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Integrating ICTs to Promote EFL Learners' Critical Thinking Skills: The Case of First-Second Year Master Students at ABDELHAMID IBN BADIS University of Mostaganem

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Dedication

I dedicate first to '**Allah**' who gave me the strength to finish this work. Also, I dedicate this work to:

- My mother and my father,

- My sisters: **Yassia**, **liala**, **Hanane**,

- My brothers: **Abdekader**, **Lazreg**, **Houari**

for standing by my side and for giving me their love, care, assistance, and patience.

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Abstract

The present study seeks to investigate the influence of ICTs on improving EFL learners' critical thinking skills. It basically focuses on integrating the different types of ICTs to enhance EFL learners'thinking skills. Since, the value of this competency in the process of EFL teaching and learning is attracting wide attention in the field of education. The main purpose of this research study is to examine the relationship between integrating ICTs in EFL classes and the development of learners' critical thinking skills. In view of this, this work is divided into two main parts: a theoretical part which includes two chapters and a practical part that contains only one chapter. The first chapter introduces a theoretical background related to ICT in education and the different ICT tools used for educational purposes. Also, it introduces the trends of e-learning - hybrid/blended teaching and learning. Then, it discusses in details the various obstacles that prevent both teachers and students from integrating ICT successfully in teaching and learning process. The second chapter attempts to introduce a general review of critical thinking in education and the main characteristics of a critical thinker. Moreover, it describes the learners' critical skills –reading, writing, listening and speaking. Besides, it attempts to examine the relation between integrating ICT and the development of learners thinking skills. Finally, the third chapter deals with the methodology adopted to conduct the research study with the analysis of the findings. The research method utilized in this study is a mixture of qualitative and quantitative methods. The data were gathered through a series of questionnaires administered to a sample of 30 students (first/second year master students) and 10 teachers at the Department of English of Abedelhamid Iben Badis University (Mostaganem). The results obtained showed that integrating ICTs helps in enhancing EFL students' critical thinking abilities. Consequently, EFL students need to be provided by effective strategies to handle ICTs and to have the appropriate tools to improve their critical thinking skills.

Key words:

ICTs, critical thinking skills, critical thinking

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List of Abbreviation/Acronyms

IT Information Technology

ICT Information and Communication Technology

EFL English as Forgien Language

OHP Over-Heard Projector

CALL Computer -Assisted Language Learning

PPT PowerPoint

PC Personal Computer

N Number

Q Question

% Percentage

General Introduction

The twenty-first century has witnessed a widespread diffusion of technologies, and this has revolutionized every domain of our life, among them education. The use of Information and Communication Technologies (ICTs) in education is a phenomenon that has gained many researchers' focus and attention. It is essential and effective to integrate Information and Communication Technology (ICT) into the educational environment especially in the teaching and learning of foreign languages. Many educators argue that ICT has great benefits in enhancing EFL learners' thinking skills when it is integrated effectively in the educational setting, and this is the case investigated in this research work. The core objective of this research study is hence to examine the major benefits of incorporating ICT tools in promoting EFL learners' critical thinking skills; this can help to raise awareness among teachers and students about the significant potential of these materials in educational settings. Besides, the main purpose is to gain insights about how to implement ICT into the classroom effectively.

The study attempts to answer the following research questions:

1. What are the advantages of using ICTs in education?
2. What are the major drawbacks that both teachers and students face when using ICTs?
3. How does integrating ICTs into EFL classroom promote the learners' critical thinking skills?

These questions would lead us to assume the following hypotheses that can be valid or invalid based on the analysis of the findings.

1. ICTs in education help in improving the quality of education and also help teachers and students to develop their skills.
2. Using ICTs has drawbacks that make learning/teaching a difficult task for both teachers and students.
3. ICT can be used as a pedagogical instrument to improve the quality of teaching and learning. Therefore, its integration in the classroom help learners assesses their critical thinking through the use of different ICT tools.

The methods used in dealing with the topic are both quantitative and qualitative. To achieve the objectives of the present research study, questionnaires are used as data collection instrument with both teachers and first and second year master students in the Department of

English at the University of Abdelhamid Iben Badis of Mostaganem of the academic year 2016-2017. The participants included thirty (30) students and ten (10) teachers which were randomly chosen.

The research study is divided into two main parts: a theoretical part which is devoted into two chapters and a practical part which concerns the field of work and discussion of the key findings. On the whole, this dissertation is divided into three chapters. The first chapter offers a relevant theoretical background about ICT in education. It presents the different ICT tools used in education. Furthermore, it highlights the trends of e-learning -both hybrid and blended leaning- as new platform learning environments. Also, the content contains the benefits of using ICTs in EFL classes. The last part of this chapter is investigating the challenges and obstacles that prevent teachers and students from an effective integration of ICTs in both teaching and learning process.

The second chapter includes an overview about critical thinking in education and what are the characteristics that learners should have in order to become critical thinkers. Besides, it underlines the four critical skills ‘reading, writing, speaking and listening of learners’. Finally, it highlights the relationship between ICT integration in classroom and the development of learners’ critical thinking skills.

The third chapter is devoted to highlighting the methodological approach adopted to achieve the research objectives. The content includes the methods used for gathering and analyzing data. Also, it presents the detailed information about the subject matter ranging from setting where the study took place, the participants who took part in the study, research instrument used to gather data from the informants and the students and teachers questionnaires are explained in details. Finally, this chapter provides the key findings of the analysis of the research data about ICT integration to improve EFL learners' critical thinking abilities.

Chapter one: information AND Communication Technologies

Introduction

This chapter is specifically comprises the historical overview of Information and Communication Technology (ICT) in education, the ICT tools used in educational setting, and E-learning trends in education including both blended and hybrid learning. In addition, it numerates the benefits of using ICT in EFL classess. Besides, it tackles then the challenges that face teachers' and students' when using ICT in teachning and learning process.

1.1 ICT in Education

In most developed and developing countries, and with the significant rapid advancement in technology, twenty-first century education has witnessed an increasing integration of technological tools, involving students in ways which were not available in the past, leading to the creation of new models of learning and teaching possibilities. The alternative changes that are occurring in society due to the advances in sciences and technology demand the need to develop the educational system.

Today's massive growth of technology led to a transmission in the educational system through changing the traditional learning towards a technology-rich environment with the use of innovative technologies such as internet, smarphones, computers and so on. "There is no doubt that modern life is dominated by technology. There is universal recognition of the need to use Information and Communication Technology (ICT) in education as we enter the era of globalization where the free flow of information via satellite and the internet hold sway in global information dissemination of knowledge".[1]

Information Technology (IT) is a transmission of information through the use of textual form and audio, video or any other media. Thus, the Information and Communication Technologies have opened the gate for new models like Online learning, e-learning, and other models. Eventually, education is comprehensively transformed by the advancement in Information and Communication Technologies (ICTs). "The field of Information and Communication Technology (ICT) combines science and technology. It includes the full range of computer

[1] Samuel Ereyi, Aduwa Ogiegbaen and Ede-Okhion Sunday Iyamu (2005). Using Information and Communication Technology in Secondary Schools, Negiria, p104.

hardware and software, telecommunication and cell phones, the Internet and Web, wired and wireless networks, digital still and video cameras, robotics, and so on".[2].

The term Information and Communication Technology is considered as an extended concept of the Information and Technology (IT). The term ICT is an acronym that stands for information and communication technology, which plays a vital role and presents a big challenge that, can change the classroom environment and enhances EFL learners' critical thinking skills. Another definition of ICTs is provided by the United Nations Development Programme. It defines ICTs as follows: "ICTs are basically information handling tools a varied set of goods, applications and services that are used to produce, store, process, distribute and exchange information".

In this light, ICT has been regarded as a potentially powerful tool for educational change and reform. The emergence of the different technological tools has motivated many countries to integrate them into the classroom as they can have a great impact on students' outcome. Like many countries, Algeria took the decision, many years ago, to use ICTs in schools and universities in order to promote the core of education.

[2]David Moursund (January 2005). Introduction to Information and Communication Technology in Education; Eugene, Oregon, p4.

1.2 ICT Tools for Education

Ever since the emergence of Information and Communication Technologis (ICTs) and the rapid moving into the digital media and information, educators and scholars sought to integrate them to enhance the quality and effeciency of education. In this regard, ICTs have provided teaching tools that are effective in the learning process. The integration of ICT tools into teaching and learning makes the process more effective and improves the quality of education.

There are different types of ICT materials that are used in different domains, and each type has its own characteristics and function. ICT materials are a set of tools which are mainly used for educational purposes. The previous used materials in education were only televisions and radios on which most of countries depend. These two materials have provided great efforts to develop the educational reform. With the advancement era in technology and the increace of the development of information and communication technologies, a diverse set of tools were introduced into the domain of education, among them are smartphones, overhead projectors, tablets, internet and so on. These have dramatically changed the learning/teaching processes.

The different ICTs tools -radio, TV, video, computers and the internet- used in educational settings have enabled an easy access to a wide range of various resources and data at any time. Among those tools is the radio. It is an old means of media that have been used since the 18 th century in order to provide news and information about what is occuring in society. The television is another medium of communication that is associated with several accessories used to transmit films, programs, pictures and sounds.

Besides, computers are basically a helpful device which is used to facilitate communication and provide, store and process data and information. Computers have become incredibly important tools in today‘s society. They are used for various purposes. Computer-Assisted-Language Learning (CALL) is designed for the purpose of language teaching. It involves the use of computers besides other tools such as the internet, e-mail, the word processor. The CALL promotes student-centred learning and helps developing students’ cognitive skills and communicative skills. In addition, CALL helps students to take responsibility for their own learning process.

Another important feature of CALL is power point. It is one of ICT tools that are widely used in educational settings. It is a presentation computer program which contains a series of slides. The latter are represented in a form of pages in order to facilitate presenting spesific subjects for the teacher and students. In addition, Overhead projector (OHP) is a very important device of ICT that is used in language classes which has a function of presenting overhead projector slides, i.e, showing pictures, images or films on a screen by connecting it to a computer, personal computer (PC) and making the lesson more enjoyable and interesting.

Furthermore, the internet is the most essential and effective tools of ICT that has served all domains. Education has also benefited from the advantages brought by internet. It is considered as a crucial means of communication which helps both teachers and students to ameliorate their competences. Richard and Haya (2009) stated that "the internet has become one of the vital ways to make available resources for research and learning for both teachers and students to share and acquire information". Another modern innovation is cell phones. The latter have great effect on helping teachers and learners to easily access to information at any time and any where. This telecommunicating device requires a subscicription to a service and installing various applications for educational purposes such as electronic dictionaries rather than printed ones.

The aforementioned ICT tools have been used over the years to promote education. These ICT devices that are used inside EFL classes have a great potential on re-inforcing the educational setting in Algeria. In contrast, there were many issues that prevent both teachers and student from a successful integration to reach the objectives of education.

1.3 E- Learning Trends

In the past, teaching and learning were taking place only in the classroom, and the teacher was regarded as the only sourse of knowledge. Nowadays, the way of teaching and learning has changed with the involvement of ICTs. Using information and communication technologies in education has become important, changing the traditional learning from a teacher-centred approach to a learner-centred approach throught the use of new models of learning "E-learning".

"E-learning is the delivery of education (all activities relevant to instructing, teaching, and learn-ing) through various electronic media. The electronic medium could be the Internet, intranets, extranets, satellite TV, video/audio tape, and/or CD ROM".[3] E-learning is known as the use of technology for educational purposes, and this has shifted the traditional learning to a new learning environment with the integration of technology within the teaching and learning process. E-learning provides better conditions for learning and an easier way of practicing education through the use e-learnign trends which are blended and hybrid learning.

1.3.1 Blended Learning

Blended learning did emerge as one of the most popular platform in the field of education. This refers to learning models that combine traditional classroom practice with technology learning environment. Blended learning has been described in Osguthorpe and Graham's (2003) definition on blended learning as follow: "Blended learning combines face-to-face with distance delivery systems… but it's more than showing a page from a website on the classroom screen…those who use blended learning environments are trying to maximize the benefits of both face-to-face and online methods." [4]

This model of learning allows students to get into discussions with their classmates and their teacher, to reach their courses online and participate in a form of presentations. Moreover, blended learning environment offers opportunities for students to develop their autonomous abilities through engaging them independently in their studies. Blended learning provides a greater flexibility to learning by combining face-to-face interaction and online learning. As a result, it enables students to benefit from the online learning efficiently and being successful

[3] Alex Koohang and Keith Harman (2005). Open Source: A Metaphor for E-Learning. V8, USA, p 77.
[4] Bayram Güzer and Hamit Caner (2013). The past, present and future of blended learning: an in depth analysis of literature. p 4596

in their learning process. Besides, it creates for students a comfortable learning environment to function well in their study.

1.3.2 Hybrid Learning

In nowadays, the educational system requires an alternative changes to cope with the modernization of technologies. The traditional learning environment of education begins to transform by the use of information and communication technology. A new model of course design is gaining currency in the field of education that combines the traditional learning and technology-based learning environments in a homogenous. This new learning environment refers to hybrid learning.

"Hybrid learning is the combination concept of online learning and face to face learning".[5] The new model of learning offers for students opportunities to improve their communicative skills. Furthermore, it provides students the chance to monitor their learning process, and helps them recieve back up support from their teachers that enhanced their learning in traditional classrooms.

In conclusion, the massive shift occuring in the traditional leaning environment led the education to a new level with the integration of ICT. The emergence of E-learning trends (hybrid and blended) has created a strong foundation for education. Consequently, there are great potentials that are offered with the two learning environments where both the traditional and online learning environments are mixed to create a comfortable learning/teaching enviromnet for both students and teachers.

[5] Zaiha Ahmad and Isma Zuriyya Ismail (April 2013). Utilization of Hybrid Learning in Accomplishing Learning Satisfaction as Perceived by University Student, p98

1.4 Benefits of ICT Use in EFL Classroom

In the twenty-first century, traditional learning/teaching environment has witnessed remarkable changes. A number of research studies argue that the use of Information and Communication Technologies (ICTs) in English foreign language classroom now holds an increasingly important role in supporting and developing the Algerian educational system in the different levels among them university. Both the learning and teaching processes have become more effective with the implementation of ICTs .The latter has provided many opportunities for EFL students to learn and for their teachers to teach effectively in nowadays' classrooms.

The integration of ICTs into the classroom help students to become more knowledgeable and promote collaborative learning through the use ICT communication tools and social networking such as emails, discussion groups, facebook, blogs and wikis. These tools which conduct activities that require discussion and exchange of ideas help them to communicate and work as a team. This increases the potentials for student interaction and decision making. This interaction has covered the different level of learning styles through providing great efforts in facilitating the acquisition of constructive thinking skills. Anderson (2010) claimed that "ICT creates new teaching and learning environment. In creating this new teaching and learning environment, ICT offer numerous advantages and provide opportunities to facilitate learning for young learners who have different learning styles and abilities, including slow learners, and to make learning more effective, involving more senses in a multimedia contex".

ICT integration facilitates for teachers to prepare their lessons through selecting the appropriate materials to meet the lesson objectives and to make the learning process more enjoyable. Besides, teachers can use a wide range of teaching tools such as computers, video and smartphones. Projectors are a tool for an effective delivery of class syllabus; this equips provides students with high quality lessons through collaboration with teachers.

In addition, ICT environment attracted the student's focus and helps them maximize their critical thinking skills and cognitive performance. Furthermore, it increases the flexibility of delivery of lessons, so that teahers and students have an easy access to information about anything in anytime and from anywhere. This process enables them to prepare and present knoweldge in a variety of forms and compose their work more effectively.

It is argued that using ICT in EFL classrooms allows teachers and students to communicate their thoughts and ideas in specific topics that reflect real-life situations and problems; this new learning environment motivates students and engages them in the process of learning. Eventually, it contributes to increasing students' self-confidence, awareness and self-esteem because most of students feel relax and comfortable with the integration of the different ICT tools into the curriculum. Papaioannon & Charalambous (2011) stressed that Information and Communication Technology in school can motivate students, stimulate their interest, increase their self-esteem and self-confidence, increase their creativity, allow greater inter-activity, enhance their critical thinking and increase their attainments among other benefits.

Moreover, "Trinided et'al (2001), Hawkins (2002), Bryant et al (2003) and Suffori (2006) in Ibe Bassej (2009) cited in Amajuoyi (2012) summarized the roles of ICT in education as:

- ✓ Promoting students intellectual qualities through higher order thinking, problem solving, improved communication skills and deep understanding of the learning tools and concepts to be taught.
- ✓ Promoting a supportive, interactive teaching and learning environment by creating broader learning communication and therefore provide learning tools for students.
- ✓ Improving school attendance levels and enabling the creation of a new and more effective curriculum.
- ✓ Ensuring that more effective interactive learning environment is created through the use of a learner centered and activity oriented teaching/learning approach.
- ✓ Increasing the quality of student learning through the access to the content through ICT facilities".[6]

Information and communication technology is a useful aid that has provided many effective opportunities for both teachers and students through improving the relevance and quality of education in various ways. Dawes (2001) stated that "Information and Communication Technology has the power to support teaching and learning, and provide new enhanced approaches for doing the required tasks in ways that have not been possible before".

To conclude, Information and Communication Technologies have many beneficial roles in education and proved to be fruitful. It is regarded as a powerful tool that has potentially

[6] Hannatu Abdullahi (November 2013). The Role of ICT in Teaching Science Education in Schools; Deparrtment of Educational Foundation, Shehu Shagari College of Education, Sokoto-Nigeria, V 3. No.9, p129.

enhanced the quality of the teaching and learning processes. The integration of ICTs in education in Algeria is still not at a very advanced stage and there are many challenges facing both teachers and students in implementing ICTs successfully and effectively into EFL classes.

1.5 Barriers of Using ICTs in Education

Information and Communication Technologies (ICTs) incorporate many benefits to improve the academic achievement, but these benefits remain unrealized for several infrastructural challenges that face both teachers and students from a successful integration of ICTs into the teaching /learning process. The process of integrating ICT in educatin is a complex one, which encountered a number of difficulties and barriers. Therefore, Information and Communication Technology in education is a potential double-edged sword.

1.5.1 Teachers' Barriers

There are a number of barriers that prevent teachers from integrating ICTs successfully in the Algerian classroom. According to Ertmer, these barriers are classified into two main categories, which are extrinsic and intrinsic barriers. "Ertmer referred to extrinsic barriers as first-order and cited access, time, support, resources and training and intrinsic barriers as second-order and cited attitudes, beliefs, practices and resistance".[7] In its simplest form, the extrinisic barriers refer to teachers' lack of effective training in solving technical problems, unreliability of materials and lack of access to resources, while the second category refers to lack of confidence, time management, negative attitude toward ICT and resistance to change to a new teaching environment.

The main critical barrier that face teachers when trying to integrate ICTs in the classroom, is its usage and how to implemente it without having analysed its appropriateness and applicability. "A different challenge altogether when it comes to internet usage is the effort involved in monitoring the students usage of the Internet to ensure that they do not visit educationally irrelevant and socially undesirable sites, thus detracting from the intended objective".[8] This task makes the role of teachers more complicated, where there is a need to guide students towards the appropriate use of internet for educational purposes.

Furthermore, teachers have a limited access to ICT equipments and encounter difficulties concerning classroom managment when using ICT. Besides, they incoprate technical problems while using computers and projectors to deliver the course. Another significant

[7] P. Ertmer (1999). Addressing first- and second-order barriers to change: Strategies for technology integration, Educational Technology Research and Development, V. 47, no. 4, pp. 47-61.

[8] ICT in School Education (Primary and Secondary) Information and Communication Technology for EducIndia and South Asia (2010), p 14.

barrier is directly related to teachers' fear of failure to use ICT. In addition, teachers' lack of confidence is another obstacle.

Algerian teachers have found a major challenge of the use of ICT in educational settings and how to devote time to incoprate technological devices into teaching process. In addition, teacher's lack of knowledge and skills regarding the use of ICTs has made it difficult to use it in education. Moreover, teachers have found difficulties to integrate ICT with instructional approaches to teach content standards. They lack the basic knowledge about technology, pedagogy and content in order to implement ICT successfully to support students' learning.

1.5.1 Students' Barriers

Information and Communication Technologies (ICTs) play a vital role in education and have great benefits in improving student learning and in adding values to the curriculum. However, despite of the opportunities that ICTs offer, there are still many obstacles facing students. Students encounter many difficulties while trying to use ICTs in their learning process. Among these difficulties students' level. Some students master ICT while others are novices. Moreover, students have found difficulties to use ICTs for educational settings; for instance when students are trying to use internet for their study they found them selves attracted by irrelevent sites.

Technical problems are a common barrier, particularly with the use of computers. It may face some errors while working with windows program or other software programs. Additionally, poor network services are also a source of problems that prevent students from a successful implementation of ICT in their study. A big problem with many ICTs is that each material requires certain skills and basic knowledge that students lack.

Basically, the significant problem that students face is that they do not have awareness of the appropiate utility of ICT in their learning. Students need to be aware of the potential of ICT to enable them to prepare and present their learning more effectively. To summarize, the following are the major barriers that prevent students from the effective usage of ICTs in their studies:

- ✓ Time limitations and difficulty in devoting enough time for studies.
- ✓ Limited access to internet.
- ✓ Lack of self-confidence.

- ✓ Lack of support which motivate learners towards the appropriate usage of ICTs in education.
- ✓ Unreliability of materials.
- ✓ Lack of the basic ICT skills and the knowledge how to use it effectively.

Generally, there are many obstacles that prevent teachers and students from using ICT effectively. These can be identified as follow : " lack of computers, lack of time, technical problems, teachers' attitudes towards computers, poor funding, lack of teacher confidence, lack of computer skills, poor fit with the curriculum, lack of incentives, scheduling difficulties, poor training opportunities, and lack of skills in how to integrate ICT in education".[9] Despite of the difficulties that face teachers and learners this does not prevents them from trying to integrate ICTs. In fact, the effective use of ICT depends upon the choices that teachers and students make about how to use ICT as an integral part of teaching and learning process.

Conclusion

All in all, this chapter has given an overview about the theoretical basis of ICT in education. In addition, it describes E-learning trends. Moreover, it highlights the various advanteges of incoperating ICTs inside the classroom which help learners promote their critical thinking skills. The following chapter covers critical thinking in education and learners' critical thinking skills and how to enhance their skills with the use of ICTs.

[9] Khalid Abdullah Bingimlas (2009). Barriers to the Successful Integration of ICT in Teaching and Learning Environment : A Literature Review, Australia, p 241

Chapter Two: icts AND CRITICAL THINKING

Introduction

The second chapter discusses the concept of critical thinking in education. The main goal is to have a clear idea about what is critical thinking, the characteristic that a critical thinker possess and the relation between ICT and learners' critical thinking. At first, this chapter introduced an overview of critical thinking, its root and importance. Additionally, it points out the characteristics that learners should possess to become critical thinkers, which were introduced by scholars in the field of critical thinking. Then, it mentions learners' critical thinking skills -reading, writing, listening and speaking- and explains the mechanism of these skills in details. Furthermore, it presents the relationship between integrating ICT in classroom and the development of learners' critical thinking competences.

2.1 Critical Thinking in Education

Due to the demand of the workplace, the primary goal of education is to develop students' thinking skills more particularly their higher order thinking competences. It is to develop students who are able to think critically and analytically. Educators have become more interested in teaching 'thinking skills'. They were aware of the importance of teaching critical thinking skills as an outcome of students learning and to prepare them to succeed in the world.

There have been various attempts to define critical thinking. Originally, critical thinking has roots in two primary domains which are philosophy and psychology. The philosophical domain tends to focus on the hypothetical critical thinker, enumerating the qualities and characteristics of this person rather than the behaviors or actions the critical thinker can perform (Lewis & Smith, 1993; Thayer-Bacon, 2000). Typically, the cognitive psychological approach focuses on defining critical thinking includeing a list of skills or procedures performed by critical thinkers (Lewis & Smith, 1993).

The most well-known attempt to the contribution of the development in critical thinking is Robert Ennis. Ennis states that critical thinking is reasonable, reflective thinking that is focused on deciding what to believe or do. According to Ennis (1985) critical thinking consists of three basic parts which are: problem solving, reasoning process and decision making. "From the cognitive scientist's point of view, the mental activities that are typically called critical thinking are actually a subset of three types of thinking: reasoning, making

judgments and decisions, and problem solving"[10].This confirmes what Ennis brought in the field of critical thinking.

Furthermore, those working in the educational field like the prominant educator Benjamin. Bloom participated in the discussions revolving around critical thinking. Bloom provides a classification of the learning objectives which denotes thinking skills as comprising knowledge, comprehension, application, analysis, synthesis and evaluation. Educators argue that the three highest levels of taxonomy (analysis, synthesis, and evaluation) constitute to critical thinking which Barak and Dori refers to in their statement. Similarly, "Barak and Dori (2009) explain that higher-order thinking can be viewed as a complex mode of thinking that often generates multiple solutions, without reliance on the application of specific sets of procedures. Some of these skills are included at the upper end of Bloom's taxonomy of the cognitive domain, such as synthesis, application and evaluation".[11]

Therefore, Critical thinking is seen as a set of skills that requires taking responsibility and control of one's own mind. It involves logical and reflective thought to decide what to believe is true or false. For Tsui, critical thinking is "an ability to identify issues and assumptions, recognize important relationships, make correct inferences, evaluate evidence or authority and deduce conclusions" (2002:743). Obviously, Critical thinking is being open to new evidence that confirms or disconfirms thoughts, to end up with deducing conclusions from available facts, and try to solve problems.

"Critical thinking skills are important in making students learn how to acquire knowledge, construct it and apply it to solve new problems critically".[12] It is a thinking which is purposeful, reasoned, and goal-directed through the use of skills and strategies. Critical thinking involves a set of cognitive skills and dispositions. The cognitive skills of critical thinking are set up as follow:

- ✓ Analyzing arguments
- ✓ making inferences through the use of inductive or deductive reasoning
- ✓ making judgement or evaluation
- ✓ and making decisions or solving problems

The critical thinking dispositions include:

[10]. Daniel T(2007). Critical Thinking Why Is It So Hard to Teach?, Willingham,p 11
[11] David Subran (24th April, 2013), Developing higher-order thinking with ICT, p1
[12] Lee Min (2004). Enhancing Critical Thinking Skills through ICT in English Reading, p 5

- ✓ Open- and fair-mindedness
- ✓ Inquisitiveness
- ✓ Flexibility
- ✓ The propensity to seek reason
- ✓ The desire to be well-informed
- ✓ Respect for and willingness to entertain various viewpoints.

Critical thinking is becoming increasingly important in education. Many educators sought to introduce teaching critical thinking and provide a set of characteristics that students have to develop in order to become critical thinker. There is a need to prepare learners who are critical thinkers through the integration of information and communication technologies into EFL classrooms.

2.2 Characteristics of Critical Thinker

Many scholars agreed on the need to develop learners who have the ability to think critically to solve the problem(s) they face in their very daily life. According to several studies, critical thinkers have to know that applying the steps of thinking make their thinking process more effective as well as develop their critical thinking skills. The step to effective thinking are stated as follow :

- ✓ Identify the problem (s)
- ✓ Define the context and gather relevent information
- ✓ Enumerates the choices and options you have
- ✓ Then, analyze and assess the situation
- ✓ List reasons explicity
- ✓ Finally, the process of self-correction

"A person who thinks critically can ask appropriate questions, gather relevant information, efficiently and creatively sort through this information, reason logically from this information, and come to reliable and trustworthy conclusions about the world that enable one to live and act successfully in it".[13] A critical thinker is capable of solving problems through raising vital questions and collecting and assesses relevant information to come up with logical and well reasonable ideas and solutions. Being critical thinker means to think open-mindedly 'thinking outside the box'. Critical thinker takes time to solve problems and came up with thoughtful decisions to cope with the situation. Critical thinker has the desire to learn and discover new things and tune to continue learning and understanding how things work together. One of the main characteristic that a critical thinker possesses is to remain objective and tries to understand the purpose behind certain percepectives. Critical thinker has the ability to differenciate between a rational thought based on careful consideration and emotional thought based on personal bias.

Becoming a skilled thinker requires to understand thought process and how to use it to structure the analysis of any problem. In this context, Paul-Elder (2009) point out "critical thinkers routinely apply intellectual standards to the elements of reasoning in order to develop intellectual traits". Paul and Elder introduce a framework of critical thinking that consists of three components which are: (see figure A)

[13] Steven D (January 1991). Schafersman; An Introduction to Critical Thinking, p 03

- ✓ **The elements of thought (reasoning):** The elements of reasoning are inter-related. "Whenever we think we think for a purpose within a point of view based on assumptions leading to implications and consequences. We use data, facts, and experiences to make inferences and judgments based on concepts and theories to answer a question or solve a problem".[14]
- ✓ **The intellectual standards:** consist of "clarity, accuracy, precision, relevance, depth, breadth, logic, significance, fairness".
- ✓ **The intellectual traits:** involve "humility, perseverance, empathy, integrity, autonomy, fair-mindedness, confidence in reasoning, integrity".

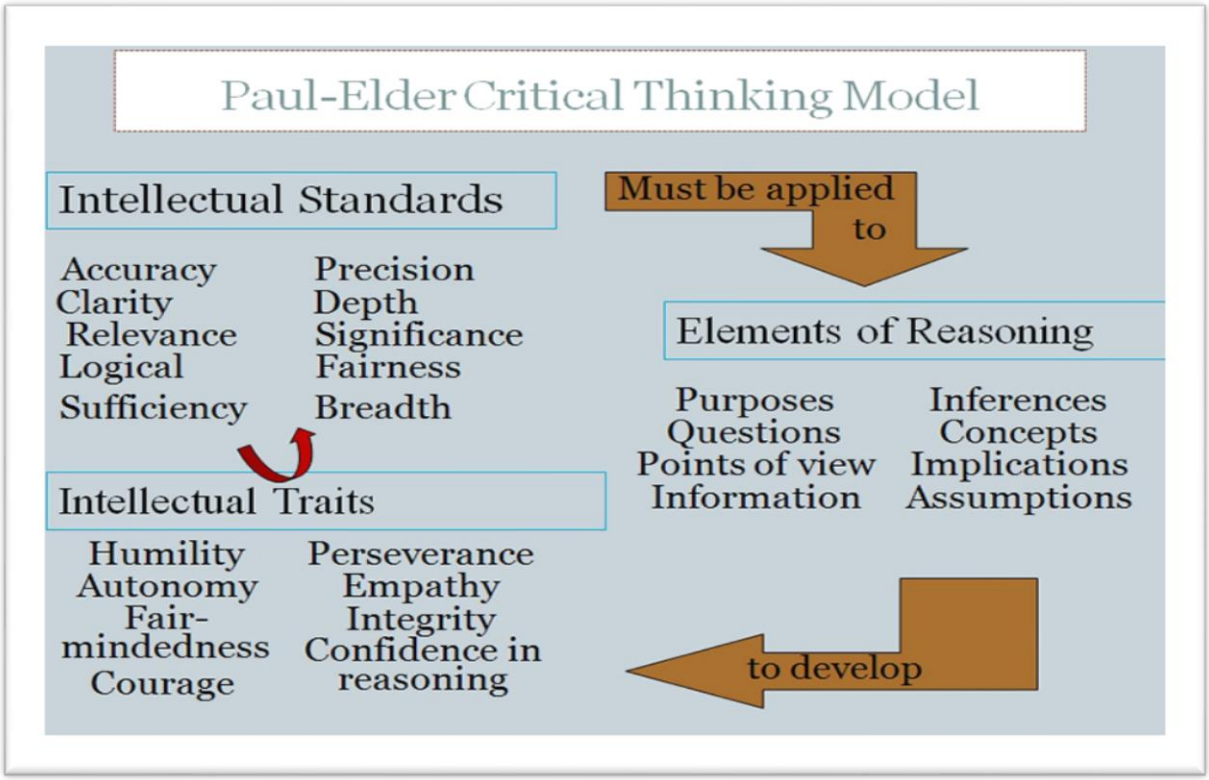

Figure A: Paul-Elder critical thiking framework

Understanding and applying the framework of Paul-Elder's make learner successful critical thinker. For Raymond S. Nickerson (1987) a good critical thinker is characterized in terms of knowledge, abilities, attitudes, and habitual ways of behaving, uses evidence skillfully and impartially. Generally, critical thinkers tend to display the following characteristics:

- ✓ Organizes thoughts concisely and coherently.

[14] Brian Denis Egan (2005). The Role of Critical Thinking in Effective Decision Making, p7.

- ✓ See the difference between logically valid and invalid inferences.
- ✓ Distinguish between reasoning and rationalizing.
- ✓ Applies problem-solving strategies.
- ✓ Recognizes the fallibility of one's own thoughts.
- ✓ Being open to new opinions and perspectives.

Learners need to develop their critical thinking skills. This requires practice and time and most importantly to have a basic understanding of the process of thinking and the various elements of critical thinking.

2.3 Learners' Critical Thinking

In order to display critical thinking, students need to improve specific skills. These skills are interpreting, analyzing, reasoning, evaluating. When students develop these critical thinking skills, they will be able to achieve better results in their study, become less dependent on teachers as well as textbooks, create knowledge and find solutions to problems. Besides, the process of critical thinking allows learners to monitor their four macro skills reading, writing, listening and speaking and make them became critical thinker.

2.3.1 Critical Reading

Reading is an essential skill in learning a foreign language that helps students to improve their writing skill. Critical reading is an important skill that aims to help students to evaluate the validity of others' point of view to become well informed about their intention. Critical reading is considered as a vital part of the writing process. According to Kurland (2000), critical reading is, therefore, a technique for discovering information and ideas within a text. Critical readers recognize not only what a text says, but also how that text portrays the subject matter.

"Critical reading is reading actively with the goals of identifying arguments, weighing evidence, evaluating sources, looking for conflicts of interest, and questioning underlying assumptions".[15] It is an active, reflective and analytic way of reading where the reader is engaged in a text. A critical reader has the ability to determine the aim of any piece of writing. He/she attempts to analyze, interpret and make judgments about how a text is argued and developed.

2.3.2 Critical Writing

The most important skill that student can learn through schooling is writing with critical thinking. The process of critical writing depends on the notion of critical reading. Critical writing is a type of writing and a complex process which involves more thinking to develop ideas in coherent piece of writing. Critical writing is an involvement in an academic debate that must be developed through regular practice. It requires accepting or criticizing conclusions of other writers through evaluating the arguments and evidences they have provided. Critical writing involves making a judgment on the quality of any piece of writing;

[15] Manuel Vallee (2016). Teaching Critical Reading, University of California, p5.

outlines implications, draws conclusions and find solutions. It is a process where the writer views a specific subject from different angels or questions.

2.3.3 Critical Listening

Critical listening is also an important skill that helps learners improve their speaking skill. Critical listening is the desire to evaluate messages. The main principle of critical listening is to listen to any audio objectively. Critical listeners tend to focus on the accuracy and consistency of messages. Critical listening is a rational process of evaluating arguments put forward by others. Critical listening requires developing the basic skills which are:

- ✓ Understanding the hearer and the context,
- ✓ Probe: through asking questions to gather additional information to have a clear understanding of the message that the hearer want to transmit.
- ✓ Discrimination: is an important element of critical listening where the listener breakdown the information into parts.
- ✓ Knowledge of argumentation

2.3.4 Critical Speaking

In language teaching and learning, speaking is an essential skill to be mastered. The growing need for communication in the information age, has led many EFL learners to improve their speaking ability most importantly their critical speaking. According to Florez (1999), speaking is an interactive process, which consists of three main stages which are producing, receiving and processing information. Therefore, speaking a language requires the ability to use the language appropriately and effectively in social interactions with others.

The four critical skills (critical reading, writing, listening and speaking) and critical thinking are inter-related. Students need to develop their skills through the use of technological devices. Since, the process of critical thinking allows students to monitor their thoughts and enables them to be successful in their study.

2.4 The Relation between Integrating ICT in Classroom and the Development of Learners' Critical Thinking Abilities

The use of Information and Communication Technlogy has brought remarkable changes at all level of schools and most importantly in universities. At university students will have the chance to acquire and applay knowledge to real-life working situations. Therefore, students need to develop their critical thinking skills. This what ICT offered when it impelement effectively in educational setting. Recently scholars were interseted to investigate the relationship between the ICT in education and learners' ability to think critically.

In this context, Jonassen proposed that when teachers view computers as mindtools, they begin to engage learners in critical thinking skills : "Mindtools are computer-based tools and learning environments that have been adapted or developed to function as intellectual partners with the learner, in order to engage and facilitate critical thinking and higher order learning" (2000 p.9). Teachers integrate computers to reflect real-life situation and ask students to illustrate their understanding of the topic. This opportunity will make learners feel confident to express their thoughts; this will help them enhance their thinking skills. The more students become experts in the use of computer equipment, the more freedom they feel to become more creative.

Another way for encouraging students to think critically is the use of social media such as facebook. The latter is a geart motivator for learners. This social media allows teachers to post links, documents and let learners discuss its content. This process will help learners' improve their reading and writing skills.

Most importantly, critical thinking skills helps learners achieve a deeper and longer lasting understanding of the concepts; it has enabled them to explained and apply what they have learned[16]. The learners who have critical thinking skills understand different subjects and information in technology-rich environment much better. Therfore, the students' who use Information and communication technology in their own way keep them actively involved in the learning process ; this tendes to improve their critical thinking skill and creativity. The use of ICT to do tasks in the classroom help in raising students' motivation towards learning

[16] Mohammad Zare, Raheleh Sarikhani (2015). The Relationship between the Use of Information and Communication Technology (ICT), Critical thinking, and Creative Thought , p 78

Furthermore, learners can exercise their critical thinking skills through web pages. The latter allow them to edit their knowledge. In addition, blogs are beneficial in teaching /learning process. Since, they provide learners with the opportunities to select the suiatble links to agree or disgree with the contents that been downloaded. Moreover, internet provides a diversity in sources and information which enables learners to choose the appropriate activities for their tendencies. Consequentaly, this will help them develop basic critical thinking skills. Additionally, documents on pdf forms are attracting students' attention rather than printed ones. This used to motivate learners towards reading. Since, reading develops their imagination, critical thinking and enrich their vocabulary as well. Besides, the use of video multi-media technology in teaching/learning has a lot of advantages on learners' cognitive skills.

Conclusion

Overall, I have attempted through this chapter to shed light on critical thinking in education. After that, I point out the basic characteristics that learners' dislay in order to become critical thinkers. Then, I tackled the importance of the four critical skills. The main part of this chapter is about introducing the relation between implementing ICT in the classroom and its affects on students' cognitive skills. The next chapter deals with the practical part of the research study.

Chapter three: DATA and data Analysis

Introduction

The present research study is concerned with the effects of integrationg ICT into EFL classes and the development of learners' critical thinking skills. The previous two chapters presented a review of related literature to ICT and critical thinking in the field of education. Then, it is followed the practical part. This chapter introduces the methodological part, and illustrates the steps of the research methodology and design followed to achieve the objectives of the study. This chapter consists of five main sections. The first section indicates the setting where the study was undertaken. The second section describes the participants who took part in the research study. Next, in the third section the research tools used to gather data are indicated. Then, the data collection process concering both students' and teachers' questionnaires are explained in details. Finally, the data analysis is described to indicate the findings of the study.

3.1 Setting

The present study took place in February, 2017 in the Deparetmant of English at Abdelhamid Iben Badis University of Mostaganem. Both qualitative and quantitative research methods were used to investigate how integrating ICTs' can enhance EFL learners' critical competencies. The survey deals with different groups of first and second year EFL master students and teachers at the same university as a sample population during the academic year 2016-2017.

3.2 Participants

The informats of the current study are a sample of first and second year master students in the department of English at the University of Abdelhamid Iben Badis of Mostaganem. The variables of this research study included ten (10) teachers and thirty (30) students. Their perceptions and opinions are essential to confirm whether the suggested hypotheses are valid or non-valid. The participants were randomly chosen.

3.3 Research Instrument

In order to collect data, there are different procedures to use: observation, interview and questionnaires. However, in the current study the primary research tool that was used to gather data from the participants was questionnaires. This research work involves two

questionnaires which are delivered to both EFL teachers and students in order to fulfill the overall aims of this study.

3.4 Students' Questionnaire

This section is concerned with indicating the aim behind addressing these questionnaires. Furthermore, the target participants who took apart in the research study were described. Then, it was followed by a detail description of students' questionnaire. Finally, the results of the study were presented and explained.

3.4.1 Aim of the Questionnaire

The students' questionnaire is designed for EFL students. The aim of questionnaire is to get students' perceptions about the use of ICTs in their learning. Not only to investigate the benefits and difficulties they encounter when using ICT tools but also to examine to what extent ICT helps them improve their critical thinking skills.

3.4.2 Administration of the Questionnaire

The target participants of this questionnaire are first and second year master students in the Department of English at the Abdelhamid Iben Badis University of Mostaganem. They were chosen randomly. The informants have showed their interest and collaboration through participating in the survey and have tried to complete answers, adding comments and suggestions when it was necessary that helped us in to reach the aims of our research.

3.4.3 Description of the Questionnaire

The questionnire begins with an introductory paragraph which explains the aim of the research study. This questionnaire involves two kinds of questions:"closed" and "open–ended" questions. Closed questions require the students to answer by "Yes" or "No" or to tick the appropriate answers from a set of options depending on their preceptions. The second type of questions 'open-ended questions' require from students to state their personal opinions, background information about subject matter or provide a clarification for their selection.

The questionnaire addressed to students consists of (13) questions in which learners were asked to answer according to their knowledge and their perception about ICT usage in education and its effectiveness in enhancing their cognitive skills. Students' questionnaire was classified under two main sections.

Section one: Background Information

It is about the students' background information. It seeks to gather background information about the participants of this questionnaire. It contains three questions. The first question specifies the gender of the students. The aim behind raising this question is to have a range of opinions from both genders. The second question seeks information about the students in terms of level. The objective to ask this question is that students' level is essential to notice how their level can influence aquiring the basic skills of ICT. In third question, students' are asked to indicate their age beacuse the new generation is aquiepted with the use of ICTs in their learning rather the old generation.

Section two: ICT and Critical Thinking in Education

This section contains ten (10) questions (see the appendix I). The objective behind asking these questions is to seek finding data about the utilization of ICTs in education and the improvements of learners' critical thinking competences.

In the first question, the students were asked to identify what the term ICT refers to. Then, they were requested to state if they are familiar with its materials.They were asked to select to what degree they support the use of ICT in their learning. The following question requires from students to tick up the type of ICT tools they use in their study from a set of options. Another important question was to seek from students to indicate the main difficulties they encounter when integrating ICT in their learning process.

In the coming question students were asked to state their opinion about the concept 'critical thinking'. Furthemore, they were required to select which skill(s) they are improving.Then, they were asked to tick up whether they agree or disgree if ICT help them to promote their critical thinking effectiveness. In addition, the aim behind asking this question was to find the opinion of students about how ICTs have affected their thinking skills. Finally, they were asked to rate the use of ICTs in their university.

3.4.4 Data Analysis

The questionnaire is addressed to (30) EFL students. The objective is to know their opinions concerning how can integrating ICTs in their learning improve their critical thinking skills.This questionnaire includes 13 questions that will be analysed and presented in tables and graphs to simplfy the explanation of findings.

Section One: Background information

This section investigates the background information of the students (Gender, Age, Degree).

Q1- Specifying gender :

Sex	**Number**	**Percentage**
Female	20	66 ,67%
Male	10	33,33%
Total	30	100%

Table 01: Students' gender

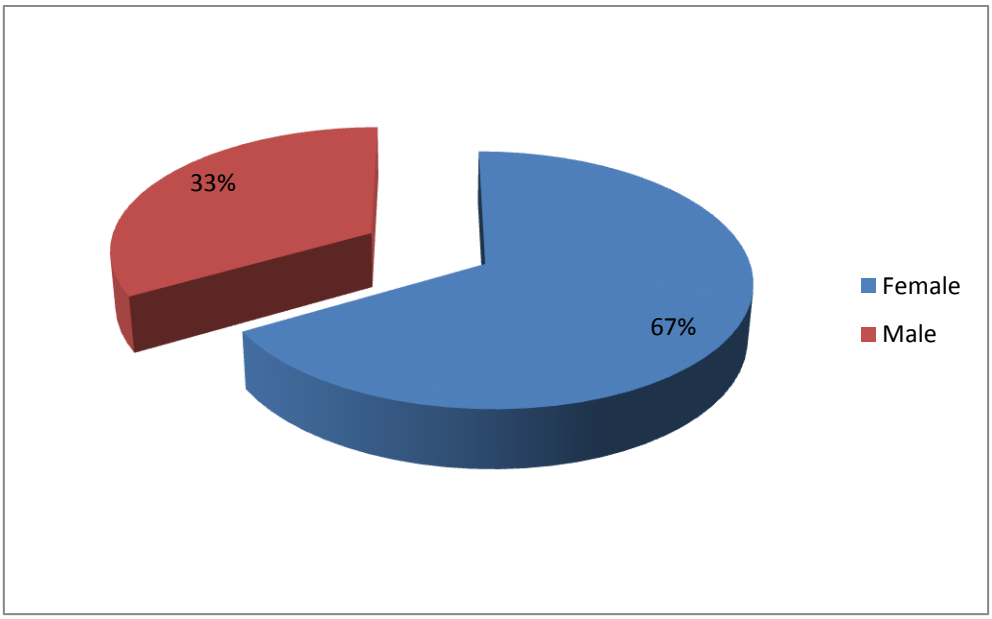

Figure 01: Students' gender

The figure (01) reveals that the majority of students are girls. The population contains (33.33%) males and (66,67%) females. The diversity in gender helps me to have a variety of opinions and ideas from both genders.

Q2- Age :

Age	**N**	**%**
21-23	19	63, 33%
24-26	9	30%
27-29	2	6,67%
Total	30	100%

Table 02: Students 'age

The table (02) indicates the results of students' age. They are varying from 21 to 29 years old. It shows that the majority (63,33%) is 21 to 23. The second category (30%) represents the students who are 24 to 26. The percentage (6,67 %) represents the students who are 27 to 29. The main purpose from asking this question is to confirm or deny the idea that younger students are more intrested in using ICTs in their learning rather than older ones.

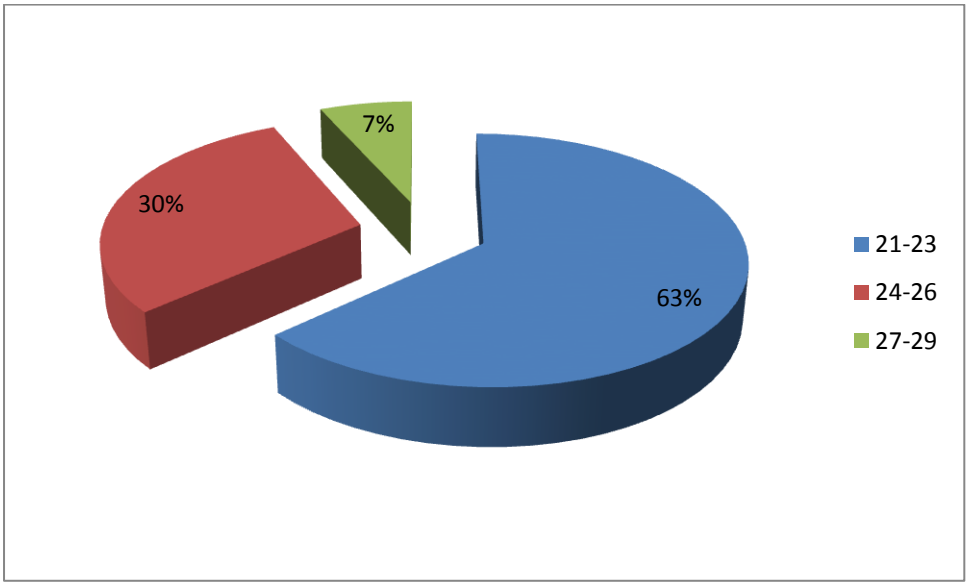

Figure 02: Students' age

Q3- Indicate your level:

a. Master one

b. Master two

Options	**N**	**%**
Master one	19	63,33%
Master two	11	36,67%

Table 03: Students' level

As the table (03) indicates, the majourity of participants (63,33%) are master one. While (36,67%) represents the informants who are master two.

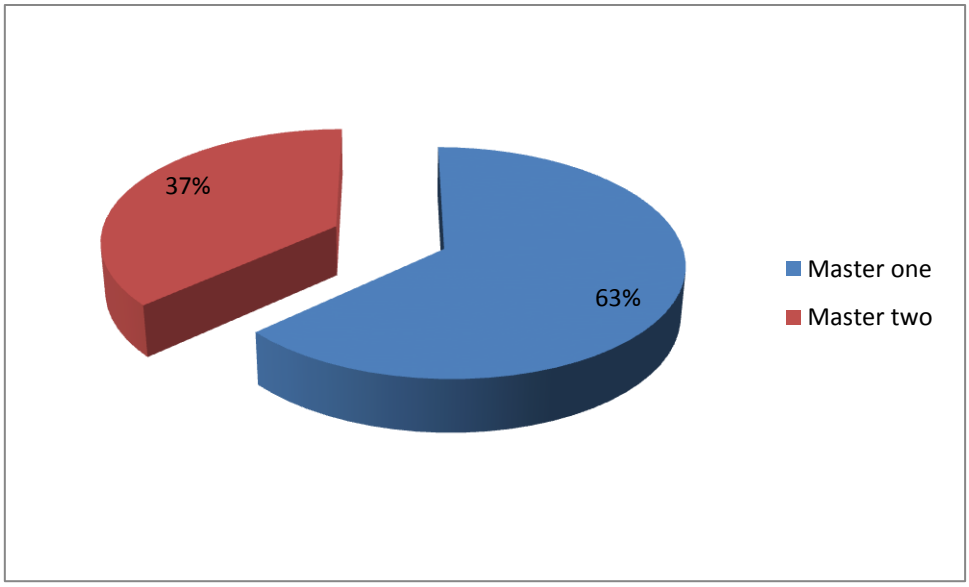

Figure 03: Students' level

Section Two: ICT and Critical thinking in education

Q4- What does the term ICT refer to?

Answers	**N**	**%**
Information and Communication Technology	21	70 %
I do not know	6	20%
Internet and Communication Technology	2	6,67%
Intercultural communicative Technology	1	3,33%

Table 04: Students' understanding of ICT acronym

As table (04) shows that the majority of students (70%) stated that the acronym ICT stands for Information and Communication Technology. On another hand, (20%) represents the informants who do not know what the term ICT refers to while only (7%) indicates that ICT refers to Internet and Communication Technology and only (3%) states that ICT refers to Intercultural Communicative Technology. This shows that there are students who do not know what ICT is but they are using it in their daily activities.

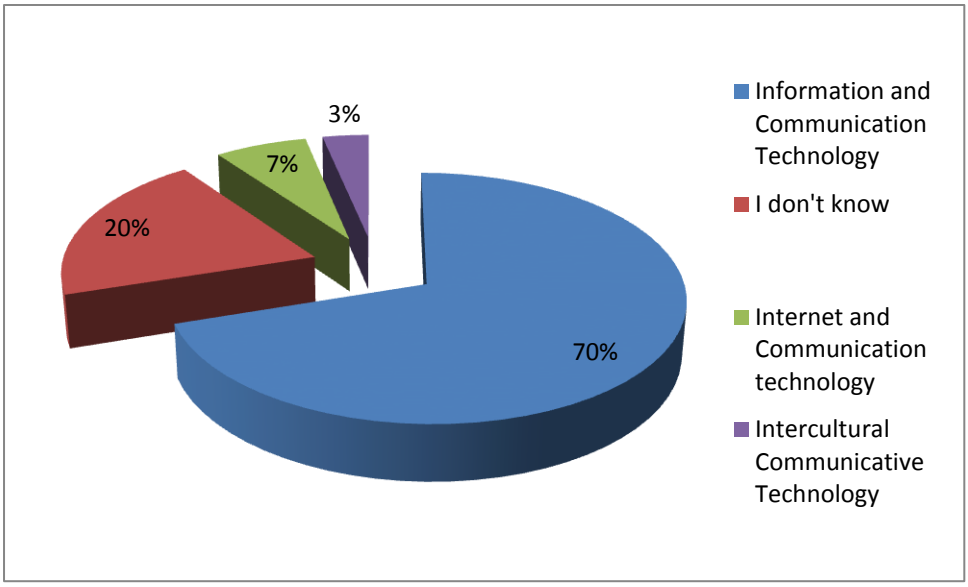

Figure 04: Students' undestanding of ICT acronym

Q5- Are you familiar with ICT materials?

a. Yes
b. No

Options	**N**	**%**
Yes	30	100%
No	/	/

Table 05: Students' familiarity with ICT materials

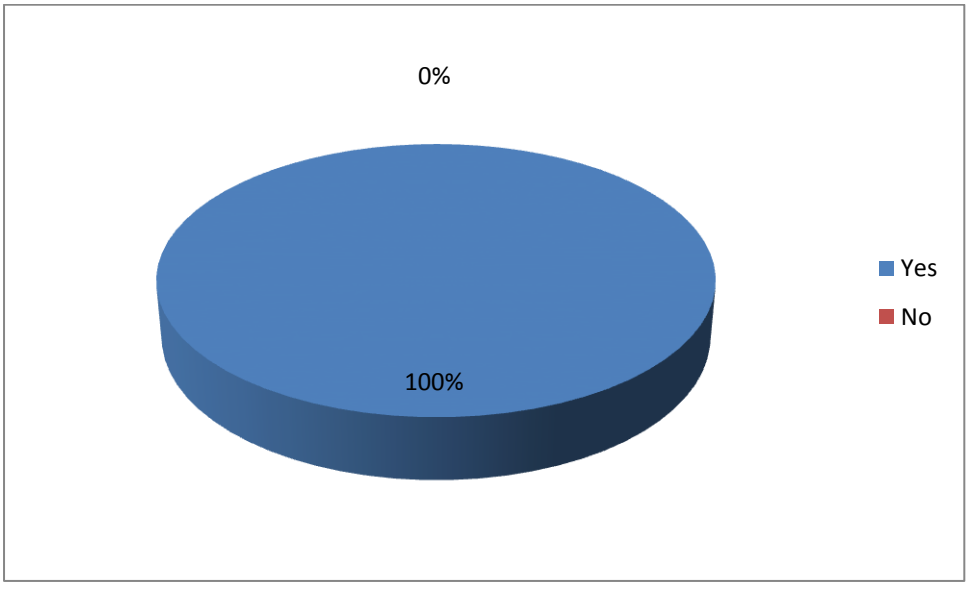

Figure 05: Students' familiarity with ICT materials

The participants were asked to tick up the appropriate box (es); 'yes' or 'no'. The figure (05) shows that the whole target population answer 'yes'; (100%) reply that they are familiar with ICT materials. It is a general question in order to notice if they are using ICT tools in their everyday activities.

Q6 - Do you use ICT to support your learning?

Frequency	**N**	**%**
Never	/	/
Always	14	46,67%
Somtimes	11	36,67%
Usually	4	13,33%
Rarely	1	3,33%
Total	30	100%

Table 06: Students' frequency of ICT use

This question aims at knowing how frequently students support the use of ICT in their learning. According to the findings that are shown in table (06), most of the students (47%) respond with 'always', while (37%) of the students respond by 'sometimes'. On the other hand, (13%) of students responded by 'usually'. The findings also show that only (3%) of the participants who rarely use ICT to support their study.

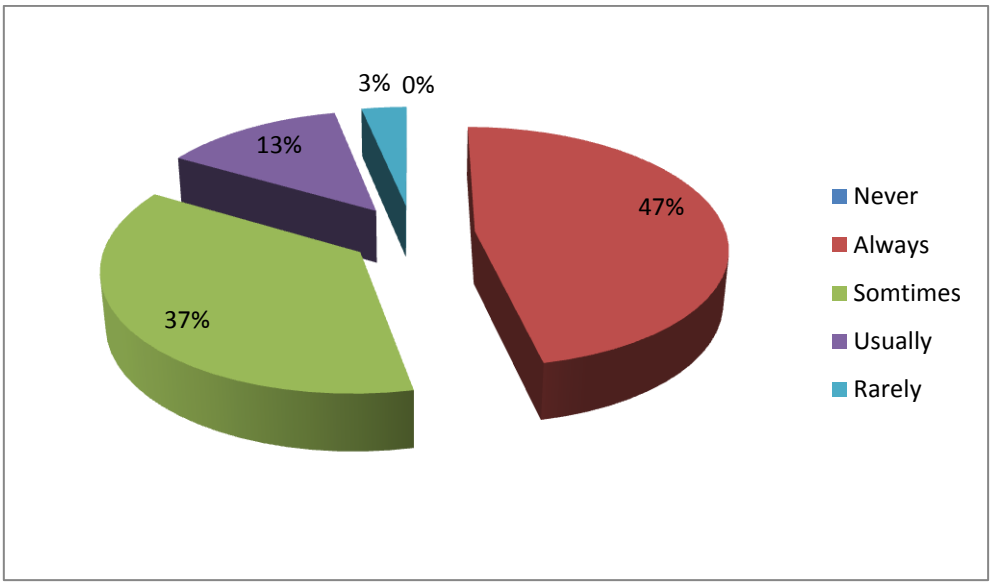

Figure 06: Students' frequency of ICT use

Q7- Select the type (s) of ICT tools you use in your learning:

Types of ICT tools	**N**	**%**
Computers	18	18%
Internet	23	23%
Cellphones	11	11%
E-mail	3	3%
Powerpoint	17	17%
Projectors	13	13%
Web pages	9	9%
Others	6	6%

Table 07 : Students' Tools

As shown in figure (07) below, a percentage of (23%) represents the participants who support the use of internet in their learning. The percentage (17%) indicates those who use PowerPoint while (18%) represents the ones who use computers. On the other hand, (13%) shows the informants who use projector to support the use of other ICT tools. Besides, (11%) represents the students who prefer to use their cellphones in studying. Furthermore, (9%) indicates the ones who use web pages to access to wide range of information and (6%) shows the students who use other devices such as face-book and youtube to support their learning. Only (3%) prefers to use e –mail.

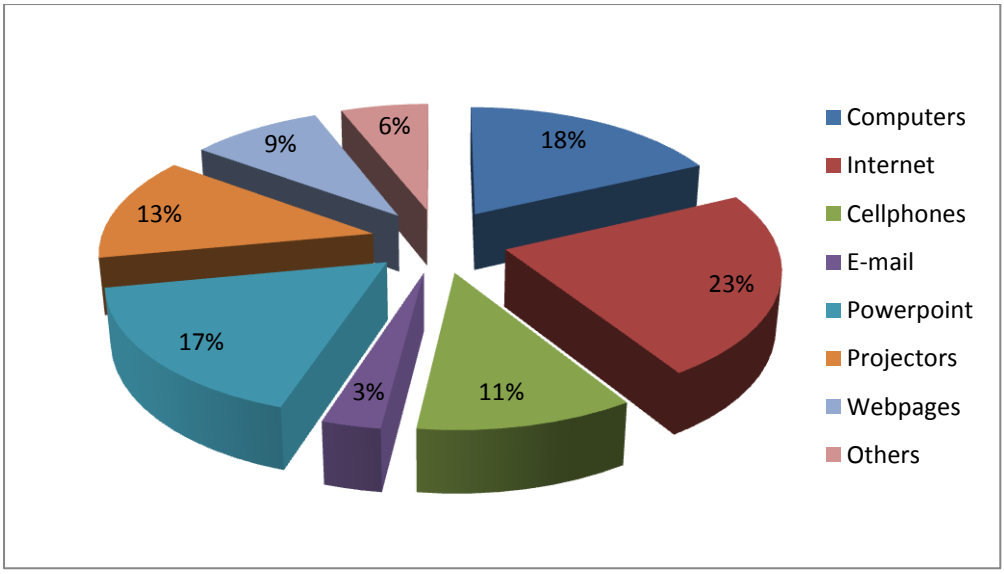

Figure 07: Students' Tools

Q8 -What kind of issue(s) do you face when using ICT in your learning process?

The following statements represent the answer of the participants' concerining the main issue(s) they face when using ICTs in their learning process:

- ✓ Technical problems
- ✓ Health problems
- ✓ Availability of materials
- ✓ Lack of funding
- ✓ Lack of ICT skills to use PC, PPT, OHP
- ✓ Internet distraction
- ✓ Reading comprehension difficulties
- ✓ Limited access to internet

Kind of ICT problems	**N**	**%**
Technical problems	3	10%
Health problems	1	3.33%
Availability of materials	6	20%
Lack of funding	2	6.67%
Lack of ICT skills to use PC,PPT, OHP	5	16.67%
Internet distraction	4	13.33%
Reading comprehension difficulties	6	20%
Limited access to interent	3	10%

Table 08: Students' problem in using ICT

From the results shown in table (08) above, we found that all EFL students encounter many difficulties in using ICT. (20%) represents the participants who have problems cocerning the availability of materials. Similarily, (20%) represents the ones who have difficulties in reading comprehension while looking for infomation. Then, (16.67%) shows that they encounter a lack of ICT skills when trying to work with PPT, OHP, and PC. Moreover, (13.33%) indicates that participants have problem in using ICTs because they found themselves distracted by irrelevent things while using interent to search for relevant data. The precentage (10%) represents the informants who find technical problems in using ICT to support their learning. Besides, (10%) indicates the students who have limited access

to interent. Finally, (6.67%) reprecents the ones who have funding problems and only (3.33%) shows that student have health problems since using these ICT tools decreased thier ability to see well.

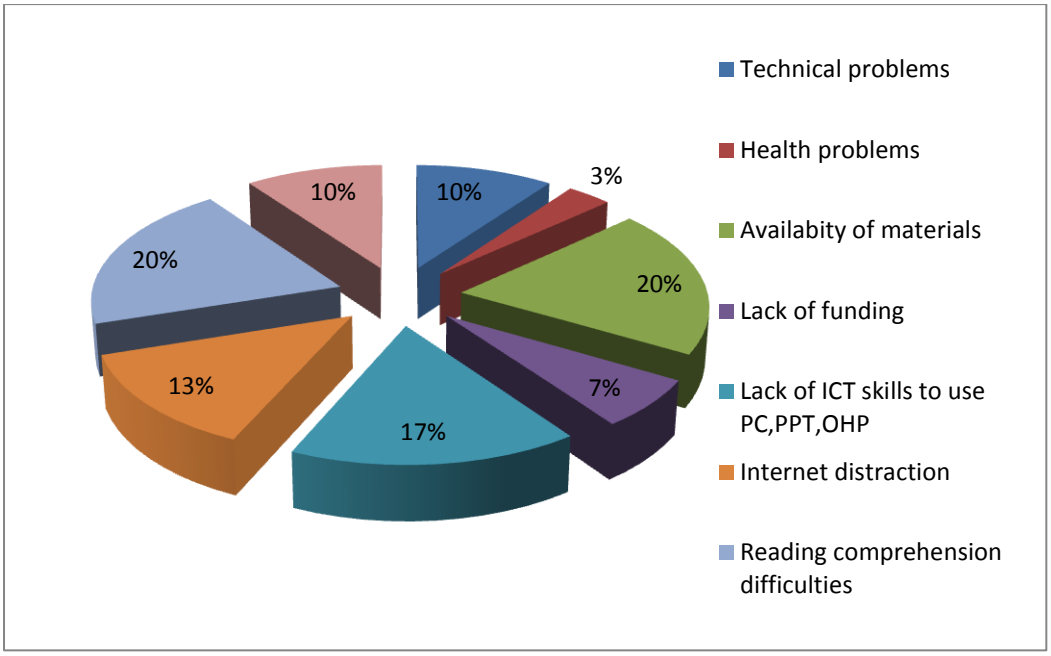

Figure 08: Students' problem in using ICT

Q9 - What do you understand by the concept "critical thinking"?

Options	**N**	**%**
No answer	15	50%
Answers	15	50%

Table 09: Defining critical thinking

Table (09) above shows the participants who gave answers concering defining the concept of 'critical thinking' and the ones who did not understand what it refers to. A precentage of (50%) represents half of the participants who did not have answers about the concept of critical thinking. On the other hand, (50%) represents the ones who understand what is meant by this concept. We have collected different answers concerning this question. They are as follows:

Student 01: 'The ability to think logically, and not take everything for granted'

Student 02: 'I think the concept of critical thinking refers to the analysis and discussion of claims, beliefs and issues'

Student 03:'Critical thinking or critical mind is the state of being aware of an issue and display or arguee that in a particular way subject matter'

Student 04: 'It means reading with using analyse and go deeper in order to ask questions'

Student 05: 'Critical thinking is a huge concept that meansyou think wisedly and the analysis of data in a way we benefit from, it is to think logically and to ask questions to a results and truths and to bring changes'

Student 06: 'The ability of analysing and thinking objectively, to distinguish between what is wrong and right reliable or not.'

Student 07: 'Critical thinking is a cignitive process which means that you should go beyond what are reading and to go deeper and to try to understand what the writer wants to say'

Student 08: The ability to think rationally or objectively to evaluate and distinguish issues'

Seven students: agree on one definition 'It is the ability to read, analyse and evaluate critically and not accept everything at random'

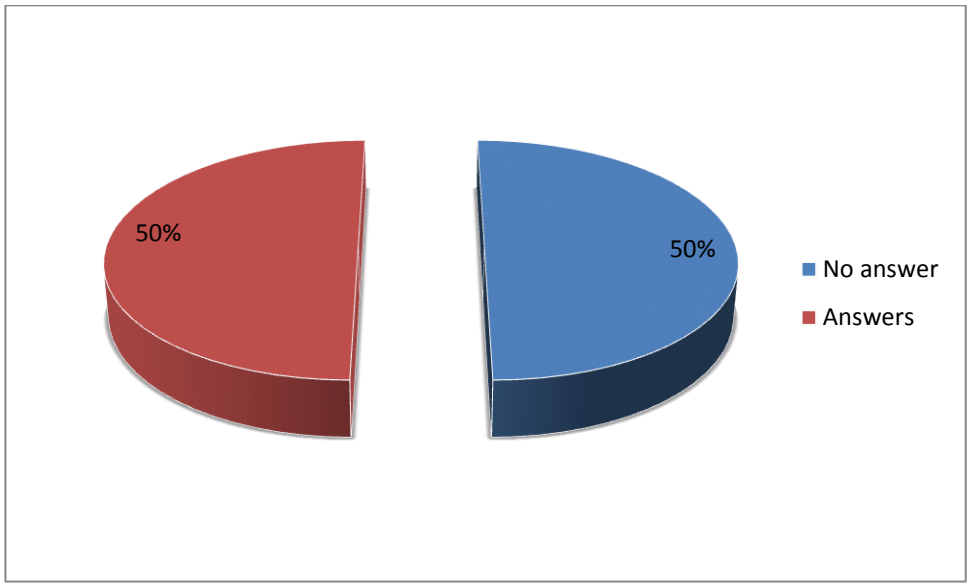

Figure 09: Defining critical thinking

Q10 - Which critical thinking skill(s) are you improving:

a. Critical reading
b. Critical writing

c. Critical listening

d. Critical speaking

Critical Skills	**N**	**%**
Critical reading	3	10%
Critical writing	15	50%
Critical listening	2	6,67%
Critical speaking	10	33,33%

Table 10: The critical skills that students are improving

This question was designed to detect which of the four skills learners are trying to improve. The results presented in the table above (10) indicate that most of students chose critical writing (50%). Then, critical speaking comes in the second place (33%) while critical reading presents (10%). Finally, critical listening is classified as the last one to be improved. This table shows that students are more interested in enhancing their productive skills rather than receptive skills.

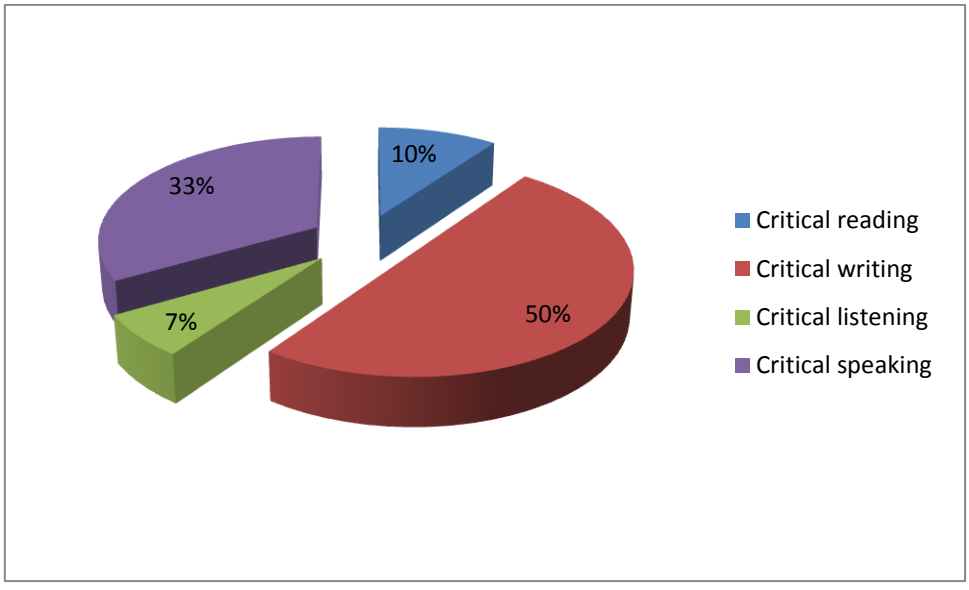

Figure 10: The critical thinking skills that students are improving

Q11 - Do you think ICT would help you promote your critical thinking effectiveness ?

a. Agree

b. Disagree

Options	N	%
Agree	30	100%
Disgree	/	/

Table 11 : Students' opinion

The findings in figure (11) show that there is no doubt that all the participants (100%) agree on the statement which says that 'Do you think ICT would help you promote your critical thinking effectiveness'.

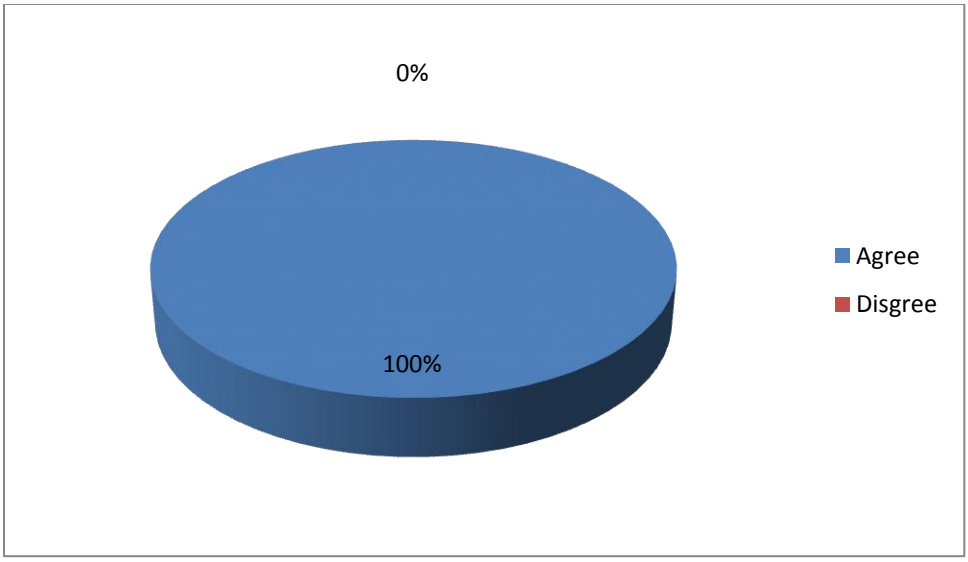

Figure 11: Students' opinion

Q12 - How have ICTs affected your critical thinking skills?

a. Positively
b. Negatively

Options	N	%
Positively	26	86.67%
Negatively	4	13.33%

Table 12: Students' attitude on the affects' of ICTs on their critical thinking skills

As table above (12) indicates most of the participants (86.67%) agree that ICTs have affected their critical thinking skills positively. In contrast, (13.33%) indicates that ICTs have affected their critical thinking negatively.

The participants who ticked up the option ‘positively’ agree on one idea to justify their choice which is ‘ICT has facilitated for us the easy access to a large amount of information and has given various opportunities to select what we need’. On the other hand, the ones who select option ‘negatively’ arguee on that ‘ICT make us somehow lazy we could found everything on the net concering our studies without bodering ourselves to work hard on using our styles in writing.’

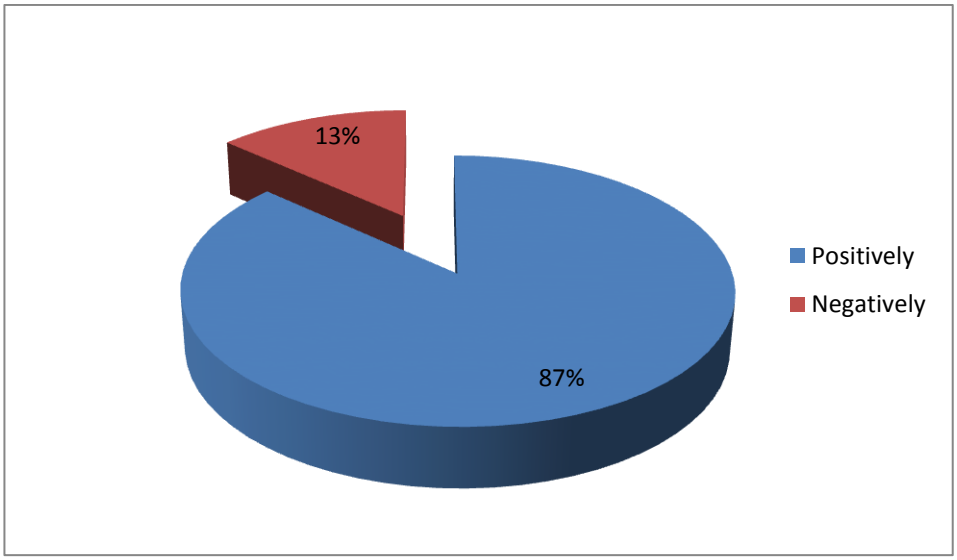

Figure 12: Students’ attitude on the affects’ of ICTs on their critical thinking skills

Q13- How can you rate the use of ICTs in learning at your university?

a. Bad
b. Low
c. Moderate
d. Good
e. Excellent

Options	**N**	**%**
Bad	3	10%
Low	11	36, 67%
Moderate	7	23,33%
Good	9	30%
Excellent	/	/

Table 13: The rate of ICT use at university

Through examining the students' answers, we found that (30%) represents the informants who see the conditions of ICTs in their university are bad. While (37%) see that it is low. In contrast, (23%) indicates the students who rate the use of ICTs at their university as moderate. Only (10%) agree that ICTs in the university are good if we compare it with other universities.(see figure 13)

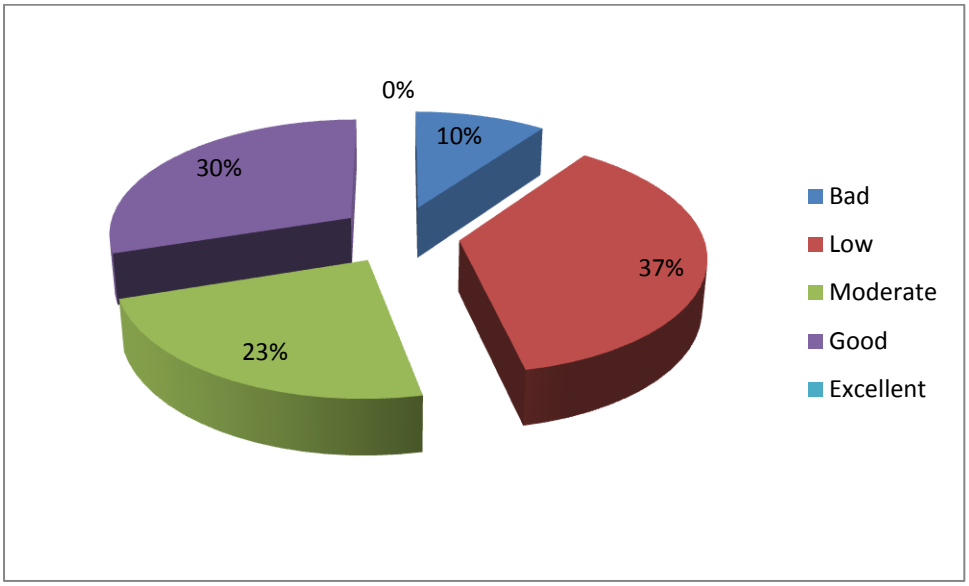

Figure 13: The rate of ICT use at university

3.5 Teachers' Questionnaire

This section is concerned with indicating the aim behind addressing this questionnaire. Furthermore, the target participants who took apart in the research study were described. Then, it was followed by a detail description of teachers' questionnaire. Finally, the results of the study were analysed, presented and explained.

3.5.1 Aim of the Questionnaire

This questionnaire is designed for teachers of English in order to fullfil the overall objectives of the study. The basic objective behind addressing this questionnaire to EFL teachers is to have more background information about their perceptions on ICT usage in education, as well as to have a clear understanding about the affects of using ICTs to promote learners' critical thinking skills and cognitive performance. It aims to share their experience in examining the effectiveness of integrating ICT into the classrrom. Besides, it aims to explore teachers' opinions and perceptions towards the use of ICT inside the classroom.

3.5.2 Administration of the Questionnaire

The target participants consist of English teachers in the Department of English at Abdelhamid Iben Badis University of Mostaganem. The questionnaire was administrated to (10) teachers who were randomly selected. They have showed their interest and collaboration through completing answers, and through adding comments and suggestions when it is necessary that help us reach the objectives of our research.

3.5.3 Description of the Questionnaire

The questionnaire begins with an introductory paragraph which explains the aim of the research study. The survey includes both types of questions "closed" and "open-ended" questions. The closed questions require from the teachers to answer by "yes" or "no" answers, or to pick up the suitable answer from a number of choices. On the other hand, open questions request from teachers to provide explanation or suggest other alternatives possible answers .The teachers' questionnaire consists of (13) questions which were divided into two essential sections. Each section deals with a particular subject.

Section One: Background Information

The first section elicited background information about the participants incorporated in the research study. The first question specified the gender of the teachers. The second question seeked information about the teachers in terms of degrees. In third question, teachers

were asked to give the number of years they have been teaching English, i .e, their teaching experience.

Section Two: ICT and Critical Thinking in Education

This section contained ten (10) questions (see appendix II). The first question aimed at exploring if teachers integrate ICT tools in their teaching. In the second question, they were required to indicate the kind of ICT tools they use. Another essential question is to state whether they have faced any difficulties when working with ICT equipments. Then, they were asked to indicate the major problems when integrating ICT into the classroom.

The next questionnaire seeked to know to what degree teachers encourage their learners' to implement ICTs in their learning process. Then, teachers were asked to provide their perceptions about the advantages of integrating ICT to promote EFL students' critical thinking competences. In addition, they were asked to tick up the appropriate anwers concering if ICTs have drwabacks on learners' cognitive skills and justify their selection. Furthermore, teachers were requested to select the suitable element(s) that is conserned as an essential part to implement ICT in education successfully or state another element according to their background knoweldge. Then, they were asked to indicate if there is a need to improve their ICT skills. Finally, teachers were required to provide recommendations to help students to enhance their critical thinking skills through the use of ICTs.

3.5.4 Data Analysis

The questionnaire is addressed to ten EFL teachers. The aim is to see their perspetions concerning the benefits of integrating ICTs in language classes on learners' critical skills. Furtheremore, the main purpose is to show their strategies and plans on how ICTs can be implemented successfully to enhance learners' cognitive skills. This questionnaire includes 13 questions that will be analysed and presented in tables and graphs to simplfy the explanation of findings.

Section one: Background information

This section indicates the background information of the teachers (Gender, Age, qualification).

Q1- Gender: a. Male

b. Female

Gender	N	%
Female	6	60%
Male	4	40%

Table14: Teachers' gender

The figure below (14) shows the gender of the teachers. Six (6) teachers are female and four (4) of them are male. The difference in gender helps us to have a variety of opinions and perceptions from both genders.

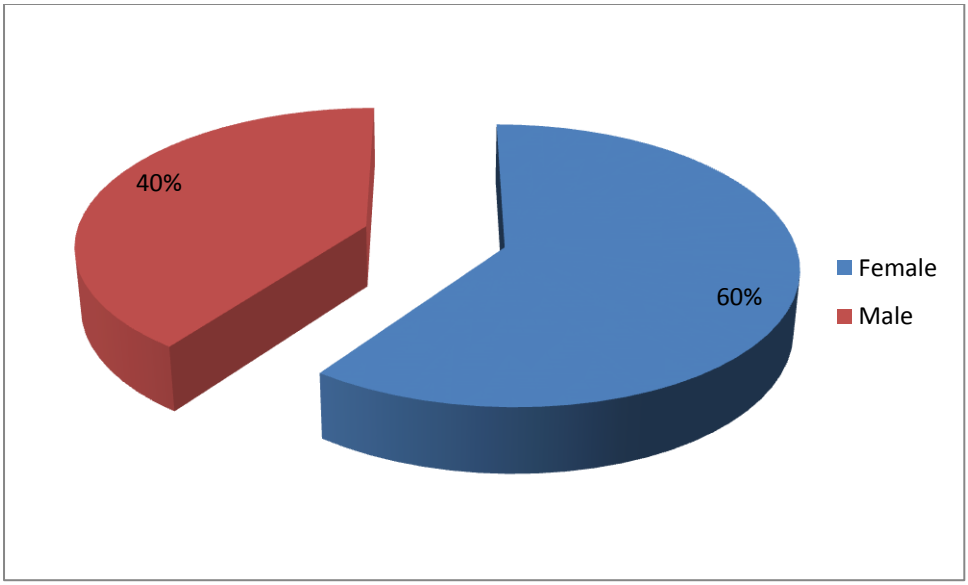

Figure 14: Teachers' gender

Q2- Degree (s) held:

a. License

b. Master/ Magister

c. Doctorate

Options	Responses	%
License	/	/
Master/Magister	9	90%
Doctorate	1	10%

Table 15: Teachers' Qualification

As figure (15) indicates, among the ten teachers, (90%) nine of them have Magister degree and (10%) only one teacher is a PhD holder.

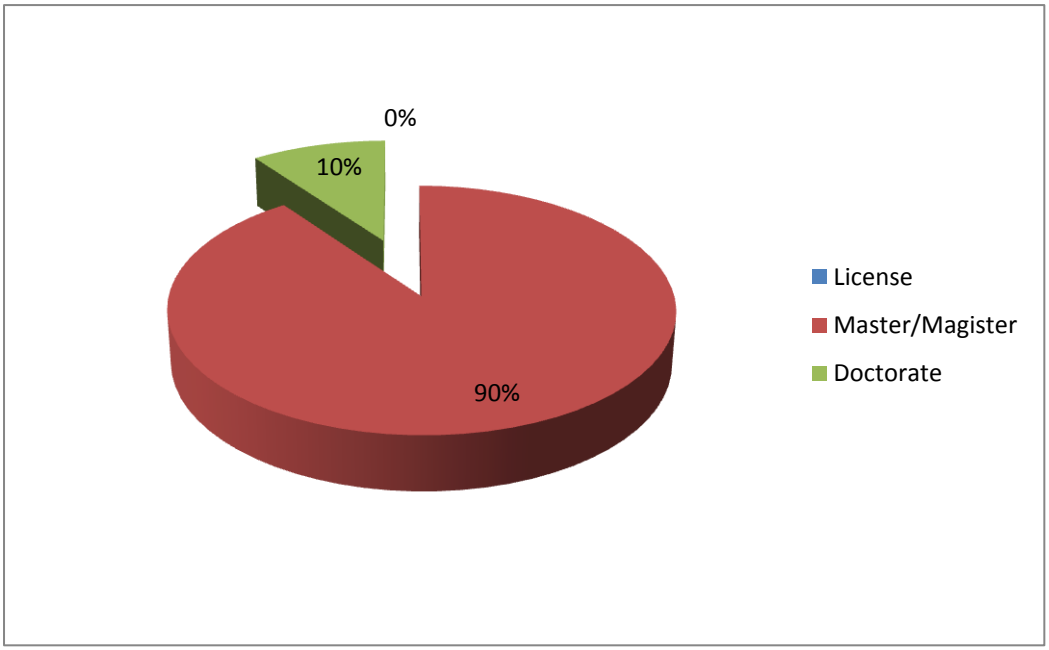

Figure 15: Teachers' qualification

Q3 - For how long have you been teaching English language?

Options	**N**	**%**
2 years	2	20%
5 - 15 years	1	10%
More then 16 years	7	70%

Table 16: Teachers' experience

The objective behind asking this question is to differentiate between the attitudes of teachers who have a long experience with those who do not have enough experience. The latter is an essential part in teaching English language. The results that are presented in figure (16) below indicate that (70%) of the informants has an experience of more than 16 years whereas (10%) have an experience of 5-15 years. Moreover, only two teachers who represent (20%) have only a 2 years experience.

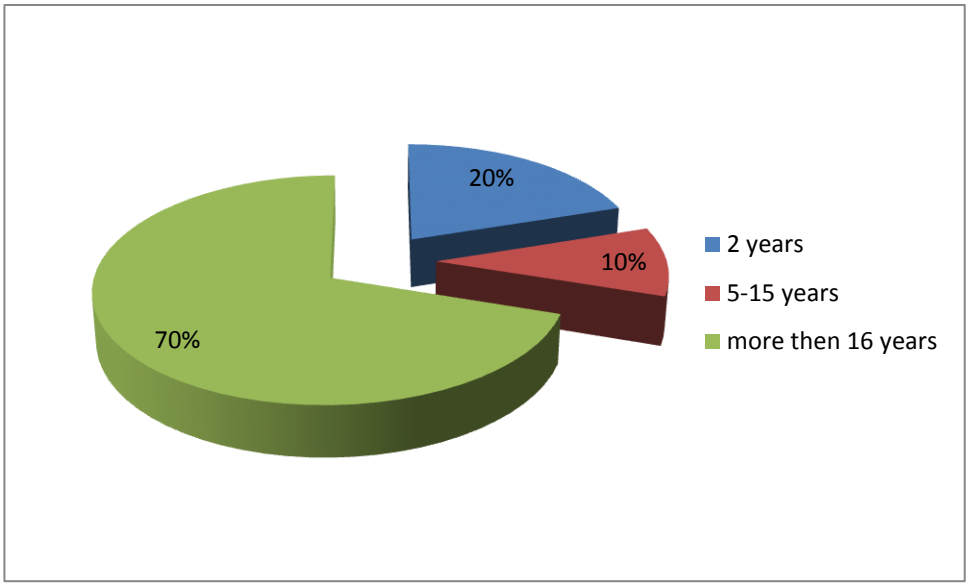

Figure 16: Teachers' experience

Section Two: ICT and Critical Thinking in Education

Q4- Do you integrate ICT tools in your teaching?

Options	**N**	**%**
Yes	10	100%
No	/	/

Table 17: Teachers' tools

Table above (17) shows that all EFL teachers (100%) integrate ICT tools in their teaching.

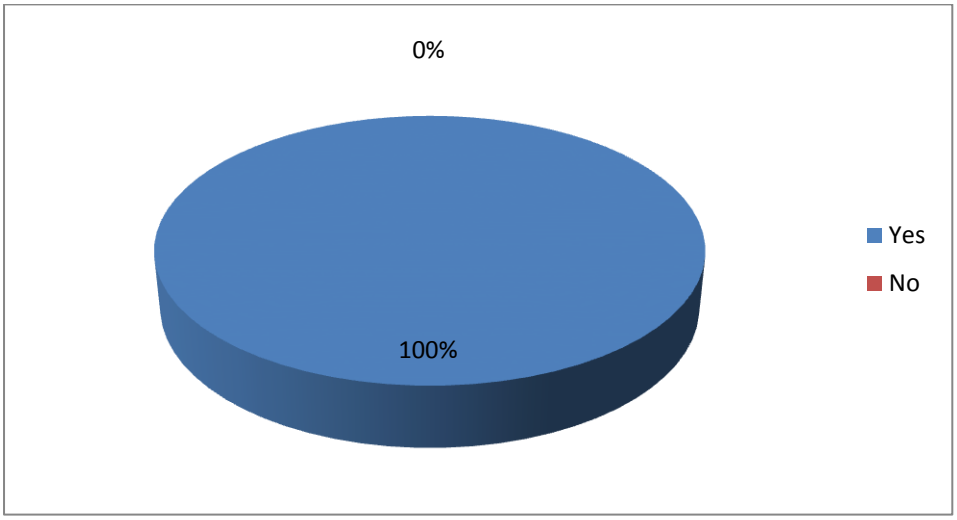

Figure 17: Teachers' tools

Q5- If yes, what type of ICT tools do you use in teaching?

The selected EFL teachers were asked to specify the type of ICT material(s) they use in their teaching in order to achieve better results. They state the only tools they use are 'computers' and 'projectors'.

Q6- Have you faced any dificulties when working with ICT materials?

a. Yes
b. No

Options	**N**	**%**
Yes	8	80%
No	2	20%

Table 18: Teachers' opinion if have problems in using ICT

The table above (18) shows that the majority of teachers (80%) marked on the option 'yes'. They state they find difficulties when working with ICT materials.While, (20%) represents the participants who did not faced any dificulties when using ICTs in their teaching. The results indicated in the figure confirm the idea that teachers' experience in the field of teaching holds an essential role in integrating ICTs successfully.

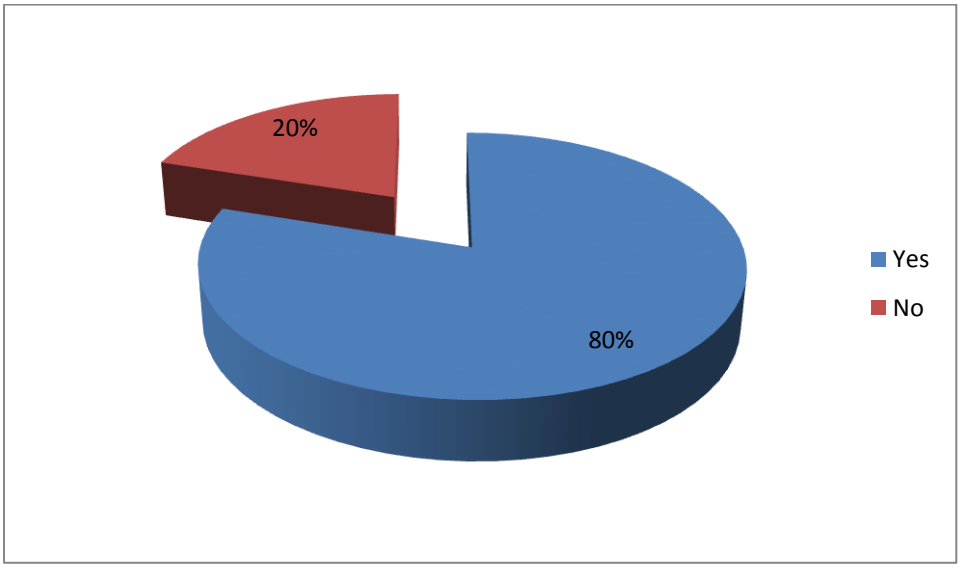

Figure 18: Teachers' opinion if have problems in using ICT

Q7- State the major problems you faced when using ICTs :

- ✓ Availability of materials and rooms
- ✓ Time management
- ✓ Technical problems
- ✓ Lack of ICT skills
- ✓ Negative attitude toward ICT

Teachers' barriers	**N**	**%**
Availability of materials and roms	4	40%
Time management	2	20%
Technical problems	2	20%
Lack of ICT skills	1	10%
Negative attitude toward ICT	1	10%

Table 19: Teachers' barriers in using ICT

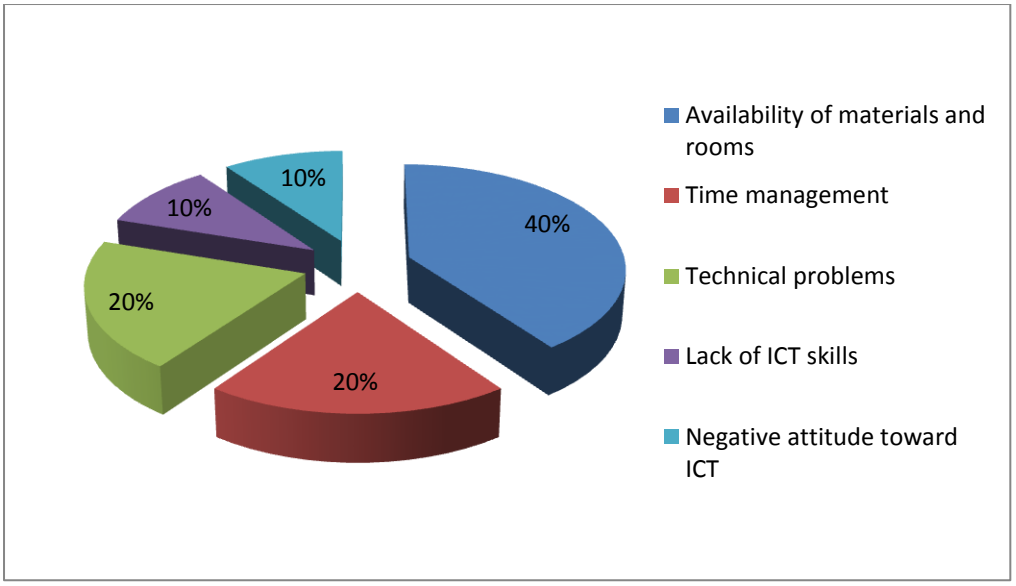

Figure 19: Teachers' barriers in using ICT

The figure (19) above summarizes the major obstacles of ICT use that teachers encounter. We found that most of EFL teachers (40%) suffer from a lack of materials in addition to availability of rooms with projectors. (20%) represents the teachers who encounter technical problems while working with ICTs. On the other hand, (20%) teachers have difficulties to manage time when integrating ICT tools to deliver lessons and lectures.

Furthermore, (10%) indicates the participants who have found it difficult to use computer because they lack the basic ICT skills. Similarily, (10%) represents the ones who have negative attitude toward ICT due to bad experience when use in it.

Q8- Do you encourage your learners to use ICT in their learning process?

a. Always
b. Sometimes
c. Rarely
d. Never

Frequency	**N**	**%**
Always	6	60%
Sometimes	4	40%
Rarely	/	/
Never	/	/

Table 20: Teachers' frequency to encourage learners' to use ICT

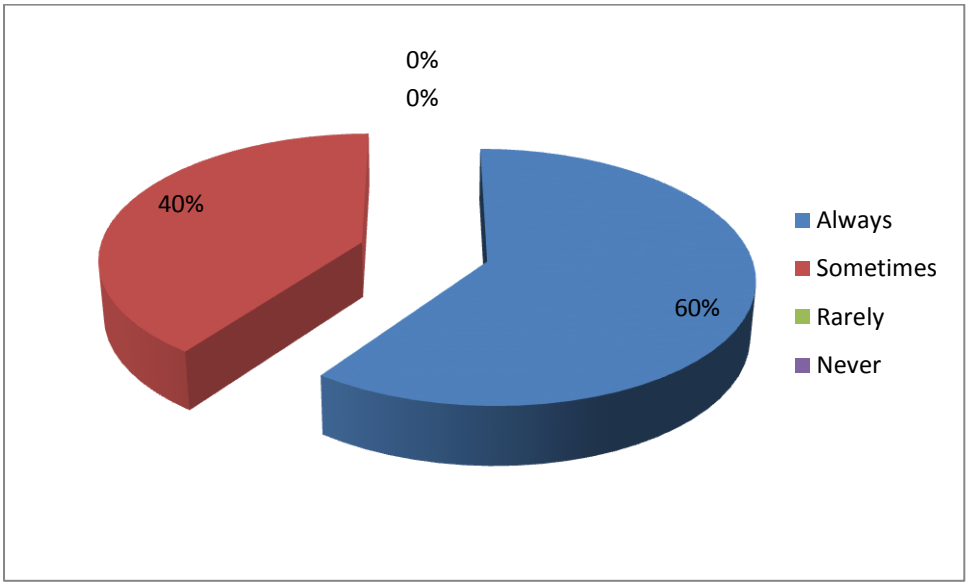

Figure 20: Teachers' frequency to encourage learners' to use ICT

This question aims at knowing how frequently teacherencourage their students to use ICT in their learning. According to the findings that are shown in figure (20), the majority of teachers (60%) respond with 'always'. While, (40%) of the teachers respond by 'somtimes'.

Q9- What are the advantages of implementing ICTs to enhance your learners' critical thinking competencies?

Most of teachers agree on the perception that integrating ICTs into teaching and learning process have a positive effects on learners' critical thinking skills only one teacher state clearly : 'I don't see the link in enhancing the learners' critical thinking' and three teachers did not answer. The answers which were collected from the participants varied from one teacher to another which are listed as follow:

Teacher 01: 'To make things clear as well as being able to explain and expand ideas'

Teacher 02: 'For example web pages such as 'wikis' provide students with the chance to add and edit information of any topic which help learners to improve their writing especially when they have the opportunity to give their point of view about the subject.'

Teacher 03: 'In oral expression for instance, it encourages the learners to take part in the discussion'

Teacher 04: 'It widens their horizons and their koweldge as well'

Teacher 05: 'One of the main effects of ICTs on learners' thinking skills is the use of youtube. It is a great tool that helps learners improve their both listening and speaking skills.'

Teacher 06 : 'The use of interent has a great benefits on developing learners skills .It provides them with an easy access to information about anything they want and download it in any form they want (mp3, mp4, pdf) according to their learnig styles this helps in enhancing their critical thinking skills'

Q10- Do ICTs have drawbacks in promoting EFL learners' critical thinking skills?

Options	**N**	**%**
Yes	9	90%
No	1	10%

Table 21: Teachers' opinion if ICT have drawbacks on learners' critical thinking skills

The participants were asked to mark the suitable option according to their opinipn then they are required to justify their selection. Table (21) reveals that (90%) of teachers indicate that ICTs have drawbacks in promoting EFL learners' critical thinking skills. On the other

hand, the precentage (20%) represents the informants who think that ICTs do not have any drawbacks on learners' cognitive skills. Out of ten (10) teachers, only (02) two teachers give a justification. Teachers' justifiction on option 'yes':

'They are extremely influenced by them and sometimes are even addicted. Also, they take everything for granted without critically evaluating information'

'They sometimes ecourage passivity'

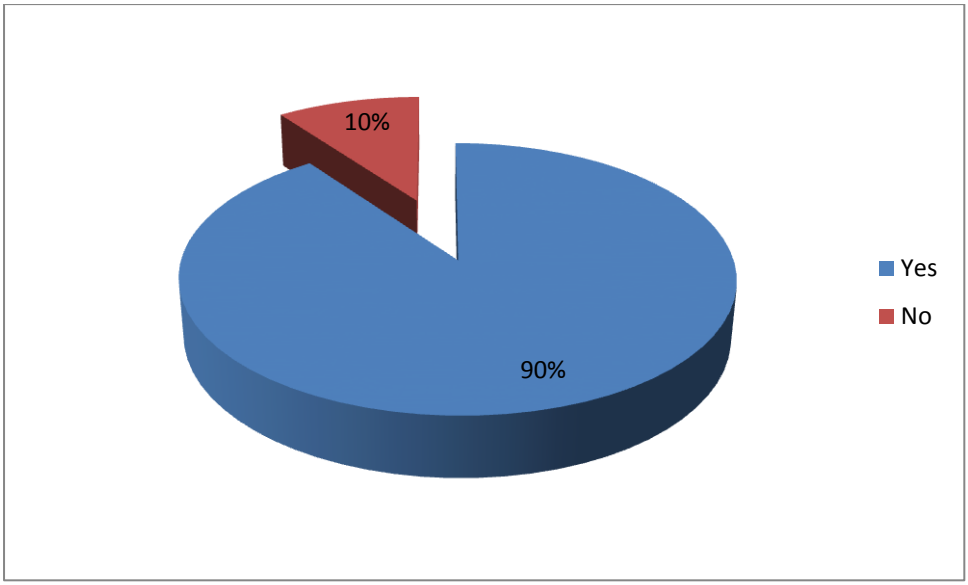

Figure 21: Teachers' opinion if ICT have drawbacks on learners' critical thinking skills

Q11- Which is considered as an essential part to implement ICT in education successfully?

a. Teacher training
b. ICT equipments
c. Learner needs
d. Others: .....

Options	**N**	**%**
Teacher training	5	50%
ICT equipments	2	20%
Learner needs	3	30%
Others	/	/

Table 22: Teachers' perceptions on the essential part to implement ICT in education successfully

The table above (22) shows that half of the participants (50%) agree that the essential part to implement ICT in education successfully is teachers' training. Since teachers have the basic ICT skills they can integrate ICT tools successfully and guide students toward the appropriate utility of ICTs. (30%) indicate the teachers who see that learner needs is a vital element toward effective integration of ICTs in education. Only (20%) represents those who see that ICTs equipements have a major role in integrating ICTs successfully.

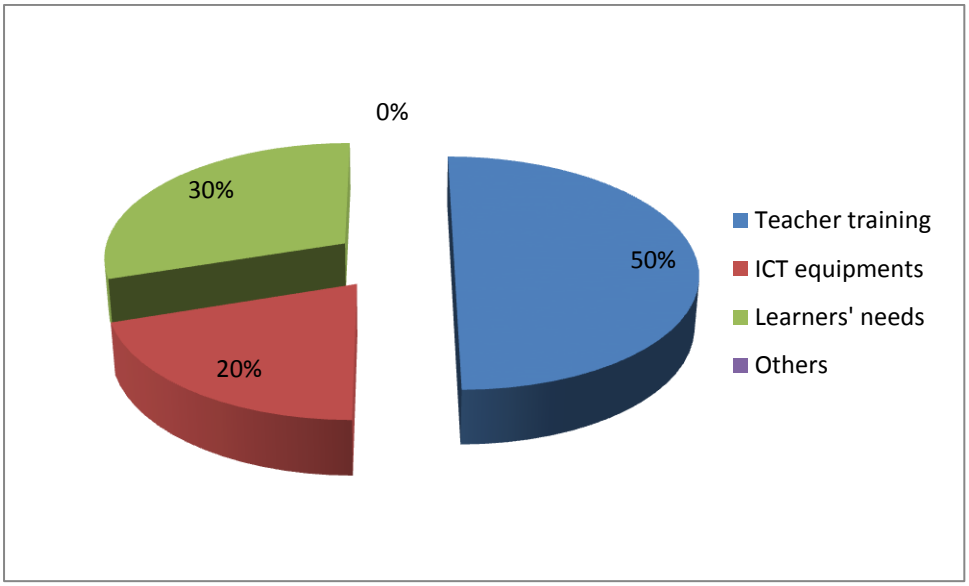

Figure 22: Teachers' perceptions on the essential part to implement ICT in education successfully

Q12- Do you think there is a need to improve your ICTs skills?

a. Yes
b. No

Options	**N**	**%**
Yes	7	70%
No	3	30%

Table 23: Teachers' opinion on the need to improve their ICTs skills

The results represented in table above (23) indicate that most of the target participants (70%) represent the ones who agree on the need to improve their ICT skills to integrate these technological devices effectively in the classroom. However, (30%) represents the informants who do not see a need to improve their ICT skills.

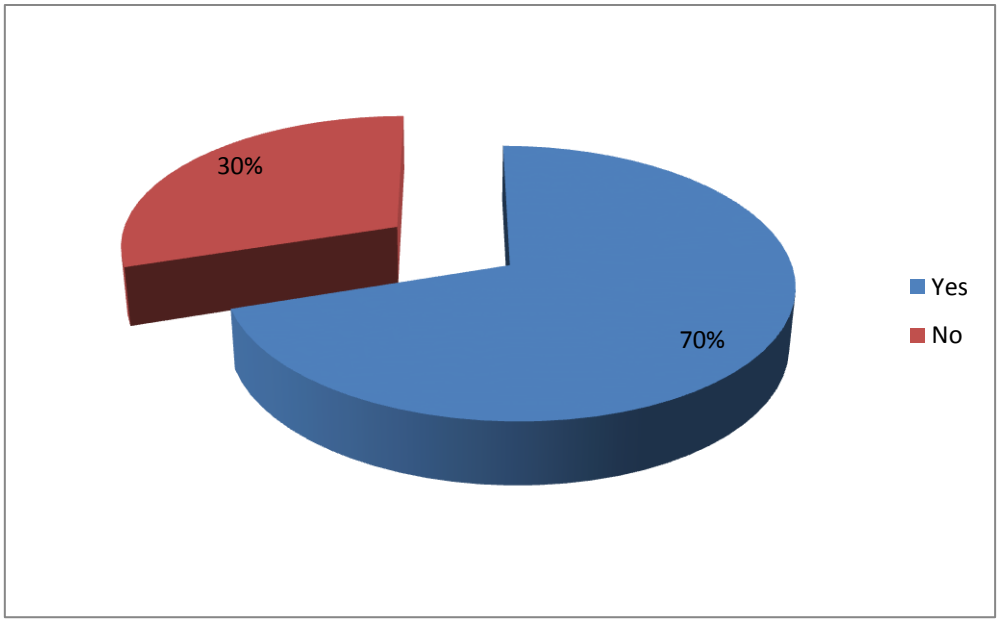

Figure 23: Teachers' opinion on the need to improve their ICTs skills

Q13- Give recommendations on how can learners improve their higher order thinking through the use of ICTs.

Most of teachers were really intereseted in providing certain recommendations on how to use ICTs in order to promote learners' critical thinking skills. The following statements are suggestions given by the participants:

'Teachers have to design lectures integrating ICT where learners will be able to interact as much as possible.'

'Students do not have to take everything for granted, they have to evaluate critically, they have to be very careful when choosing to use ICT.'

'Students need guide from their teachers to the appropriate utility of ICTs tools in order to develop their skills.'

'We can motivate our students to incoperate social media in their learning like facebook which is the most popular nowadays through sharing resources and interacting with their teachers using groups to post links, documents, video related to their studies. Furthermore, they can negotiate what has been posted collaberatively and have the chance to think and share with their classmates and teachers their own's point of view that is one way to enhance learners' critical thinking skills through the use of socail media.'

‘Designing a proper teaching and learning plans to integrate ICTs into classroom activities effectively through analazing the suitable tools to be used for education.’

‘One of the most ICT tools used in education are computers, students need to have the basic skills to use such devices that will help them in long terms.’

3.6 D iscussion of the Findings:

In the following section, the major results that are collected for each research instruments will be discussed:

- ✓ Both EFL teachers and students were familiare with the use of ICTs.
- ✓ Students use ICTs most of time in their study.
- ✓ Most common ICT types used by both teachers and students are: internert, smartphones, computers and projectors.The use of these instruments depends on the lesson and the availability of materials and rooms.
- ✓ Teachers tends to encourage their learners to use ICTs in their learning.
- ✓ Learners were intreseted in improving their critical writing/speaking skills.
- ✓ Teachers see thier is a need to develop their ICT skills.
- ✓ Teachers consider : ICT materials, learners need and teacher training are essential to implement ICT effectively.
- ✓ The common problems that students and teachers may face when working with ICTs is that they do not know how to deal with ICTs because the lack the basic knowledge and practice as well to use it. The other s barriers contains technical problems, avaliability of materials/rooms, health problems, Internet distraction, reading comprehension difficulties, limited access to internet, lack of funding, time managment, negative attitude toward ICT
- ✓ ICTs increase students interest and create a relaxed and enjoyable learning environment.
- ✓ ICTs help teachers to design and create new activities.

3.7 Recommandations

The study has shown that Information and Communication Technology affects positively the learners’ critical thinking in numerous ways. Therefore, EFL students’ have to know the effective strategies to handle ICTs and the appropriate tools to improve their critical thinking

skills. In this context, we have introduced suggestions and recommendations that will be useful and helpful for the both EFL teachers and learners in particular:

- ✓ Teachers have to select the appropriate ICT tools while teaching.
- ✓ Learners need to be guided by their teachers to appropriately use ICTs tools to enhance their critical thinking skills.
- ✓ The integration of ICT successfully into teaching/learning process depends on the knowledge teachers and learners have to utilize it in classrooms.
- ✓ Teachers need to have the skills to design technology-based courses to achieve better results.
- ✓ Designing a proper teaching and learning plans to integrate ICTs into classroom activities effectively through analyzing the suitable tools to be used for education.
- ✓ Administration has to take responsibility to provide learners with programs that integrate ICT successfully in education in order to enhance learners' critical thinking skills. Through preparing rooms equipped with computers in order to help learners practice and improve their ICT skills.

Conclusion

To conclude this chapter, according to the results obtained through students' and teachers' questionnaires. EFL students are aware of the need to improve their critical thinking skillsin their learning process to do this they need guide from their teachers to the appropriate utility of ICTs tools to enhance their critical thinking skills.Besides, it is important to implement ICTs as pedagogical tool to enhance the quality of education.

General Conclusion

The present research study has attempted to cover how integrating ICTs can enhance learners' critical thinking skills. Primarily, it attempted to examine the relation between integrating Information and Communication Technology (ICT) in language classes and the development of EFL learners' critical thinking skills. Besides, it has sought to raise awareness about the beneficial effects of ICTs on learners' cognitive skills and has examined the most appropriate ways to be implemented it successfully into the teaching / learning process.

The first chapter reveals that ICT in education have a great potential to enhance the educational reform through the use of platforms "blended and hybrid learning". Therefore, both teachers and students need to know how to integrate in the teaching/learning process. In the second chapter, we figured out that critical thinking is attracting a wide attention years ago, therefore various scholars where are interesteds in developing learners' critical thinking skills. Due to the rise of development in technology, researchers are now investigating how integrating ICTs in education can have effects on improving learners' thinking skills. This chapter sought to examine this relation which is proved to develop learners' critical thinking skills. The third chapter has examined the practical part of the research study.In order to answer the research questions; we have investigated this problem through gathering various data from both EFL teachers and learners. The findings of this study appear to confirm the hypothesis that was intially put forward. The students' and teachers' questionnaires have enabled us to collect data concerning the use of ICTs in educational settings. The aim was to help learners enhance and improve their critical thinking abilities through using ICTs as a pedagogical tool. The results obtained from 'questionnaires' were discussed in relation to the already raised hypotheses.

The first hypothesis that indicates that ICTs in education help in improving the quality of education and also help teachers and students to develop their skills is confirmed since the teachers' and students' questionnaires show that ICTs have a significant impact on the teaching/learning process. The second hypothesis reveals that using ICTs has drawbacks that make learning/teaching a difficult task for both teachers and students. This is true since there are many learners and teachers that lack the basic skills and knowledge to integrate it successfully.

The third and final hypothesis indicates that ICT can be used as a pedagogical instrument to improve the quality of teaching and learning. Therefore, its integration in the classroom helps

learners to assess their critical thinking through the use of different ICT tools. The results of this study also revealed the relationship between learners' critical thinking skills' and the use of ICTs as a pedagogical means. Besides, ICT does have a vital role and effect in improving the EFL learners' thinking skills. ICT tools do contribute in the development of learners 'critical thinking skills through web-pages, social media, computers, internet and so on. These devices offer the learner with opportunities to improve their writing and speaking skills in particular. Furthermore, ICTs increase learners' interest by making the lessons enjoyable. Also, ICTs help teachers to create and design new activities and ideas. ICTs provide a set of options to both teachers and students. The use of ICT suggests new course plans and it changes the classroom management. Besides, the integration of ICTs provide different activities and exercises for oth teachers and learners.

List of References

Alex Koohang and Keith Harman (2005). Open Source: A Metaphor for E-Learning. V8, USA.

Dr. Barbara Penington (March 27, 2010), Listening & Critical Thinking; UW- Whitewater, Wisconsin.

Bayram Güzer and Hamit Caner (2013). The Past, Present and Future of Blended Learning: an in Depth Analysis of Literature.

Bojana Nikic Vujic, Maja Jerkovic (n.d). Improving Reading and Speaking Skills through Critical Thinking, Serbia.

Boutkhil Guemide, Chellali Benachaiba and Med Bouzar (2012), Exploiting ICT to Improve Professional Development for Secondary School Teachers in Algeria via e-Learning.

Brian Denis Egan (2005), The Role of Critical Thinking in Effective Decision Making.

David Moursund (January2005), Introduction to Information and Communication Technology in Education. University of Oregon, Eugene, Oregon.

Daniel.T (2007). Critical Thinking Why Is It So Hard to Teach?, Willingham.

Daniel J. Kurland (2000). Retrieved from http://www.criticalreading.com/critical_reading_thinking.htm

David Subran (24th April, 2013), Developing Higher-order Thinking with ICT.

Emily R. Lai (June 2011). Critical Thinking: A Literature Review

Hannatu Abdullahi (November 2013). The Role of ICT in Teaching Science Education in Schools; Deparrtment of Educational Foundation, Shehu Shagari College of Education, Sokoto-Nigeria, V 3. No.9.

Ibrahim Yasar Kazua and Mehmet Demirkol (January 2014). Effect of Blended Learning Environment Model on High School Students' Academic Achivement; Turkey; volume 13; issue 1.

ICT in School Education (Primary and Secondary) Information and Communication Technology for EducIndia and South Asia (2010).

Karakoc Murat (July 2016). The Significance of Critical Thinking Ability in terms of Education, V. 6, No. 7 Istanbul Aydın University, Turkey.

Khalid Abdullah Bingimlas (2009). Barriers to the Successful Integration of ICT in Teachingand Learning Environment: A Literature Review, Australia.

Lee Min (2004). Enhancing Critical Thinking Skills through ICT in English Reading.

Livingstone, Sonia (2012) Critical reflections on the benefits of ICT in education.

Lizziepauker (September 2, 2010) 6 Powerful Characteristics of Great Critical Thinkers.

Manolis Sofos (n.d). Critical Thinking- A Historical Overview, Greece.

Manuel Vallee (2016). Teaching Critical Reading, University of California.

Methinee Wongwanich Rumpagaporn (May 2007), Students' Critical Thinking Skills, Attitudes to ICT and Perceptions of ICT Classroom Learning Environments under the ICT School Pilot Project in Thailand (Doctoral dissertation). Retrieved from https://digital.library.adelaide.edu.au/dspace/bitstream/2440/37896/8/02whole.pdf

Munienge Mbodila, Telisa Jones, Kikunga Muhandji (November 2013). Integration of ICT in Education: Key Challenges Volume 3, Issue 11.

P. Ertmer (1999). Addressing First- and Second-order Barriers to Change: Strategies for Technology Integration, Educational Technology Research and Development, V. 47, no. 4.

Reza Vahdani Sanavi and Samaneh Tarighat (2014); Critical Thinking and Speaking Proficiency: A Mixed-method Study; Finland.

Samuel Ereyi, Aduwa-Ogiegbaen and Ede-Okhion Sunday Iyamu (2005). Using Information and Communication Technology in Secondary Schools in Negiria.

Shazia Mumtaz (2000); Factors affecting teachers' use of information and communications technology: a review of the literature ; University of Warwick, Coventry, United Kingdom

Steven D (January 1991). Schafersman; An Introduction to Critical Thinking.

Zaiha Ahmad and Isma Zuriyya Ismail (April 2013). Utilization of Hybrid Learning in Accomplishing Learning Satisfaction as Perceived by University Student.

Appendices

Appendix I: Students' Questionnaire

This questionnaire is designed to gather data about the integration of ICTs in higher education, and how implementing ICT tools could enhance EFL learners' critical thinking skills.

I would be very grateful if you answer the following questions in order to help me reach the objectives of my investigation.

Section One: Background Information

1- What is your gender?

a. Male ☐
b. Female ☐

2- Indicate your level:

a. Master one ☐
b. Master two ☐

3- Indicate your age:

.....

Section Two: ICT and Critical Thinking in Education

4- What does the term ICT refer to?

.....
.....

5- Are you familiar with ICT materials?

a. Yes ☐
b. No ☐

6-Do you use ICT to support your learning?

a. Never ☐
b. Always ☐
c. Sometimes ☐

d. Usually ☐
e. Rarely ☐

7- Select the type of ICT tools you use in your learning:

a. Computers ☐
b. Internet ☐
c. Cell phones ☐
d. E-mail ☐
e. Power point ☐
f. Projectors ☐
g. Web pages ☐
h. Others: .....

8- What kind of issue(s) do you face when using ICT in your learning process?

.....
.....
.....
.....

9- What do you understand by the concept " critical thinking"?

.....
.....
.....

10- Which critical thinking skill(s) are you improving:

a. Critical reading ☐
b. Critical writing ☐
c. Critical listening ☐
d. Critical speaking ☐

11- Do you think ICT would help you promote your critical thinking effectiveness?

a. Agree ☐
b. Disagree ☐

12- How have ICTs affected your critical thinking skills?

a. Positively ☐
b. Negatively ☐

Justify

.....

.....

.....

13- How can you rate the use of ICTs in learning at your university?

a. Bad ☐
b. Low ☐
c. Moderate ☐
d. Good ☐
e. Excellent ☐

Thank you for your collaboration ☺

Appendix II: Teachers' Questionnaire

This survey is set out to collect data needed for the accomplishment of a master dissertation. It aims at exploring how integrating ICTs in curriculum can enhance learners' critical thinking skills.

I would be very grateful if you could take time to share with me your experience by answering the following questions.

Section One: Background Information

1-Gender

a. Male ☐
b. Female ☐

2- Indicate the degree(s) you have achieved so far :

a. BA ☐
b. MA/Magister ☐
c. PhD ☐

3- For how long have you been teaching English language?

..... year(s).

Section Two*: *ICT and Critical Thinking in Education

4- Do you integrate ICT tools in your teaching?

a. Yes ☐
b. No ☐

5- If yes, what type of ICT tools do you use in teaching?

.....
.....
.....
.....

6- Have you faced any difficulties when working with ICT materials?

a. Yes ☐
b. No ☐

7-State the major problems you faced when using ICTs

.....
.....
.....
.....

8- Do you encourage your learners to use ICT in their learning process?

a. Always ☐
b. Sometimes ☐
c. Rarely ☐
d. Never ☐

9-What are the advantages of implementing ICTs to enhance your learners' critical thinking competencies?

.....
.....
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10- Do ICTs have drawbacks in promoting EFL learners' critical thinking skills?

a. Yes ☐
b. No ☐

Justify

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11- Which is considered as an essential part to implement ICT in education successfully?

a. Teacher training ☐
b. ICT equipments ☐
c. Learner needs ☐
d. Others: .....

12-Do you think there is a need to improve your ICTs skills?

a. Yes ☐
b. No ☐

13- Give recommendations on how can learners improve their higher order thinking through the use of ICTs

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Thank you for your collaboration ☺