Shortage of class time hinders me to use ICT	5	4	3	2	1

Little access to ICT prevents me to use it	5	4	3	2	1
Few ICT technical supports in the classrooms discourage me to use it	5	4	3	2	1
Unreliable computers and/or software	5	4	3	2	1
Internet access is not easily accessible in the classrooms	5	4	3	2	1
Lack of training on available computers and/or software	5	4	3	2	1
Lack of administrative support					
Insufficient pedagogical support for teachers	5	4	3	2	1
Student's lack of ICT use	5	4	3	2	1
The pressure to prepare students for exams and tests	5	4	3	2	1
Using ICT in teaching and learning not being a goal in our university	5	4	3	2	1
Teaching with ICT required more time.	5	4	3	2	1
Lack of pedagogical training on how to use technology in EFL teaching.	5	4	3	2	1

VI. In the sixth part, there are going to be statements some people agree with and some people don't. We would like to know to what extent they describe your own feelings or situation. After each statement you'll find five a frequency scale from 5 to 1. Please circle a number on the frequency scale from 1 to 5 which best expresses how true the statement is about your feelings or situation. You can choose any number in the scale.

5 (absolutely agree), 4 (mostly agree), 3 (partly agree partly disagree agree), 2 (disagree), 1 (absolutely disagree).

ICT supports my role as a teacher	5	4	3	2	1
ICT makes me feel more professional	5	4	3	2	1
ICT positively changes the teaching atmosphere in my classroom	5	4	3	2	1

ICT positively shifts the relationship between me and my students	5	4	3	2	1
ICT makes the teaching profession more interesting for me	5	4	3	2	1
ICT makes the teaching process more difficult	5	4	3	2	1
ICT makes my teaching methodologies more diverse	5	4	3	2	1
ICT enhances the presentation of material in my lessons	5	4	3	2	1
ICT makes the lessons more fun for the students	5	4	3	2	1
I feel comfortable working with ICT	5	4	3	2	1
ICT is very helpful in the teaching process	5	4	3	2	1
Teaching with ICT required more time	5	4	3	2	1
It is the mission of my university to integrate ICT in EFL teaching	5	4	3	2	1
No one cares in my university whether I use ICT or not	5	4	3	2	1
No one from my university asked me to use ICT in EFL teaching	5	4	3	2	1
My university provides technical training on the software programs available in the classrooms/university	5	4	3	2	1
My university provides pedagogical training on how to use ICT in EFL teaching	5	4	3	2	1

VII.

Did you attend any ICT training?

Yes No

Would you like to take part in ICT training?

Yes No

VIII. Please put an X in the appropriate box.

Gender: Male: Female:

Age: 25-35 36-45 46-55 Older than 55

Teaching experience:

Up to 2 year 3-5 years 6-10 years 11-15 years

More than 15 years

Education: Master Degree: Doctoral Degree: PhD student:

Academic Title: Assistant Lecturer: Lecturer: Assistant Professor:

Professor:

Teaching hours/ week: 6-9 8-12 10-15 12-18

Thank You for Your Participation!

Appendix B

Student Questionnaire

Dear Student,

I would like to ask you to help my research which is not market research but I need it for my PhD research project. The survey is about students' disposition towards the use of Information and Communication Technology (ICT) in learning English as a foreign language.

This is not a test so there are no "right" or "wrong" answers and you don't even have to write your name on it. I am interested in your personal opinion. Please give your answers sincerely as only this will guarantee the success of the investigation. Thank you very much for your help.

I. To what extent can you use the followings ICT tools?

Please circle a number (and only one) on the frequency scale from 1 to 5. You can choose any number in the scale.

5= I can use it very well, 4= I can use it well, 3= I can use it satisfactorily, 2= I can use it to a small extent, 1= I cannot use it

To what extent can you use the followings ICT tools?

Personal laptop/computer	5	4	3	2	1
interactive whiteboard	5	4	3	2	1
CD, VCD, DVD, Cassette player	5	4	3	2	1
Word processing	5	4	3	2	1
Spreadsheet (Excel)	5	4	3	2	1
Online library catalogue	5	4	3	2	1
Power point	5	4	3	2	1
Email	5	4	3	2	1
Internet	5	4	3	2	1
Learning Management Systems (Moodle, Edmodo, Canvas, Wikispaces etc.)	5	4	3	2	1

Wikipedia	5	4	3	2	1
Podcasts	5	4	3	2	1
Social networking sites (Facebook, Twitter, Snapchat, LinkedIn, Whatsup, etc.)	5	4	3	2	1
Skype	5	4	3	2	1
YouTube	5	4	3	2	1
Blogs	5	4	3	2	1
Language learning software	5	4	3	2	1
Language learning website	5	4	3	2	1

II. How often do you use the followings for English language learning purposes?

Please circle one (and only one) number on the frequency scale from 1 to 5. You can choose any number in the scale.

**5 = almost daily 4 = weekly 3 = 1 or 2 times a month
2 = once a term 1 = never**

How often do you use the followings for English language learning purposes?

Personal laptop/computer	5	4	3	2	1
interactive whiteboard	5	4	3	2	1
CD, VCD, DVD, Cassette player	5	4	3	2	1
Word processing	5	4	3	2	1
Spreadsheet (Excel)	5	4	3	2	1
Online library catalogue	5	4	3	2	1
Power point	5	4	3	2	1
Email	5	4	3	2	1
Internet	5	4	3	2	1

Learning Management Systems (Moodle, Edmodo, Canvas, Wikispaces etc.)	5	4	3	2	1
Wikipedia	5	4	3	2	1
Podcasts	5	4	3	2	1
Social networking sites (Facebook, Twitter, Snapchat, LinkedIn, Whatsup, etc.)	5	4	3	2	1
Skype	5	4	3	2	1
YouTube	5	4	3	2	1
Blogs	5	4	3	2	1
Language learning software	5	4	3	2	1
Language learning website	5	4	3	2	1

III. To what extent do you use the ICT tools for the following activities?

Please circle a number on the frequency scale from 1 to 5. You can choose any number in the scale.

5 = always 4 = usually 3 = sometimes 2 = rarely 1 = not at all

To what extent do you use the ICT tools for the following activities?

Develop technical skills (e.g. how to use wikispaces,...)	5	4	3	2	1
Enhance speaking skills	5	4	3	2	1
Enhance writing skills	5	4	3	2	1
Enhance reading comprehension skills	5	4	3	2	1
Enhance listening skill	5	4	3	2	1
Prepare for a term test	5	4	3	2	1
Provide an opportunity for self-study.	5	4	3	2	1
Enhance group work.	5	4	3	2	1

Prepare lesson assignments	5	4	3	2	1
Send and receive emails	5	4	3	2	1
Search for online English materials	5	4	3	2	1
Communicate with my teachers	5	4	3	2	1
Communicate with other students in and out of my university	5	4	3	2	1
upload assignments via email	5	4	3	2	1
Download music files	5	4	3	2	1
Make presentation/ seminars	5	4	3	2	1
Search for information and educational materials	5	4	3	2	1
Use the internet to play games	5	4	3	2	1
Use chat applications with friends	5	4	3	2	1
Learn vocabularies	5	4	3	2	1
Perform grammatical exercises	5	4	3	2	1
Translating (look up words or phrases online)	5	4	3	2	1
Take part in online group discussions or forums	5	4	3	2	1
Carry out research	5	4	3	2	1
Listen to music	5	4	3	2	1
instant messaging (e.g. msn, Skype, Viber, Whatsup, Facebook Messenger, etc.)	5	4	3	2	1
reading newspapers, magazines online	5	4	3	2	1
using a language teaching website (e.g. BBC learning English)	5	4	3	2	1
Watch English movies/ series online	5	4	3	2	1

IV. What kind of ICT tool is available for you as a student at your university?

Please circle a number on the frequency scale from 1 to 5. You can choose any number in the scale.

**5= In all classrooms 4= In some classrooms 3= Upon request
2= only in language laboratory 1= In no class-room**

What kind of ICT tool is available for you as a student at your university?

Projector	5	4	3	2	1
Computer	5	4	3	2	1
interactive whiteboard	5	4	3	2	1
Audio/Video equipments (CD, VCD, DVD, Tape player)	5	4	3	2	1
Online library catalogue	5	4	3	2	1
Internet	5	4	3	2	1
Learning Management Systems (Moodle, Edmodo, Canvas, etc.)	5	4	3	2	1
video conferencing systems	5	4	3	2	1

- V.** Now there are going to be statements some people agree with and some people don't. We would like to know to what extent they describe your own feelings or situation. After each statement you'll find five a frequency scale from 5 to 1. Please circle a number on the frequency scale from 1 to 5 which best expresses how true the statement is about your feelings or situation. You can choose any number in the scale.

5 = absolutely agree, 4 = mostly agree, 3 = partly agree partly disagree, 2 = disagree, 1 = absolutely disagree.

Today it is not possible to learn the English language without the Internet.	5	4	3	2	1
I like learning languages with the help of ICT tools.	5	4	3	2	1
It is easy to learn languages using ICT tools	5	4	3	2	1
I like to use ICT in my lessons.	5	4	3	2	1
ICT helps me to experience things more actively.	5	4	3	2	1
ICT makes the course content more lively.	5	4	3	2	1

ICT makes things too easy for the students.	5	4	3	2	1
The mixture of ICT use with other teaching formats is important.	5	4	3	2	1
I enjoy lessons with ICT	5	4	3	2	1
Using ICT facilitates my English language learning	5	4	3	2	1
learning with ICT offers real advantages over traditional learning strategies	5	4	3	2	1

VI. Now, we would like to know to what extent the following statements describe your teachers situation regarding ICT. After each statement you'll find five a frequency scale from 5 to 1. Please circle a number on the frequency scale from 1 to 5 which best expresses how true the statement is about your teachers ICT use. You can choose any number in the scale.

5 = absolutely agree, 4 = mostly agree, 3 = partly agree partly disagree, 2 = disagree, 1 = absolutely disagree.

The teachers' use of ICT in classroom teaching has increased my interest in the subject matter	5	4	3	2	1
Teachers regularly communicate with the students via email.	5	4	3	2	1
Teachers can use the available ICT tools well in the classroom	5	4	3	2	1
My teachers encourage the students to use ICT tools for learning purposes	5	4	3	2	1
Some of the teachers share with us useful links and language learning websites	5	4	3	2	1
Teachers do not use ICT tools in classroom teaching sufficiently	5	4	3	2	1

Finally, please put an X in the appropriate box.

Gender: Male: Female:

Age: 18-23 24-29 above 29

How long have you been learning English?

1-2 years 3-5 years 6-9 years more than 10 years

Year of study: 2nd year 3rd year 4th year

Have you answered all the questions? Thank you!

Appendix C

Interview Protocol

Semi-structured interview schedule about policy makers' role in implementing and improving the situation of ICT in teacher education programs

Introduction

Thank you for your willingness to participate in my research " Exploring the status of Information Communication Technologies in Foreign Language Classroom Teaching: The Case of Iraqi Kurdistan".

My name is Hama Karim Barzan and I am currently a PhD candidate of English Language Pedagogy Program in the Faculty of Education and Psychology at Eotvos Lorand University and currently conducting this research as part of my study program.

One aim of my study is to explore the attitude, role, long and short term plans, mission, and vision of the university policy makers towards the current situation of ICT use in teacher education program at public universities in Iraqi Kurdistan. This research is intended to reflect on the potential obstacles, risks and benefits that ICT may bring when it is integrated in the process of foreign language teaching and encourage the policy makers towards taking critical steps to overcome the problems/risk and foster the advantages of ICT. This interview is expected to take 30- 50-minutes and is audio-recorded.

There are no anticipated risks to participate in the study. It is important for you to know that your participation is voluntary, no compensation will be provided for your participation. You are also free to withdraw from this study at any time or not to respond to any questions without penalty. You will remain anonymous throughout this process, no identifiers will be released and all data collected will be for a period of two years and only I will have access to the interview tapes and transcripts.

Settings

Date:

Time: (Iraq time zone)

Place:

Personal information (confidential)

Policy maker's name:

Position:

Qualification:

Gender:

Age:

Years of teaching experience:

Years of administration experience:

Name of university:

Interview questions

Please tell me about yourself? Where did you do your study? How long have you been serving in your current position?

1. Generally, how do you perceive the use of ICT in the process of teaching, learning and administration?
 - 1.1 What are the goals of using ICT in teacher education programs at your university?
 - 1.2 How available is technology in your university in general and in the teacher education programs in particular for classroom instruction?
2. Through your educational field observation, how does your university decide what technology is needed for both instruction and administration?
 - 2.1 Who are the people that participate in preparing the short and/or long term plans for integrating (ICT) into in teaching, learning and administration in your university?
 - 2.2 What are the efforts of your university to integrate ICT into the teaching process?
 - 2.3 What is your role or what can you do to enhance the use of ICT in the teacher education programs?
3. How do you evaluate the process of ICT integration in teacher education programs in order to foster the professional development of ICT use?
 - 3.1 What are the standards that are used to measure the success of ICT implementation in teacher education programs?
4. Does your university provide any ICT training session for teachers? if Yes what type of training do they offer? if No what are the main reasons of not providing ICT training?
5. What are the primary obstacles that prevent implementation of instructional technology at your university?
6. What financial stresses have your university faced when you attempt to integrate ICT in the teacher education programs?
7. According to your experience, what should be done in order to improve the current situation of ICT in the teacher education programs, financially, technically and pedagogically at your university?

Appendix D

Request letter to the Ministry of Higher Education and Scientific Research

بۆ بەرپرێز / راگری کۆلیجی پەروەردەیی بنەرەت لە رێگەی بەرپرێز سەرۆکی بەشی زمانی ئنگلیزیەوه

بابەت/ پشنگیری

سلاوی زانست...

ناماژە بە فەرمانی وەزاری (٩٧١٨/٣) لە رێکەوتی (٢٠١٥/٥/١٩) وە فەرمانی زانکۆیی ژمارە (١٥١١/٥/٥) لە رێکەوتی (٢٠١٥/٦/١) وە فەرمانی کارگیری (١٢٦٤ /٧/٧) لە رێکەوتی (٢٠١٥/٨/١٦) تاییبەت بە پێدانی مۆلەتی بە موچە بەمەبەستی تەواوکردنی خویندنی بآل/ دکتورا لە بواری Language Pedagogy PhD Program لە زانکۆی Eötvös Loránd University لە ولاتی هەنگاریا.

داواکارم لە بەرپرێزان بفرمون بە ئاراستەکردنی نوسراویکی پشنگیری بۆ وەزارەتی خویندنی بآل و توێژینەوهی زانستی بەمەبەستی کارناسنیکردن بۆ کۆکردنەوهی داتای پێویست لە رێگەی فۆرمی راپرسی و چاوپێکەوتنەوه لەگەڵ ژمارەیهک لە مامۆستاو خویندکارو کاربەدەستانی زانکۆ حکومیەکانی هەریمی کوردستان دا وەک بەشیکێ گرنگ بۆ نوسینی تیزی دکتوراکەم که ناوێشانەیکەیی بریتیه له:

Exploring the possibilities of improving the situation of ICT in teaching EFL: the case of public universities in Iraqi Kurdistan

هاوکاری و پشنگیرکردنتان هاندەرێکی جیدیم دەبێت بۆ تەواوکردنی خویندنی دکتوراکەم.

لەگەڵ ریزدا...

هاوینچ:-

١- فەرمانی وەزاری

٢. فەرمانی زانکۆیی

٣. فەرمانی کارگیری

داواکار

بەرزان هادی حەمەکەریم

خویندکاری دکتورا

٢٠١٨/٥/٢

Appendix F

Consent to Participate Request

Invitation to participate email

Subject: Exploring the possibilities of improving the situation of ICT in teaching EFL:
The case of public universities in Iraqi Kurdistan

Dear,

My name is Hama Karim Barzan. I am a PhD candidate in English Language Pedagogy PhD Program at Eötvös Loránd University , also known as ELTE (<http://langped.elte.hu/>).

I write to invite you to take part in a PhD project on the current status of ICT integration in Kurdish public universities.

The overall purpose of the proposed study is to bridge the existing gap in the literature and inform policymakers about the process of ICT integration in teacher education programs in Kurdish universities.

My procedure entails conducting interviews with certain university policymakers as part of my PhD study at five public universities in the Kurdistan region.

You are receiving this invitation because you have currently been in office for at least one year at your institution. The interview will take 45-60 minutes and will be recorded.

Your responses to any questions will be kept confidential, as explained in the attached informed consent form.

If you are willing to participate, please return the attached consent form to me at your earliest convenience.

Thank you for your kind consideration,

Hama Karim Barzan

زۆر بەرز،

من که نام له خوارموه هاتوه خویندکاری دکتورام له زانکوی Eötvös Loránd University له ولاتی ههنگاریا. باتهی تیزی دکتوراکهم بریتیه له:

Exploring the possibilities of improving the situation of ICT in teaching EFL: the case of public universities in Iraqi Kurdistan

بهریزتان وهک یهکنیک له گه لاله کهرانی بریار له زانکوه تاندا به پتویستم زانی بانگهیشتی بهشداری کردن بکهن له کوکردنهوهی داتای پتویست بو مه بهستی نوسینی تیزی دکتوراکهم .

وهک بهرزتان ناگادارن که مترین توژینهوه له سهه ئهم بابتهه کراوه که بابتهیکی ههچگار گرنهگه له دامهزراوهکانی خویندنی بالادا.

هیوادارم کانتان هه بیته و وه لاهی ئه رتیم به دهست به گات.

له گه ریزدا

به رزان هادی همه که ریم

Appendix G

Consent to Participate Reminder

Subject: Reminder regarding participation in the study: Exploring the possibilities of improving the situation of ICT in teaching EFL: The case of public universities in Iraqi Kurdistan

Dear,

I haven't yet received your response of my prior e-mail requesting participation in the study: Exploring the possibilities of improving the situation of ICT in teaching EFL: The case of public universities in Iraqi Kurdistan. This will be your only reminder. I refer you to my prior e-mail of May XX, 2018 for details on the study, the interview procedure.

Please let me know if you have an interest in participating the study.

I hope to hear from you soon,

Hama Karim Barzan

زۆر بەرێز، ...

ناماژە بە نامەی ئەلکترونیم لە بەرواری (.....) تاییەت بە بەشداریکردنتان لە چاوپێکەوتنی تاییەت بە کۆکردنەوەی داتای پێویست بۆ تیزی دکتۆراکەم، وەلامی نامەکەم بە دەست نەگەیشتووە تا نوسینی ئەم نامەیە. هیوادارم لە کاتیکی نزیکدا وەلامی ئەرینی بەرێزتەنم پێیگات.

لەگەڵ ریزدا...

بەرزان هادی حەمەکەریم

Appendix H

Informed Consent Authorization Form

Researcher: Hama Karim Barzan Hadi

Study: **Exploring the possibilities of improving the situation of ICT in teaching EFL: the case of public universities in Iraqi Kurdistan**

.

Interviewee: _____ Date Issued: _____

Terms of Participation:

- 1) Your participation will consist of a 30- to 50-minute audio-recorded one-on-one interview.
- 2) There are no anticipated risks to participating in the study, certainly none higher than those you would encounter in the course of your normal daily activities.
- 3) No compensation will be provided for your participation.
- 4) Your participation in the study will be confidential; your name will not be mentioned during the recorded portion of the interview, nor will it be recorded in the study manuscript except by pseudonym.
- 5) Only I will have access to these digital recordings. Digital files will be password protected in my laptop.
- 6) Interview tapes and transcripts will be retained for a period of two years, and then destroyed.
- 7) It is important for you to know that you are free to withdraw from this study at any time without penalty. You are free not to respond to any questions that you choose or respond to what is being asked of you without penalty.

I consent to be interviewed under the terms listed above:

Signature: _____ Date: _____

You may alternatively consent to this study by returning this form to sorrann44@yahoo.com via your personal e-mail account with the statement "I agree to the attached terms for participation in the study of the: " **Exploring the possibilities of**

improving the situation of ICT in teaching EFL: the case of public universities in Iraqi Kurdistan".

P.S. This **Informed Consent Authorization Form** is adopted from Back (2016).

Appendix I

Research Ethics Approval in the Language Pedagogy PhD

Researcher's name:	Hama Karim Barzan Hadi
e-mail address:	<u>Sorrann944@yahoo.com</u>
Title of the research:	Exploring the possibilities of improving the situation of ICT in teaching EFL: the case of public universities in Iraqi Kurdistan
Co-researchers (if any):	
Expected dates of the beginning and the end of the research:	March 2018 March 2019
Research funder (if any):	
Date of the submission of the application:	8 th December 2017
Research goal (100-200 words):	The purpose of the proposed study is threefold: 1) to explore, describe, and interpret the selected participants' experiences regarding the use of ICT in the process of teaching and learning English as a foreign language. 2) to gain scope of ICT integration and assess issues and bottlenecks from the teachers, students and experts' perspectives in order to gain a holistic view and illustrate the current status of ICT use in foreign language teaching and learning. 3) On completion of the study, I will use the results to provide university decision makers and practitioners with several proposals that will address the challenges and give recommendations to improve the current state of ICT use in teaching English language in teacher education programs at public universities in Iraqi Kurdistan.
Age of the research participants (<u>underline</u>):	Under 3 years Between 3-14 years Between 14-18 years <u>Over 18 years</u>
How many research participants will be involved?	340
Method of the selection of the participants. Please, attach the appropriate documentation: text of the advertising, invitation letter, etc.	The participants for the quantitative data collection will be selected based by using a convenience sampling based on the fact that participants possess "certain key characteristics that are related to the purpose of the investigation" and they are "easily accessible" (Dörnyei & Csizér, 2012, p. 1).

	And the participants for qualitative data collection will be selected using purposive sampling techniques. (Kindly find the attachment).
Location of the study	Public university in Iraqi Kurdistan region
Short description of the study (The research protocol should be described in details. The theoretical background of the research is not relevant from the ethical point of view.)	<p>In 2010, a platform to reform the system of higher education was declared by the Ministry of Higher Education and Scientific Research in Iraqi Kurdistan (MOHE). A great emphasis of the platform was given to adopt new methods of teaching and update the knowledge and skills of teachers with a new philosophy towards integrating Information Communication and Technologies (ICT) in the process of teaching and learning (MOHE, 2010).</p> <p>The intention of this platform was to challenge the inherited out-of-date higher education system of the "old Iraq", and approach a modern and westernized system of higher education to prepare students to respond to the demands of the local job market (MOHE, 2010). As a result, the Kurdish government took the initiative to invest a great deal to transform the teaching environments with ICT infrastructures and the decision makers of the universities encourage their teachers to use multimodal technology in language teaching (MOHE, 2010).</p> <p>A part of the road map was also aimed to enhance English language teacher's skills with the help of ICT-rich environments. MOHE is convinced that the launching of such initiatives is an important step in improving and developing teachers' teaching skills and abilities to adapt to the 21st century challenges (MOHE, 2010).</p> <p>Unfortunately, the accommodation of ICT tools into the Kurdish universities was not researched. In particular, the response of the teachers as the end users and their pedagogical and conditional implementation of ICT integration seem to be lacking consideration. After seven years of intensive investment of ICT into the process of teaching and learning, no significant project has been conducted to investigate its impact in the process of foreign language teaching. Thus, the lack of research in this area stipulates the rationale for carrying out the present study to investigate the current situation of ICT integration in the Foreign Language (FL) teaching programs at public universities in Iraqi Kurdistan.</p>
What kind of equipment, instruments, tools will you use?	The study complementarity concurrent mixed design. Both quantitative (Questionnaire) and qualitative "semi-

Please, attach the appropriate documentation.	structured interviews" will be used to collect data. (Kindly find the attachment)
What kind of questionnaires, tests, and interview techniques are you planning to use? Please, attach the questionnaires, interview guides and tests.	Open-closed questionnaire items and one-on-one semi-structured interviews will be used. (Kindly find the attachment).
Explain the short and long term handling and archiving of the recorded data and what measures will be taken to ensure that the participants' anonymity is preserved.	<ol style="list-style-type: none"> 1. There are no anticipated risks to participating in the study, certainly none higher than those the participant would encounter in the course of his/her normal daily activities. 2. Participation in the study will be confidential; participant's name will not be mentioned when answering the questionnaire or during the recorded portion of the interview, nor will it be recorded in the study manuscript except by pseudonym. 3. Only I will have access to these digital recordings. Digital files will be password protected in my laptop. Questionnaire results and interview tapes and transcripts will be retained for a period of two years, and then destroyed. 4. It is important for the participants to know that s/he is free to withdraw from the study at any time without penalty. S/he is free not to respond to any questions that s/he chooses or responds to what is being asked of him/her without penalty.

A "YES" answer to any of the following questions does not imply that the study is not feasible.			If you have answered YES to any of these questions, explain how the physical and emotional safety of the participants will be guaranteed.
Does the study involve the application of unpleasant stimuli?	<u>NO</u>	YES	
Does the study involve the application of unpleasant (data acquisition) conditions?	<u>NO</u>	YES	
Does the study involve the participation of mentally handicapped people?	<u>NO</u>	YES	
Does the study involve the participation of people with special educational needs?	<u>NO</u>	YES	
Does the study involve deception of the participants?	<u>NO</u>	YES	
Does the study involve concealment of the nature or purpose of the research?	<u>NO</u>	YES	

Does the study involve a procedure (procedures) which may even unintentionally induce anxiety or suffering (e.g. in-depth interview)?	<u>NO</u>	YES	
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Are there any other ethical aspects of the study not mentioned above? (E.g., giving rewards to encourage participation ¹ , keeping record of and archiving data, etc.) If yes, please provide a brief description.	NO
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In my view, the proposed research is consistent with the ethical standards of education research. I ask for approval for the study to be carried out.

Date: _____ Hama Karim Barzan
Hadi _____

Researcher

To be filled in by the Ethics Committee²:

The Research Ethics Committee has examined the research plan and proposes the following changes:

Date:.....

signature of the chair of the committee
(or signature of the acting member)

Or:

The Research Ethics Committee has examined the research plan and approves of the proposed research methods and procedures.

Date:.....

signature of the chair of the committee
(or signature of the acting member)

¹ Remember that giving rewards to participants may seriously threaten the integrity of the research. However, if an incentive is deemed suitable, consider any harmful effects of e.g., sweets. If in doubt, ask for expert advice.
(c.f. <https://www.bera.ac.uk/wp-content/uploads/2014/02/BERA-Ethical-Guidelines-2011.pdf?noredirect=1>)

² Please cross the option not used and sign the relevant section.

INSTRUCTIONS

1., The Research Ethics Committee of the Language Pedagogy PhD Programme consists of the Programme Director, the Director of Studies and the tutors of all the compulsory courses of the Programme. The committee (chaired by the Programme Director) may co-opt other members in case the need arises.

2., Applications must be handed in electronically as a Word document in the following manner:

Purpose	Submit to / to be approved by	Submit by (date)
Seminar paper	Seminar tutor & Consultant	As agreed with the tutor
A study to be published – if different from any other study that approval has already been granted for	Consultant & Director of Studies	One month prior to starting the research
Dissertation research proposal	Research Proposal Committee & Consultant	As an appendix to the proposal (If parts of the proposed research had already been granted ethical approval, this must be made clear in the proposal and in the application, too.)
Dissertation research or parts thereof if not approved of earlier or if they have been altered in terms of data collection from people ³	Programme Director and Director of Studies	One month prior to starting the research

3., The application package must contain:

- the application form,
- the text of any documents used to request participation, seek for consent and collect data
(e.g., recruiting poster, advertisement, request to participants, consent form, questionnaire, interview questions, etc.),

Please remember that:

³ It may save time for the final research to propose alternatives in the research proposal to pre-empt possible problems.

- The participants should give their consent before taking part in the study voluntarily and in possession of all essential information. It must be made clear that the participant has the right to withdraw from the study at any time.
- The procedure should begin by informing the participant in detail about the study itself (reading the Description of the Research) followed by filling out the Consent Form. The fact that participation is anonymous, voluntarily and can be withdrawn at any time must be emphasized in the attached Description of the Research and in the Consent Form.
- In case of an online survey the participant should state their consent by choosing a “yes” reply (or a “check”) before filling in the questionnaire.
- In case of research studies involving foreign institutions, the approval of the competent Research Ethics Committee of the countries involved is necessary. If individuals’ views are sought abroad, there is no need to have consent from any institution.
- Please specify by all means (1) that the Consent Form which contains personal data will be stored securely so that no unauthorised person can have access to it; (2) that a coded identifier will be assigned to the rest of the documents; (3) the digital format of data storage; (4) for how long and where the raw data (filled-out questionnaires, recordings) and the processed data (digitalized, content analysed, etc.) and the Consent Forms will be stored.

4., The way to seek consent from the participants depends on their age:

- If the age of the participating children is ***under 3 years***, the description of the research must be shown to a parent or guardian of the child and only they can give their consent in writing. Please, attach the description of the research and the consent form. If the research or the recruitment takes place in an institute (typically in a nursery school), the ethical approval is only valid with the written consent of the head of the host institute.
- If the age of the participating children is ***between 3-14 years***, a parent or guardian gives approval in writing and oral approval is expected from the children taking part in the study. Please, attach the description of the research and the consent form as well as the content of the information to be given to the children. If the research or the recruitment takes place in an institution (typically in a kindergarten or a school), the ethical approval is only valid with the written consent of the head of the host institute.
- If the age of the young participants is ***between 14-18 years***, the description of the research must be given both to a parent or guardian and to the persons participating in the study and both of them must sign the consent form. If the name of the young participants is not shown in the research, the passive consent of a parent or guardian may be acceptable (i.e., they do not object to the participation of the young person in the research.) Please attach the description of the research and the consent form. If the research or the recruitment takes place in an institution (typically in a school), the ethical approval is only valid with the written consent of the head of the host institute (school).

- If the age of the participant is *over 18 years*, the research must be explained to the persons taking part in the study in sufficient detail and they must give their consent in writing. Please, attach the description of the research and the consent.
- If the research relies only on the participants' products/learning outcomes in the form of tests, compositions, so that the participants remain anonymous, it is enough to seek consent from the head of the host institute (school).

5., The body of tutors approving the applications can take up to a month to evaluate the applications. They may propose changes to the procedures. In that case the applicant must implement the necessary changes (written into the original application in blue).

6., The approved applications must be archived electronically by both the researcher and the tutors approving the application. A signed hard copy of the approved application must be stored by both the head of the research ethics committee and the researcher. (i.e., Two copies of the application must be printed.)

Appendix J

Student Feedback

فۆرمى فېدباكى قوتابيان/ خويندكاران

زانكو
كۆلچ
بەش
قوناغ
وانە
سالى خويندن

خويندكارى بەريز لە پىناو باشتەر كردنى پرۆسەى خويندن و چۆنيەتى گەياندى نەو پەيامە زانستىە بەپيويستى دەزانين سوود لەراو سەرئەكەتەن بيبين ، كە سەرەنجام لە خزمەتى پرۆسەى زانستى و خويندن دەبىت

"راو بۆچوونەكەتەن لەسەر نەو برگانەى خوارەو بەخەرە روو ، نەنجامى نەم فۆرمە تەنھا بۆ پيشخستى پرۆسەى خويندن بەكاردەهينريت"

ژمارە	پرسىارى ھەلسەنگاندن	(1 - 5)	تیبينى
1-	لەسەرەتای دەستپیکردنى خويندن ناوەرۆك و بابەتەکانى وانه خزانە روو؟		
2-	خوينكار ئاشناكرا بەسەرچاوەى تر و جوراو جور و پەيوپەندىدار بە وانهكە جگە لە سەرچاوە سەرەكەكە؟		
3-	سروشتى وانهكە و شىوازى ووتنەوہى سەرنجراكيش و ھانى زياترى خويندكار دەدات شارەز ابىت لەم بواردەدا؟		
4-	تا چەند وانهكە كارپگەرى ھەبوو لەسەر توانا و كارامەى خويندكار بۆ بەكار ھينانى زانستەكەى لە رووى پراكتيكەوہ؟		
5-	تا چەند لەوانەكەدا كاتى گونجاو و پيويست بۆ پرسىار و بەشدارى خويندكار رەمخسینرا؟		
6-	ئامرازى پيويست بۆ روونکردنەوہى بابەتەكە بەكار ھينرا ھەك (سلايد ، ئۆديو ، فيديو ، وايت بۆرد ،.....ھتد)؟		

- 7- لهم وانهيدها دهر فعت رهخسا كه قوتاي سمينار، راپورت،
تويژينهوه پيشكesh بكات؟
- 8- وانهكه لهكاتي ديار يكر اودا دهست پندهكات و كوتايي ديت و
كات بهفير و نادر يت؟
- 9- لهكاتي وانه ووتنهو دا ماموستا بههيمني و ريزلينا نهوه
ههلسوكهوتي دهكر د؟
- 10- ئايا پرسيار هكاني تاقير دنهوهكان رهنكدانهوهي ناوه روكي
وانهكه بوون؟
- 11- ئايا ماموستا كه كلاس و وييساي تي بو بابتهكه دروست
كردبوو؟ ئايا كزرس بووك و سيلههس و تيبيني وانهكاني
لهسر كلاس و وييساي تهكهي داناه بهشيوهيهك كه تو بتوانيت
بيخوينيتهوه و دايبهز نيت؟
- 12- بهشيوهيهكي گشتي ماموستاي وانهكه سهركهوتوو بوو
لهوانهكهيدا؟

4.5-5	3.5-4.5	2-3.5	1-2
زور باشه	باشه	پهسنده	پهسند نيه