

**REPUBLIC OF TURKEY
FIRAT UNIVERSITY
Institute of Educational Sciences
Department of Educational Sciences
Division of Curriculum and Instruction**



**STUDENTS' OPINIONS ON TECHNOLOGY-BASED
CLASSROOM APPROACH: A
SAMPLE STUDY OF FIRAT UNIVERSITY ENGLISH
LANGUAGE DEPARTMENT**

Master's Thesis

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ELAZIG- 2021

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Master Thesis

**Students Opinions on Technology-based Classroom Approach:
A Sample Study of Firat University English Language Department**

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CONFIRMATION

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DECLARATION

I hereby declare that I am the solely the author of this Master's Thesis and it is essential to affirm that all the data and information used in this document have been obtained and submitted in conformity with ethical demeanour and academic rules. I also state that I did not submit this Thesis to any other institution to obtain a degree.

Elazig, 2021

Yakubu ISSAKU

(imza)

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ACKNOWLEDGEMENT

Education is the only way through which societies can follow and keep up with the increasing technological and scientific developments of the 21st- century. It is an undeniable fact that societal innovation has serious implications on education systems in the first place.

The various changes in our education system from the past to today is a typical example of the impact societal innovation has on our education. With the age of innovation, technology and knowledge of our time, scholars of education saw it as a mission to integrate technology into our education

In the course of this study I would like to acknowledge and thank the following people who contributed to the successful end of this thesis. My first appreciation goes to my esteemed supervisor Assoc. Prof. Dr. İbrahim Yaşar KAZU, accepting to supervise me and providing useful guidance towards my master's program in general and this master's thesis in particular.

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Elazig, 2021

ABSTRACT

Students' Opinions on Technology-Based Classroom Approach: A Sample Study of Firat University English Language Department

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Technology has come to stay and will continue to grow in all facets of human existence and development. The importance of technology integration in all fields of human growth, academia, teaching and usage by students has been the subject of concern of many scholars and researchers. As technology progresses in humanity, it is gradually taken centre stage in schools around the world. Many institutions are moving from lecturer's centred education to students oriented through technology. Technology integration has been researched for more than two decades; but, studies in both qualitative and quantitative have revealed varied effects on the usage of technology in the classes. However, the role of schools tends to prepare students for challenges of life after graduation and how to stay current; the use of technology is at its peak. Yet the ways of using the technology in classrooms are still in the hands of students. Therefore the opinions of students' can probably affect the use of technology in a class. This study analysed classroom technology evolution in university settings. Technology based classroom were measured via controlled Likert scale surveys. The research aimed to examine whether students' years in usage of technology, how often students use technology based classrooms, and availability of technology based classrooms and facilities influenced their perception of the technology oriented classroom. The use of technology based classroom aids students to become self-oriented learners, motivate them to study English language and their continuous usage of technology based classroom has contributed to self –efficacy in classroom.

The data of this study was collected through the means of survey. The survey was administered to three hundred and three (303) English language learning students at Firat University-Department of English language with the following class levels-preparatory, first, second, third- and fourth-year students. The outcome of this study revealed that even though majority of students have electronic and technological gadgets but a lot of time is spending on these tools and materials for other reasons rather than educational purposes. The study also established that students' behaviour towards technology –based classroom is assenting. However, English language students do not se this approach more often. Furthermore, the use of technology- based classroom is not frequent due to several challenges, examples are lack of technological materials, insufficient information about the use of the various types of these gadgets, and programs; inadequate courses for the effective training of teachers and students on how to use this approach.

More importantly, the outcome of this study's analysis is that majority of variables recorded no statistically significant differences between the means of the group. However, two variables had meaningful significance between those variables. It was also established that there were no significant differences between the means of the majority of the variables. Nonetheless, two items recorded significant differences.

Lastly, this study provided methodological suggestions like improving the technology based classroom with modern technological tools, materials and providing adequate training for both students and teachers on how to use the technology-based classroom to help increase the implementation of technology in English language learning.

Key Words: Technology-Based Classroom, Self-Efficacy, University Setting, Technology Integration, English Language Learning



OZET

Yuksek Lisans Tezi

Teknoloji Temelli Sınıf Yaklaşımına İlişkin Öğrenci Görüşleri: Fırat Üniversitesi İngiliz Dili Bölümü Örneği

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Teknoloji, insan varlığının ve gelişiminin tüm yönlerinde yerini aldı ve büyümeye devam edecek. İnsan gelişiminin, akademinin, öğretimin ve öğrencilerin kullanımının tüm alanlarında teknoloji entegrasyonunun önemi birçok bilim adamı ve araştırmacının ilgi konusu olmuştur. Teknoloji insanlık ilerledikçe, yavaş yavaş dünyanın dört bir yanındaki okullarda merkeze alınmaktadır. Birçok kurum, öğretmen merkezli eğitimden, teknoloji tanıtımı yoluyla yönlendirilen öğrenci eksenli eğitime geçmektedir. Teknoloji entegrasyonu yirmi yılı aşkın bir süredir araştırılmıştır; ancak, hem nitel hem de nicel olarak yapılan çalışmalar, sınıflarda teknolojinin kullanımı üzerinde çeşitli etkiler ortaya koymuştur. Bununla birlikte, okulların rolü, öğrencileri mezun olduktan sonra yaşamın zorlukları ve güncel kalmanın yolları için hazırlamaya eğilimlidir; teknoloji kullanımı zirvede bulunmaktadır. Yine de sınıflarda teknolojiyi kullanmanın yolları hala öğrencilerin elindedir. Bu nedenle, öğrencilerin düşünceleri muhtemelen bir sınıfa teknolojinin tanıtımını etkileyebilir. Bu çalışma, üniversite ortamlarında sınıf teknolojisi evrimini analiz etti. Teknoloji tabanlı sınıf, kontrollü Likert ölçekli anketlerle ölçülmüştür. Araştırma, öğrencilerin teknolojiyi kullanma yıllarının, öğrencilerin teknolojiye dayalı sınıfları ne sıklıkla kullandıklarını ve teknoloji tabanlı sınıfların ve tesislerin mevcudiyetinin onların teknoloji odaklı sınıf algılarını etkileyip etkilemediğini incelemeyi amaçlamaktadır. Teknoloji tabanlı sınıfın kullanımı, öğrencilerin öz yönelimli öğrenciler olmalarına yardımcı olur, öğrencileri İngilizce öğrenmeye motive eder ve teknoloji tabanlı sınıfın sürekli kullanımı sınıfta öz yeterliliğe katkıda bulunur. Bu çalışmanın verileri anket yoluyla toplandı. Anket, Fırat Üniversitesi İngilizce Bölümü İngilizce öğrenen 303 öğrenciye birinci, ikinci, üçüncü ve dördüncü sınıflarda öğrenim gören öğrencilere uygulanmıştır. Bu çalışmanın sonucu, öğrencilerin çoğunun elektronik ve teknolojik aletlere sahip olmasına rağmen, bu araçlara ve malzemelere eğitimden ziyade başka nedenlerle çok fazla zamanın harcadığını ortaya koymuştur. Çalışma aynı zamanda öğrencilerin teknoloji temelli sınıfa yönelik kabullenici davranış gösterdiğini ortaya koydu. Ancak, İngilizce dil öğrencileri ve öğretmenleri bu yaklaşımı daha sık kullanmadı. Ayrıca, teknoloji tabanlı sınıf kullanımı çeşitli zorluklar nedeniyle sık değildir. Teknolojik materyal eksikliği, bu aletlerin çeşitli türlerinin ve programların kullanımı hakkında yetersiz bilgi; öğretmenlerin ve öğrencilerin bu yaklaşımı nasıl kullanacakları konusunda etkili eğitimi için yetersizdir. Daha da önemlisi, bu çalışmanın analizinin sonucu, değişkenlerin çoğunluğunun grup ortalamaları arasında istatistiksel olarak

anlamalı bir farklılık kaydetmemesidir, ancak, iki maddenin bu deęişkenler arasında anlamalı bir önemi vardır. Deęişkenlerin çoğunluğunun ortalamaları arasında önemli bir fark olmadığı da tespit edildi. Bununla birlikte, iki öęe önemli farklılıklar kaydetti. Son olarak, bu çalışma, teknoloji temelli sınıfı modern teknolojik araçlar, malzemelerle geliştirme ve hem öğrenciler hem de öğretmenler için yeterli eğitim sağlama ve İngilizce öğreniminde teknolojinin uygulanmasını artırmaya yardımcı olmak için teknoloji temelli sınıfın nasıl kullanılacağı gibi metodolojik öneriler sağlamıştır.

Anahtar Kelimeler: Teknoloji Temelli Sınıf, Öz-Yeterlik, Üniversite Ortamı, Teknoloji Entegrasyonu, İngilizce Dil Öğrenimi



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CHAPTER ONE

I. INTRODUCTION

1.1. Background

The period of globalisation has put the world under two main changes in modes of communication: the developing and the developed countries. The language 'English' has gradually taken centre stage in global languages. It is now desired and accepted in business, education and science. There are more speakers of English literature in the world of education, commerce and science than any language.

The role of Information Communication Technology ICT in the process of globalisation is very vital, technology-based countries have progressed successfully in all facets of human development especially the economic benefit (Newby, Hite, Hite & Mugimu 2013). In the sphere of education, technology-based instruction together with approaches has changed pedagogy and its practices in the classroom. This has raised the fruitfulness and extensiveness of pedagogy (Al Harbi, 2014; Howard & Mozeiko, 2015).

As happening in many developed and developing countries, Turkey is swiftly changing and revising its routine particularly in the sphere of education. Recognition and the value of English literature education have gone through many reforms and the use of technology in human resources development. Many educational policies have mandated the institutions of teacher training to advance teachers who can fit to teach the 21st century of scholars with an emphasis on English literature capability as well as expertise in technology. These requirements have put pressure on policy makers on education to change the existence of teacher's education training courses. However, the approaches of pedagogy which now certainly include technologies, the transformations are mirrored on different policies in ICT that promotes the usage of technology in learning.

Technology has been a centre of social growth since the beginning of time. It has grown into a great dependence for the world. Since the beginning of computer technology, education has been involved in the use of this new and sometimes confusing technology. The beginning of the millennium society has pushed toward

integrating this new technology in classes. The application of technology plays a vital role in all facets of human life; it also plays a critical role in our education. In order to solve problems of the 21st period, a model of teaching and learning focuses on usage of technology in classrooms known as technology based classroom. With the advancement of technology, today's students who happen to be 'digital natives' i.e. (born and bred in the era of technology) have access to a huge pool of materials and information which are just a few fingertips off (Egbert, 2009). Scholars in education posit technology assimilation is supportive, important and essential for a school to operate effectively. A number of teachers are hesitant to make a transformation to fit into the technological world of education, and many learners are demotivated to give it a try. A survey carried by an association of schools of Ehrlich, Spote, and Sebring, in Chicago in 2013 came out with their findings that about 92% of scholars have means of using the internet and other forms of technology in their home, however less than half of the scholars used that knowledge they have in technology for activities related to school. The 21st century, often referred to as the age of technology, where information is easily accessible through various means. Technology which used to be the preserve of the wealthy and the few people is now so advanced and has become so cheap and easy to be accessed by all in respective of status in society (Edwards, 2009). Today's students were born with technology, that is why the idea of "digital natives" propounded by Marc Prensky (2001) clearly explains today's learner. Today's learners are technologically inclined who basically use technology in their daily lives. For example, listen to music from the iPod, computer, phone, use the internet to solve their daily problems, today's learner is a technologically minded individual and raising such a child in the classroom needs a technological based pedagogy which is the only language the learner understands.

To complement the forthcoming technological society, it's only prudent for the current day classroom to mirror what is perceived in a society. However, this can be carried by displaying the real-world technology to programs, where values that are intrinsic can be taken to the learning process by doing so to improve student awareness and incentive (Usher & Center on Education, 2012). To address the challenges of a technological society it's essential that these technological classrooms should address the desires of all learners. Technology believes in different learning approaches, aid to create a sense of communal togetherness and also a significant skill (Futurelab, 2009).

Correct usage of technology will be a motivating factor in classroom to all disciplines in education for instance maths, history studies, and literature (Heafner, 2004; Liu, 2016; Housand, 2012). Scholars with learning incompetence are part of regular education classrooms through the use of appropriate integration of technology with assistance of relevant technological devices by giving challenged students access to data and maintain their own pace (Floyd & Judge, 2012).

The usage of technology in educational classes has been of greatest movement from the traditional path of imparting knowledge to a more advanced and a modern way of teaching. For decades, scholars of education, teachers, parents, guardians, policy makers and students have all been pondering on the possible impact that technology will have on education more especially classroom teaching (Himmelsbach, 2019). There has been a lot of agitation against the risk of technology and its consequences on education. However, the argument now is more persistent than before as policy makers are increasingly incorporating technology to their curricula and faculty members are using technology to experiment with new teaching methods. There are opposing views with regard to using technology in the classroom. On one hand technology gives the teacher the opportunity to demonstrate in pedagogy, expose students to classroom democracy and proper engagement. On the other hand, some lecturers have an idea that technology in classes is disrupting and can even promote cheating in class (Himmelsbach, 2019).

Technology, when included into the curriculum, reforms the process of learning in the classroom. Several research attest to the fact that integrating technology in the curriculum increases students' results in the learning process. Teachers who see technology as a tool for solving problems change their methodology. They change their pedagogy from a behavioural approach to a more of constructionist approach. Interactive learning with the use of multimedia through the technology are more conducive to project –based learning. Scholars are involved in learning via the use of these tools by doing so they end up becoming originators and critical thinkers' not just users (Collier, 2017).

Important results from the literature review on technology implementation in the classroom reveal the power in which technology uses to involve students in learning and how the usage of technology in classes increases student's motivation and also commitment in acquiring knowledge (Godzicki, Krofel, & Michaels, 2013). Other

studies posit a technology-based class students are highly motivated, as shown in Halat (2013) the research on the usage of web quests shows when students become the drivers of their own learning there is a possibility of them making meaningful and constructive criticism of them comprehending difficult concepts (Futurelab, 2009). When technology is used in the right way in the classroom it supports the approaches of constructivist ideas of teaching and learning.

1.2. Statement of Problem

The rate at which technology is advancing in the 21st century, the speed of spread of knowledge has made great leaps and necessitated the re-conceptualization, evaluation and presentation of all kinds of strategy to augment the advancement of technology in the educational field and human development. Improvement chalked in the area of science and technology is pushing all areas from health to economy from, literature to art for pertinent changes. The most important fact that technology has had a dramatic effect on is in the field of education and these influences will continue for a long time to come. Technology has taken center stage in today's global educational activities where expectations of education have been renewed and the learner taken to the center, it has been inevitable to use the opportunities provided by technology at the highest level. Teachers and trainers who use these technological tools, which are relevant contributor of education, are working to create conducive teaching and learning environment for learners, as well as students who are beneficiaries of technology to transfer more knowledge and learn more. From the above reason that this study seeks to promote a model of teaching and learning into our classrooms, which are the basic learning environment, these classes should be integrated with developing technologies to use effectively (Filiz & Kurt, 2015). Luckily, these days' internet is easily accessible and widespread, giving technology the upper hand to be used in all facets of life.

The idea of "digital natives" propounded by Marc Prensky (2001) clearly explains today's learner. Today's learners are technologically inclined who uses technology in their daily life. For instance, watching of movies on the phone, listen to lesson on the net, use the internet to solve their basic problems such as homework, essentially, today's learner is a technologically minded individual and raising such a child in classroom needs a technology-based pedagogy which is the only language today's

learner speaks. Therefore, the learning patterns of today's learner such as doing homework and communicating with one another differs from the habits of previous generations, the reason for this sharp difference is the issue of technology. Prensky is of the view that the traditional method of teaching in educational settings, like assessment and evaluation, teaching learning materials (TLMS) as well as the approaches used by teachers are not in-line with today's learner, Prensky (2001, p.2) believed that the most important problem facing education today is what he termed 'digital immigrants' teachers trying to educate 'digital natives' students 'something'.

By including technology into the classroom, teachers' will be able to involve all students (from high achievers, low achievers to under achievers and disabled learners). The subject of technology in the classroom helps to achieve better performance as it has been researched, although not comprehensively to other fields of academics. But the lack of existing study in technology that deals with the technology for students who have disabilities and how technology can help them. Flanagan, Bouck & Richardson (2013) are of the opinion that application of technology in the classroom was good, however, it was unaffordable in the past.

'Digital natives' are privy to fast access to data; perform several task at the same time, are happy to deal with images rather than written texts; the group performs well on the go; they want to get swift feedback and prefer to work seriously" (Prensky 2001, p.2). In order to achieve success at school, it's expedient to arrange the classroom activities, materials and evaluation according to the requirements of the digital native scholars. It is at this juncture, that the issue of technology-based classroom comes to mind, the 21st- century learner is technology inclined and in order to give the 21st-century learner the best education, classroom should be arranged technologically to respond to the problems of the 21st- century students. In this study, the paradigm shifts of education pedagogy is the use of technology-based classrooms which are answering the wants of the 'digital natives' students.

The study introduces the perceptions of technology in daily life, technology based classroom, advent of technology-based classroom, integrating technology into the classroom, technology integration in language education, technology based pedagogy, application of technological, pedagogical content knowledge (TPACK) domain in education, challenges and benefits of technology based integration in language

education, factors influencing the implementation of technology based classroom, what is TPACK, conceptual framework of TPACK, components and the knowledge of technology based classroom, constructivism, kinds of technology based devices in the classroom and related studies in technology education.

Technology-based classes have the advantage of increasing educational success and also what it has chalked in the field of academics for both learners and instructors of education (Courville, 2011). A research conducted by Usher & Center on Education (2012) stated that modern technological gadgets that have real-world applications coupled with additional topics in academia helps motivate students. The study came with these findings that when a learning that is based in technology inquiry connects with real-world conditions, the intrinsic value begins to manifest in what is been learnt by students, these technology-based gadgets increase students interest in what they are learning and also motivates them to learn better. Also, using abstract concepts and turning them to real world technological situations aid students to understand difficult ideas, which will then help improve student's capability. Through the use of technology-based classrooms in educational settings especially university English language departments, lecturers can use this technological structure to distinguish teaching to all kinds of students, technology-based classroom also motivates learners and brings all skill levels together into the learning phase.

The aims of this research are to: 1. Investigate university scholars' opinions on the technology -based classroom in English language department settings; 2.examine the availability of technological devices used as instructional materials in technology-based classrooms to support learning integration in university settings. 3. Establish the effect of technology-based classroom on English language learning students according to their gender. 4. Establish the effect of students' usage of technology-based materials in learning of English language in university settings.

An outstanding study is done by first outlining the challenges and problems of the research and then trying to eliminate these problems. The aim of this study is not only about understanding the wants and benefits of technology-based classes, but to inspire the design of a curriculum that will focus on usage of technology based-classroom as a method of instruction in the classroom.

Results from the research will enlighten a wide selection of people. The key beneficiaries of such a study will be officials of the Ministry of Education, curriculum planners and implementers, and university teachers, finally, for students' who are going to be the major beneficiaries of the research. Everyone from the above group of recipients would stand to profit from the study by involving themselves in a curriculum that is technology based.

1.3. Aims of the Research

The study is purposed to address and answer the following research questions:

1. To what extent are the opinions of English language students towards the usage of technology –based classroom when learning English?
2. Does the availability of technological devices and materials used as instructional materials in technology–based classroom support learning integration in English language settings?
3. Is there a relationship between student's motivation for learning in technology-based classroom according to their age, gender, and class levels?
4. Are there significant differences in students' perceptions towards the use of technology-based classrooms in English lessons due to gender, age and class level?

1.4. Importance of the Research

It is an undeniable fact that students' now live in an era of information, technology and innovation. Also, it is a well-known fact that technology has taken centre stage in all spheres of human endeavour especially in the sphere of education. Even though, education has passed through a lot of transitions such as the learner-centered education which is introduced in 2005 in Turkey to tune in line with the advancement of technology; the desired result was still not achieved. The fact that the twenty-first century learners are given lessons in educational programs with active and modern pedagogies the concept of technology cannot be denied. The technology-based classroom approach enumerated in this research is of great importance when responding to the requirement of twenty-first century learners.

The importance of the research is to increase research data based on the effectiveness of technology-based classroom towards the training of the twenty-first

century learners. The findings of this research will benefit the following people; Universities, officials of the Ministry of National Education, and officials of higher education board administrators, teachers, lecturers, students as well as experts in the educational technology field.

1.5. Assumptions

It was assumed that the students who take part in this research answered the data collection tools reflecting their sincere and real thoughts.

1.6. Limitations of the study

Limitations are parts which define the boundaries in terms of the basis, application and result of our research. This research has many constraints which includes the following:

First of all, the survey is constrained because it would not be able to shield all the features of technology implementation in English language learning. The survey contains only the opinions of students towards the technology- based classroom, the questionnaire is restricted to only students without teachers.

Secondly, time constraints were a major challenge to this research. The number of respondents could not be higher due to lack of time, and the researcher had it tough getting students to answer the survey on time. Also, the study focussed only on the students of the departments of English language at Firat University.

More importantly, the COVID-19 pandemic was a major limitation of this study. Because half of the survey was answered through distance education and by google forms, and it took students several weeks to send back the answered survey to the researcher.

Lastly, this research is constrained to only the opinions of English language students of Firat University which may have similar thoughts. In this regard, the study cannot be generalise since it was carried out with only students of Firat university departments of English language. The research would not be accurate to generalise to all students learning in different departments of Firat University or other universities in Turkey which may have different situations. This research is restricted to 2020-2021 academic year with all the students who are studying English in the specialty of Foreign

Languages at Firat University, Elazig, Turkey. The research data obtained is limited to the survey adapted by the researcher.

1.7. Explanation of Terms

This section makes clear the sense of basic words applied in the research to help readers' in grasping the concept of a research. The definitions underneath is sourced out of institutional wellspring and are arranged in the order of alphabet.

Curriculum a written file which gives a wide, generic framework that should be studied and enunciates the discipline of education and thesis supporting these statements (Allen, 2016).

EFL is methodology of English literature as an international language in a society in which a different language is a dominator.

ICT Implementation; is the introduction of a current ICT system in the teacher's training education activities.

ICT Integration is the application of ICT in data exchange, information processing and keeping effectively attaining the required education and learning ambitions (Goup, 2016; Harris 2008).

Innovation "is the idea, activity or objectives identified as current by a person or other identity elements of adoption (Rogers, 1995).

Policy Implementation is a change of policies purpose and objectives of functioning and continuing activities (Sonntagbauer, 2014).

Syllabus is a written file which employs a curriculum through specifying the abilities and information to be taught and also procedures, materials and measures lecturers should employ and pursue (Allen, 2016).

1.8. Abbreviations

CALL: Computer –assisted Language Learning

CLT: Communicative Language Teaching

EFL: English as Foreign language

ICT: Information and Communications Technology

MOE: Ministry of Education

TLM: Teaching Learning Materials

TPACK: Technological Pedagogical Content Knowledge

CHAPTER TWO

II. TECHNOLOGY BASED CLASSROOM AND REVIEW OF RELATED LITERATURE AND STUDIES

This part basically reviews the description of literature to the problem under research. The main purpose is to use the information as a theoretical framework upon which conclusions and generalizations could be taken with regards to distinctive reference to Student's perception on technology based- classroom. This chapter has been put under the following sub –headings.

2.1. Perceptions of Technology in Daily Life

It is a fact that a cell phone ringing in a pact classroom will definitely interrupt the academic exercise going on at that moment, should it be concluded that because a cell phone rang in the classroom and disrupted the class; does this mean we should outright ban the use of electronic devices in the classroom? Most teachers also agree that using electronic devices by students in the classroom is not necessary, but students see technology as part of their routine life and it's important and safe for their usage (Thomas, O'Bannon, & Bolton, 2013). Some teachers still use the out-dated pedagogy such as a lecture method where interaction in the classroom is very minimal, students in this type of classroom feel disconnected from the 'real world' and think that their type of classroom is false and artificial (Baker, Lusk, & Neuhauser, 2012). The use of PowerPoint technology permits teachers to give knowledge and information via visual (Goodin, 2012)but the sad reality here is teachers who use this kind of technology often is perceived as authoritarian and PowerPoint is perceived as a negative technology in classroom (Baker, Lusk, & Neuhauser, 2012).The authoritative nature of PowerPoint technology is further seen in the way teachers still regulate the usage of knowledge in the classroom, thereby putting a hindrance in learning process. Even though these barriers hinder the effective usage of technology in classroom, it should also be noted from the studies of Baker, Lusk, and Neuhauser (2012) that the consensus of instructors or teachers, the 21st century learner has problem with controlling themselves and have low maturity level with regards to the use of electronics in the classes, therefore its

necessary for education policy makers to include rules on the usage of electronics devices in the classroom.

With all the help and assistance, we receive from technology such coffee makers, cell phones, cars etc. It's right to say that technology is an integral portion of human existence and whether we decide to apply it or not (Egbert, 2009). It would be counterproductive for a lecture to stick to the out-model pedagogies planned long before technology in the classroom to teach the twenty-first century learner whose life basically revolves around the use of technology. For lecturers to fully merge technology into classroom instruction there should be a paradigm shift from the out-dated techniques of modern methodologies where teachers will involve students in the learning process and activities via technology-based classroom, by so doing students understanding of school-based learning where the teacher is the center of attraction will transform to student centered.

2.1.1. *Constructivism*

The proponent of the constructivism theory Jean Piaget opined that a learner who takes active part in experimental activities becomes a better-connected learner to the activity and is able to 'inter-coordinate' practice and use these activities in their everyday lives (Piaget, 1955). As technology is gradually taken centre stage in our everyday life, scholars of education must have a re-think and take a digital view on how best the use of technology in the classroom will aid inter-joining learning. The modern view here is that technology provides learners with various ways to acquire information in different ways and use this knowledge in classroom settings to solve academic problems. Technology can be used in several methods of teaching (Ford & Lott, 2011). Even though incorporating technology into classroom settings can be a challenge and a daunting desk, the 21st century teacher who is a symbol of change will get to see the technology which is a challenge as a better option with many opportunities to learners which before were not easily accessible (Ford & Lott, 2011). With recent methodology in education, people who share Piaget's views rely on the important assertion that learning is achieved when learner's take active part in the learning process (Ebert, 2015). This can be seen from students actively involving themselves in hands-on activities through the use of accurate real-world facilities in the classroom (Gensburg &

Herman, 2009). Ebert (2015) opines that ‘actual world productive knowledge conditions are better and encouraging to scholars via effective implementation of learning’. It is more essential to point out that constructivist approach believes in the idea of differentiation, which is fully participation of all learners at all levels. Any educator who uses the approaches will be able to design a syllabus that will cater for problems of students, since the correct use of resources to suitable pacing (Gensburg & Herman, 2009). Knowledge practices which are planned by teachers focus on learners' individual goals of learning, that is learners approach their goals at their own pace, way and time; this is also referred to as diversity. With variation learners can develop their own learning of the content being taught and infer meaning from the information being given by the teacher. A curriculum that is technology centered will help teachers use technology to distinguish and help put up classroom settings which gives students opportunities to learn. Technology affords the learner with various ways of learning if used properly, it believes in the constructivist approach of learning which gives equal opportunities to learners in regard to their learning disability to learn.

2.2. Technology- Based Classroom

Technology’s role in education is increasing significantly due to the opportunities it presents to students to interact with a varied kind of content in English, this couldn’t be possible earlier. The usage of technology in studies is vital and is gradually taking center stage in the professional and higher education system (Almekhlafi & Almeqdadi, 2010; Riasati & Tan 2015). For more than two decades, the attention of educators on the role of technology on foreign /second language processes of instruction. In recent times the use of technology- based learning has delivered valuable and powerful ways with amelioration of educational materials for literature learning and teaching from both teachers and scholars of EFL (Gilakjani, 2012; Mohammed 2012; Sa’d 2014; Sadeghi, 2013). However, a study by Herman (2002) differed with the effective role of technology-based learning, he believed the application of technology based- classroom in learning of foreign /second language takes a lot of time and not applicable to all. Another study established that different learning materials in educational technologies such as computers, tablets, DVD players, CD ROM discs and smartboards have become

an important part of literature learning in many higher education facilities (Mc Nulty & Lazarevic, 2012).

Kren (2008) explained an educational technology that it offers a lot of benefits to students and teachers. For example, educational technology become an important and useful equipment to teach cognitive abilities for scholar's in a form of problem solving, decision making, exploration, collaborative learning and critical thinking.

According to Gao et al., (2010) technology-based methodology is identified as the effective application of Information Communication and Technology (ICT) which supports and imparts students learning. This includes all the activities of the teacher from the planning of lesson to delivering with the usage of technology-based materials, tools and approaches that will promote quality teaching in the classroom, which will in the end impact the modern learner effectively. The use of computer, tablet, laptop, online learning, as well as internet and intranet interactions all combined as technology-based pedagogy.

Önsoy (2004) investigated the perception of scholars and lecturers on technology resources in teaching and learning of international language. A research focussed on attitudes of both a student's and a teacher's towards the utilisation of technology- based learning (i.e. computer-assisted language learning) CALL. Differences and similarities in students and teacher's attitudes and how these influences their usage of computer-assisted literature learning programme was organised at Celal Bayar University preparation school in Turkey. The findings of the study established little or no differences between a teacher's and a student's feeling on technology usage in language learning. The study suggested further training for both students and teachers for effective application of technology tools in the classroom.

2.3. Advent of Technology -Based Classroom

As the world sails through the twenty-first century, education is supposed to move alongside; this can only become a reality when technology is applied in our classroom as equipment for teaching and learning. Technology in the classroom is gradually taking centre stage in the field of teaching. Students are using tablets instead of textbooks, information that students can use days to research in books is just a minute click from the smartphone. The use of social media has become a public activity and technology

usage has completely changed our lives. The effect of technology on schools and studies has been pretty substantial. The extensive approval of technology with the introduction of latest operating systems such as Windows 10, and other important tools and software like driver restore has completely changed the dynamics of teaching using technology (Collier, 2017).

Technology integration in classroom instruction is not just about teaching students the basics of computer abilities and learning of software programs in computer labs; actual technology integration needs to be incorporated in curriculum that will show ways of enhancing the process of learning in the classroom. Technology integration in curriculums should have these four key components: group participation, active engagement of students, regular conversation and response, and inter-joining to real – world experts. In order to achieve real technology integration, transparency and routine should be used to support curricular goals (Collier, 2017). The influence of computer technology on students' learning experience started to manifest about 25 years ago, but at a very minimal rate (Cuban, 2001). But, for more than a decade now integrating computer technology into the classroom has got a major push due to accessibility, immediate information, its interactivity nature, as well its multimedia communication tool and educational friendliness (Mouza, 2002).

2.4. Integrating Technology into the Classroom

Technology-based classroom has come to help remove the out-moded method of teaching and techniques by giving teachers the chance to plan curriculum ahead according to the concept of differentiation (Mulrine, 2007). In terms of its use in classroom not all technology upholds the purpose of the curriculum, but teachers manoeuvre to introduce technology into their classroom to help support teaching and learning (Zimlich, 2015).

A research conducted by Zimlich (2015) in Alabama University with master's level certification program, six graduate's lesson plan effectiveness on technology was monitored. It was realised that using a lot of technology in classrooms does not increase success in implementing technology in classroom, instead, a particular usage and the quality of technology design by the teacher in the classroom does. This quality employed by the teachers helps them to be different in the mind of their scholars. The

abundance of tools and the easy-to-use nature of technology give scholars the opportunity to team up with friends (students and teachers alike). A technology device such as Google Drive and Google Doc etc. provides scholars a chance to work on collaborative paper (same in nature paper) with other writers who live in a distinct place (Eckstein, 2009).

Blogs or Weblogs as well provides users related prospects, giving people the chance to pass comments and publish thoughts in a forum where another person can read and also comment. A discussion session in a classroom with this type of technology offers students an opportunity to share their thoughts and ideas on a blog, by so doing share their own learning with their other students (Eckstein, 2009).

2.5. Technology Integration in Language Education

Technology based classrooms are identified as classrooms where teaching and learning procedures depend on the usage of all learning technologies comprising CD-ROMS programs on multi-media, teaching and learning resources on the web, objects or materials which promotes students learning. Competencies exhibited by teachers to develop, manage, use and assess technology-based tools, systems, and processes are very important to successful classroom implementation (Sani, 2014).

Earlier research on language teachers' use of technology-based classroom recommends that technology-based learning is used in a classroom to help teachers utter a lesson. For instance, in studies conducted by the following researchers Hassanzadeh, Gholami, Allahyar & Noordin (2012), Li & Ni (2011) and Nim Park & Son (2009) established that teachers use basic technology materials such as software 'apps' like data editor, delivery programme-message packets and net portals as tools of communication, teaching and administration. Keengwe & Kang (2013) found the most frequently used application for presenting PowerPoint. In a research carried on elements influencing lectures to usage of technology –based learning in literature teaching by Dang (2011), exposed that lecturers of English as foreign language EFL used only basic applications in technology for lead presentation and preparation. They engaged the use of internet searching, PowerPoint and email and Microsoft office but its application in the classroom was very limited. Several educational software like voice threads, mind –

mapping and educational blogs were not used by the teachers because they saw it as difficult to use.

A research carried out by Le (2015) in Vietnam on English language teachers' adoption and introduction of technology-based learning. The outcomes of the research conformed to the earlier research (Pham, 2014). Accordingly, the majority of teachers did not use online software platforms that use and encourage interaction between teachers and distance learning students. These teachers only focus on the use of computers, cassette players, over-head projectors and sometimes audio recorders.

2.6. Technology-Based Pedagogy

The paradigm shift in education has placed students' at the center of learning with a curriculum that includes technology to promote understanding, skills, beliefs and values of students (ISTE, 2008). Studies conducted by Larson & Miller (2011) have asked for a suitable methodology to help improve students' creative and critical thinking skills, collaborative skills, confidence and processes of solving problems. Karagiorgi & Charalambous (2006) think technology is not just a tool of operation in education but a very important communication and learning material that helps students to develop their innate abilities and understanding. But just knowing how to utilise technology tools and materials is not enough to enable and uphold successful learning of their scholars is very paramount. Also, confidence on the part of teachers must be abundant to help the successful application of ICT in lesson presentation (Hu & McGrath, 2001).

Mishra & Koehler (2006) came out with an outline in which include knowledge, technological knowledge and knowledge of pedagogy related to design a kind of information that explains ICT and pedagogy incorporation. Since the knowledge of technology keeps changing all the time, it is significant for teachers to be appraised with the processes of integration and how materials can be used in preparation and presentation of content (Kershaw, 2016). Subsequently, in reforms of education, technology instruction is explained as an innovative approach in which educators' efficiently apply technology into the learning of content and pedagogy to help upgrade student's control on their learning, collaborate with one another and self-regulates. Fundamentally, change the role of teachers.

Several scholars have come to the realisation that lecturer's confidence and capability to use technology pedagogy in teaching of English literature was lacking (H, Z. & M, I. 2011; L, N. C, A. & Y, A. H, 2005; D, H. 2004; H, L. 2007). A typical illustration is a study conducted by Drenoyiaani, (2004) in Greece on application of ICT based project training for in-service teachers and realised the problem of teachers is not technological but pedagogical. Another study by Webb & Cox (2004) on the knowledge of teacher's pedagogy explained that teachers need improvement in pedagogy. Hu & McGrath (2011) mentioned inadequate skills and lack of certainty on the part of lecturers to introduce ICT in their methodology, stressing the critical need for lecturers to be trained in the area of technology in a context of pedagogy. Also, English language teachers face problems of how to guide individual student's learning, learning autonomously and cooperative learning in the context of equipped ICT, enforcing the need for teachers to use a methodology that promotes individual learning and autonomy of students (Smith, Erdogan, Lamb, & Reinders, 2008). In a research conducted by Gu (2007), admonished that integration of new technology in pedagogy, he stated that it cannot be used within a short time frame due to the multiple tasks of assessment, adjustment, experimentation and re- routing.

Teachers' beliefs have a critical role in forecasting how they apply technology in teaching of language; this is due to the changes in beliefs that have an effect on transformation in activities (Ng, Nicholas, & Williams, 2010). To elaborate, Chaaban (2014), suggested several kinds of beliefs: (a) belief in how valuable using technology is; (b) a conviction that pedagogical use of technology is useful as well as (c) self- belief of a teacher's ability to use technology well. Teachers who believe and value technology that it aids teaching and learning and bring out better results will probable use it. Equally, granted that integrating technology provides help in pedagogy through uplifting tutoring approach, teachers are definitely going to use in teaching. Self-efficacy is the next credence, it talks about teachers who believe in themselves that the knowledge of technology will employ ICT in their lesson and are self-assured to using it.

The beliefs of teachers in the benefits and relevance of technology for classroom activities play the basic role in readiness for them to take applications in ICT (Mama & Hennessy, 2013; Ertmer, Ottenbreit-Leftwich, Sadik & Sendurur, 2012a). When a

teacher does believe in how useful technology is to them and their student needs, they will definitely apply ICT teachings (Mirriahi, Dawson, & Hoven, 2012). However, many lecturers who apply ICT in their teachings believe that it serves as the most appropriate solutions which help them attain their ambitions (Ertmer et al., 2012).

Furthermore, teachers and pre-service students should use reflections in their usage of technology when teaching. This must be done in and afterwards lessons since meditative teaching are a key factor in programmes of instructor teaching (; Shoffner, 2009; Farrel, 2011).

According to Nomlomo & Desai (2014), in the area of the teachers' work, the practice of reviewing, how to improve, searching for new and relevant information that will complement his work in the classroom is very vital. The teacher needs to involve himself with critical scrutiny, ability to evaluate himself/herself to help improve and be innovative.

Shoffner (2009) opined that the combination of technology ICT and reflective practices enables the teacher develop the (TPACK) domain; technological, pedagogical content knowledge, the integration of each domain in helping language pre- service students in their teaching is what this research seeks to unveil.

Teachers' feelings toward the application of ICT in teaching and learning are significant to determine factors for a successful transformation in the field of education. Teachers who have a positive attitude are more probable to use ICT in teaching than negative minded teachers who will try to evade technology application (M, A. & I, Y. 2016; D, A .T .K & N, T .H .N. 2014; F, J. S. 2013; M, M. & H, S. 2013). Attitudes comprises teachers' philosophies in the worth and importance of applying technology in literature teachings and process of education. However, if the application of ICT in teaching shows positive results, lecturers will always use it in their lessons whereas its lack of success in the classroom will end in embarrassment. In this situation, lecturers are likely not to use technology in their teaching practice (Aydin, 2013).

2.7. Functions of the TPACK Domain in Teaching

A model called TPACK has been part of many studies and researches. It has featured in many conference papers, articles in journals, and post- graduate papers to certify, produce and measure the knowledge of teachers on how to efficiently apply ICT

in their classes (Graham, 2011; Chai et al., 2013; Jordan, 2014). There have been several researches on TPACK about how to improve training programmes of teachers in different subject areas and professional development courses, aiming to generate, validate and measure ICT knowledge and abilities of teachers, (Hofer & Grandgenett, 2012) but a small study has been done on the area of teaching language especially pre-service teachers in languages department.

Kocoğlu (2009) is among the first researchers in this domain who investigated how the knowledge and ability of technology was developed in teaching the second – language EFL Turkish programme for teachers of pre-service. She realised that the domain of the TPACK helped teachers of EFL to build, apply and implement technology effectively in practice of teaching and learning.

A study carried out in America (H, M. & G, N. 2012; C, R. 2008) researched in what way tutors in social sciences, ecology and mathematics apply technological pedagogical content knowledge in teaching programs preparation. The outcomes show that via technology programmes, pre-service teachers develop a higher responsiveness on how pedagogy content and technology work together. This responsiveness encouraged teachers' to adjust their ways of teaching and practice of teaching to promote better lesson preparation and presentation by use of ICT. The results proved that teachers' pedagogical and technological knowledge improved meaningfully but there were limitations in their technological content knowledge.

A later research investigated the results of a TPACK development programme for teachers' of EFL pre-service in Turkey. The outcomes of the research revealed that domains with technology related members had the highest score even though their knowledge of ICT before the training was inadequate for teaching of second-language. The training provided the would-be teachers with a lot of confidence in regards to choosing technological tools to support their teaching (Kurt, Mishra, & Kocoğlu, 2013).

A research conducted by Garrett (2014) in USA at University of Cornell in which clinical professors, instructors and supplements, like teaching assistants in graduate schools assessed themselves in regards to TPACK perceptions, and came to the conclusion that the TPACK has positive influence on the function of technology training, confidence, knowledge and abilities.

Al Harbi (2014) stated in his research that confidence was a factor when he examined high school teachers in Saudi Arabia, their perceptions of ICT application and realised they have little to moderate knowledge of TPACK components. This shows an understanding level in their ICT implementation, outcomes revealed challenges that further curtailed the implementation of ICT such as inadequate technology materials, lack of support on professional growth, non-existence of ICT policy and insufficient knowledge in ICT.

A similar research conducted by Doukakis et al., (2010) in Greece wanted to identify the information of TPACK on instructors of computer science of a secondary school and their ICT applicability. The results of the research revealed that computer science teachers' content knowledge CK, technological pedagogical knowledge TPK, technology knowledge TK pedagogical knowledge PK and technological pedagogical knowledge TPACK were very high, but had relatively low technological content knowledge TCK and pedagogical content knowledge PCK as well as confidence level was lacking in domains. The study also depicted teachers' efforts being restricted (62%) on the implementation of ICT because of inadequate technology tools and materials, sizes of class and time pressure. Setting guidelines to select the suitable ICT materials for classroom teaching in teacher programmes in education was suggested by the author.

A study that investigated primary school EFL beginner teachers' on the factors influencing ICT application in language came out with the following findings: firstly the study concluded that ICT implementation in language teaching were lacking due to inadequate skills and knowledge on the part of teachers' Essentially, the researcher believed that "a big infrastructural investment in technology and an approach of top-down technology implementation change in teaching of English is not a guarantee for teachers to adopt technology in their classroom activities"(Dinh, 2009).

In a similar research that examines the views of blending traditional teaching with electronic learning. The outcome revealed limited understanding of teachers (Hoang, 2015). The researcher specified low educational leadership understanding of blending traditional teaching and electronic learning and therefore suggested improvement in this area. Research has portrayed that ICT uptake in learning and teaching has been influenced by two things: organisational challenges such as workload of teachers',

configuration of classroom time, large class size and personal traits such as experience of teacher, gender, and age (Buabeng –Andoh, 2012).

The effects of teacher's gender have revealed varying outcomes. Koh & Chai (2011) carried-out a study in Singapore, in which they examined pre-service teachers' perceptions attending ICT compulsory training which focussed on gender and age impacts on TPACK components of acceptance. The study illustrated insights of the various factors influencing the identification of pre-service students in introduction of ICT and came to a conclusion, the skills and knowledge of ICT have a better influence on perceptions of pre-service teachers than factors that are demographic such as how old a student is and which gender. Furthermore, TCK in addition TPK are seen as the finest impactful components of a TPACK structure.

Öz (2015) reported similar findings when he made an assessment of pre-service teachers' perception on TPACK in Turkey, after integrating the principles of TPACK into the programmes of teacher training. But investigations of Koh & Chai (2011) reported significant gender differences with identification of TPACK in females there were more positives than those of males. Another research shows the age and experience of teachers' and their willingness to use ICT (Venkatesh Thong, & Xu (2012). Rahimi & Yadollahi (2011) supported these studies by stating that teachers' with more experience are older but are less likely to apply (ICT) in teaching than younger teachers. In several researches, male teachers are reported to have higher use of ICT in teaching than female lecturers Mahdi & Al- Dera, (2013) credited this to the fact that men have higher interests in technology than women (Volman & Van Eck, 2001). But a study conducted by Adams (2002) established contradictory findings that showed an increased number of female's lecturers used ICT in their teaching.

Many studies in recent time don't portray significant differences between female and male lecturer's ICT usage in both software and hardware tools (Famsi & Orduah, 2017, Le, 2015, Verma & Dahiya, 2016). Organisational challenges are easily solved but are more fascinating. Efficient usage of ICT spaces takes a substantial demand on lecturers' time as they master the implementation and later use it in their practice in teaching. Moreover, searching for relevant teaching learning materials on the Internet takes a lot of teachers' time; even preparation of slides to deliver a lesson with ICT takes more time to finish. The duty of combining ICT and teaching responsibilities

workloads such as lesson preparation, CLT mastering, assessment of students' competencies, group organisation and other activities like classroom management makes the job of teaching tedious and time consuming. This work load must times lead teachers' to "just recycle old materials and practices to help adopt both, pressure to alter overload and practices truncating the improvements of performance" (Abuhmaid, 2011, p.206).

2.8. Challenges and Benefits of Technology Based Integration in Language Education

Studies on efficient usage of technology based- classroom in literature education have shown very positive results, not only for English language learning but other language settings with the creation of authenticity (Nguyen, 2018). The most important among the benefits mentioned is learning independently (Cakici, 2016, Houcine, 2011; Shabaya, 2009). Technology based- classroom promotes independent learning in students. It provides ways for students to have access to other foreign language learning.

According to Himmelsbach, (2019) technology-based classroom through use of internet polling and other digital equipment where all students are totally engaged causes students to be shy and inactive students who don't lift their hands in class in normal circumstances. With online engagement systems teachers have the opportunity to check in regularly with students and give them feedback on class assignment and also check students' progress on course materials etc. Teachers sometimes use data analysis to track areas where students are lacking and help accordingly.

Response system of students also helps them to evaluate their understanding of content and teachers will also see where they have to revise, the response system also imbibes in the student's digital citizenship where students get the chance to interact with other students and get rewards at the same time. Technology based environments interaction and communication in language education promotes students' confidence level, demonstrating that the knowledge in technology promotes both self-standing and collaborative approaches to international language acquisition skill and practice (Duong, 2010). The use of E-books apps and other technological resources in classroom make tech-based classroom lack of equipment and materials for teaching and learning. A certain population of teachers are turning towards use of games in the classes. 'Gamification' of the classroom is where teachers use competition to teach students, this

is done by distribution points and prized to make learning more enjoyable and engaging. Storytelling through digital is one of the best ways to make learning more exciting. Interactive learning can reduce passivity in the classes via use of games. The application of technology in the classroom helps with implementation of classroom games and assessment. Automation can speed up difficult, time-wasting tasks in the classroom, for instance, keeping records scholar's attendance and performance in class. Tools for engagement help streamline grading for text assignment, discussion and class participation and also answering ordinary student's questions, which otherwise seem difficult to the nature of their objective. Integration of technology in classrooms will help reduce the amount of time used in minor tasks. Availability of technology in the classroom helps scholars get immediate access to recent information which can aid their learning experiences. Having different E- books and other course materials that are usually up to date boost collaborative learning environment, students network with their friends online, share information among themselves, do group projects together and have interaction with their teachers (Himmelsbach, 2019).

Azmi (2017) opined the relevance of motivation in literature learning. His studies review the current usage of ICT in English learning classes, the outcomes of a research revealed that using technology-based materials in language learning with appropriate implementation motivates learners. This situation turns classrooms into digital settings. Significantly, the researcher proposed that better usage of technology-based classroom, including careful planning of methodology as well as providing teachers with adequate training is very essential to language learning.

Additionally, technology in the classroom permits students to take an active portion in learning; this is done by increasing student engagement through the use of online polling or giving short tests when lectures are on-going (with immediate results). Content is active and well-timed with the use of digital books that are linked to applicable materials. A typical advantage of technology based- classroom is the use of flipped classroom where students are given materials (videos) to watch at home and interact with friends. Teachers' knowledge of technology builds confidence and credibility with students and colleague teachers. A proper idea of students' progress is achieved in technology- based classroom (Himmelsbach, 2019). Even though using (ICT) in general has many positives, its usage in the classroom and education has

resulted in many challenges. The effects it has on students' thinking and learning as well as their abilities intellectually (Carr, 2010). For example, instance access to materials by students through technology lures them to believe and accept any knowledge provided by the internet. Students copy and use this information without verification, acknowledgement and evaluation (Keen, 2011).

According to Parker, Lenhart, & Moore, (2011), Plagiarism and academic dishonesty engagements by some students are as a result of computers, internet and technology. 'Digital natives' students who are tech-savvy find it difficult to pay attention in class when they find themselves in a class where a lot of digital devices are within their reach. Dynarski (2017) opined that students in colleges learn less when they have laptops or tablets within their reach in class. She stated students in technology-based classroom "tend to earn worse grades. The research is unequivocal: Laptops distract from learning, both for users and those around" 'Students tend to play with these digital tools by watching unnecessary videos and other materials which are not relevant to their course. Many people think that technology has isolated many students from interacting socially. If technology is used in class students interacting among them will be limited, all students will be busy with their laptop or tablets and social interaction in class will be eliminated. Also, students always try to look for ways to cheat in class and technology-based classroom give them a favourable avenue for it, through copying and passing of assignments digitally to their friends and even hiring online writers to help them write their homework is a problem with technology-based classroom students. Also, some students just copy from sites so doing hinders their creativity and professional development. Technology- based classroom also promotes laziness when students are grouped digitally to do a project with only a few students actively taking part (Himmelsbach, 2019). Students' dependence on ICT as posited by Carr (2010) believes that dependency shortens attention span, students' ability to study independently and concentrate. This situation doesn't promote 'deep learning'. Students in this era of technology study less effectively than students of pre- technology era (Kolikant, 2010). To achieve the aim of a technology-based class all students must have access to technological tools, unfortunately, not all students can afford to buy laptops, tablets or even textbooks required for class. Moreover, not all students have internet access at home to enable them to do home and other projects required by technology-

based classroom. For example, in flipped classroom which happen to be the components of technology based classroom students are required to watch videos and other content at home digitally, in this case if students don't have these tools at home they will not be able to take part in the lesson (Himmelsbach, 2019). There are several problems with the proper application of ICT. According to Mohammed (2015), inadequate infrastructure in technology coupled with lack of training, technical help as well as insufficient time on the part of lecturers impede ICT in language learning and instruction. Besides, several teachers are 'digital immigrants', they lack technology competencies and confidence to teach ICT efficiently (Pourhosein, Banou & Zabihniaemran, 2015). A lot of teachers believe technology in the classroom is a blessing in disguise but many teachers are faced with the obstacles which have stopped them from introducing technology into their classroom. A common obstacle of some teachers is anxiety (Redmann & Kotrlik, 2004). Teachers with little or no experience in this field have shown a high level of anxiety (Lokken, Cheek, & Hastings, 2003). From the above studies, the authors opined, the application of technology resources in the classroom is not sufficient to promote proper application of technology-based classrooms, training of lecturers in ICT will help upgrade their competency and effectiveness.

2.9. Factors Influencing the Implementation of Technology- Based Classroom

Fullan (2007) claimed that changes in education happen at all levels: institutes of education, national and at state levels, teachers and students (Fullan, 2007). For more than one century introducing technology in teaching and learning has a connection to the changes in education. The role its play has become more pertinent, technology resources have been rapidly revealed (Howard & Mozeiko, 2015). From the current sense of transformation (Fullan, 2007) stated several important clusters of reasons that impede an application of transformation; he mentioned outside factors, characteristics within the locality, the nature of change itself.

Hu & McGrath (2011) asserted that these factors stretched from administrative dynamics through institutions and individuals. The physical environment in which the participants operated becomes important to be identified, together with the influences of

social and history as well as factors that affected individual's reasons and deeds (Murphy & Iverson, 2003).

Earlier studies on issues that affect fruitful application of technology-based learning in the education field identified these factors which have similar ways with the other factors. Some authors settled that application of ICT was influenced by both innate barriers such as the beliefs and attitudes of teachers and extrinsic barriers like infrastructure, policy and support for its implementation (Ertmer, Ottenbreit- Leftwich, & Yorke, 2006). Dang (2013) also classified the factors that impede ICT implementation into two parts: Institutional and teacher. The teacher factors comprise 'workload of teachers, gender and age of teachers, their confidence and competency level, attitudes, beliefs, teacher's experiences in teaching as well as the influences of social issues.

The institutional –level factors as posited by Dang (2013) mentioned 'support of leadership, professional development in technology-based learning (ICT), help in technical training in ICT, facilities, availability and accessibility to technology.

Balanskat, Blamire & Kefala (2006) have different views, they categorised their barriers into three main areas: factors of teachers, school and systems factors.

According to Chaaban (2014) "technology application is a difficult procedure of transformation that requires different levels of transformation and is impacted by contextual factors". The subsequent segment seeks to analyse and define the important reasons that have affected technology integration in English learning. As stated in earlier studies, three levels of organisation were put under consideration: teacher levels institutional and national (Chaaban, 2014; Momino & Carrere, 2016, Pandolfini, 2016).

Policy of Education goes through diverse phases of advancement: these are adoption, formulation and implementation. It is very important for the integration to focus on issues that could affect its progress, except they are handled in the phase of planning. Several scholars including (Elmore, 1978, Mofarrah & Ibrahim, 2016; Paudel, 2009) categorised the main aspect of efficient implementation of technology-based learning into four.

Firstly, the inclusion of ICT into programmes of education must be acknowledged as a way of vindicating recent issues of education. Albugami (2016) opined that changes such as this are usually brought about by "status quo with dissatisfaction and

the opportunities provided to students to improve their desires in education''. Other authors like Hekami Hussin & Dahlan (2013) and Al Harbi (2014) holds the same perception, they believed that in implementation of policies, lectures must explain the aims and the learning results with expectation of a new policy, and choose the most appropriate technology-based materials to help teachers achieve these outcomes. It recommends that, to help achieve this goal ''makers of policies and others individuals who are principally living out of the classroom surrounding'' gets the views of literacy teachers about the action suggested, otherwise they won't act favourably to this transformation'' (Toll, 2001).

Secondly, the policies on technology-based education must possess all the guidelines which are clear for leaders in Education and teachers to trail during the phases of application (Al Harbi, 2014). Other authors upheld the same view that having a rich environment which is technically inclined will not spontaneously arise in efficient ICT implementation. If teachers' knowledge of technology-based learning usage is not enough, how to choose the best and appropriate ICT tools or not understanding the basic values of ICT in education (Van Braak, & Valcke, 2008). Subsequently, many studies asked for clear ways in planning of policy to make sure the aims of the policy is pleased (Phaudel, 2009; Albugami, 2016).

In the third element, Ahmed & Albugami (2015) stated that apart from investment of resources in ICT for activities in classes, a state has to offer ways which help be wield the implementation of technology- based education. Another problem of technology application in the classroom is absence of collaboration between other stakeholders in education (Oyaid, 2009) and schools (Albugami, 2016).

More importantly, lack of supervision and inspection by Ministries of Education is another biggest challenge facing technology-based learning implementation in the classroom (Hakami et al. (2013). Supervision is very vital at all levels to help determine the challenges and how best to rectify these challenges in a timely manner (Göktas, Yildirim & Yildirim, 2009). Mofarrah & Ibrahim (2016) posit that to help prevent poor and out –of –date technology-based policy ongoing evaluation is very important for the formation of reforms in policies.

2.10. What is TPACK (Technological Pedagogical Content Knowledge)?

Technological Pedagogical Content Knowledge (TPACK) emerged as a result of interaction between technological knowledge and pedagogy. TPACK involves the use of pedagogical approaches connected with the knowledge of the various technologies by the teacher in the classroom (Shin et al., 2009). TPACK has a superior influence in training and improvement of teachers (Koehler et.al, 2007).

TPACK deals with a teacher's skills to plan on curriculum which will transform technological equipment for the purpose of pedagogy (Kereluik et al., 2010). TPACK is a structure of theories that provide means for lecturers to effectively plan programmes with information communication and technology, and are able to introduce these programmes in their classes (Rocha, Mota & Coutino, 2011). The concept of TPACK includes technological content knowledge, technological pedagogical knowledge, pedagogical content knowledge and technological pedagogical content knowledge. All these elements interact with one another (Mishra & Koehler, 2006; Sahin, 2011). Technological pedagogical content knowledge is the knowledge of using technology together with methodology and subject matter in diverse subjects and practices of teaching. This knowledge helps the teacher to impact students with easy and appropriate content through the use of technology and pedagogy (Koehler & Mishra, 2009; Schmidt et al., 2009). TPACK aims to help teachers think creatively, it goes past technocentrism. The knowledge of TPACK encourages the process of curriculum samples to reveal the experiences of teachers to be more professional, this brings a new paradigm to the purpose of educational technology (Mishra, Koehler, Zellner & Kereluik, 2014).

The framework of the TPACK encourages the teacher to develop a multifaceted comprehensive, flexible and fluent knowledge of all the elements and the usage of appropriate technology should be used by the teachers. The how and the why of the usage of technology in the teaching process should be known by the teachers (Koehler et al.2011). The choice of the TPACK framework by teachers' influences students' performance and in- class behaviour.

2.11. Conceptual Framework of TPACK (Technological Pedagogical Content Knowledge)

The introduction of TPACK into the research of education technology in the field of teaching as a theoretical structure to determine how knowledgeable teachers ought to be in order to promote efficient integration of technology (Mishra & Koehler, 2006). The structure of TPACK comprises knowledge of technology as placed within pedagogical knowledge and content. Even though TPACK is a new terminology, its concept has been available for a long time. A forerunner to the concept of TPACK was a short-lived comment of the triad of content, a concept (which is different from pedagogy), and technology in Mishra (1999). But in the settings of software in educational project, Keating and Evans (2001), Pierson (2001), Zhao (2003) equally explained what the relationship between content, technology and pedagogy is. Several studies have opined parallel thoughts, with different motives and structures which involves literacy integration (Gunter & Baumbach, 2004); information and communication ICT related PCK (Angeli & Valanides, 2005; technological content knowledge (Slough & Connell, 2006); and electronic PCK or e-PCK (Franklin, 2004; Irving 2006). The following authors also researched on the role and relationships between technology pedagogy and content (Huges, 2004; McCrory 2004; Margerum – Leys & Marx 2002; Niess, 2005; Slough & Connell, 2006).

The main aim of the TPACK framework is designed to help lecturers efficiently fuse the use of content, technology and pedagogy to impart knowledge. Students who graduates from education faculties are expected to have acquired precise skills in their area of specialisation coupled with skills in pedagogy to enable them transfer knowledge to learners. Combining all the three areas and planning a better way to teach learners has been a big challenge to educators.

Scholars have identified other areas where TPACK is very useful to teaching, it can be used to create a survey to measure the confidence level of teachers' as well as their attitudes and views in ICT in relation to their teachings in class. TPACK is not only used to link content knowledge, technology and pedagogy (Dinh, 2015; Baser, Kopcha & Ozden, 2016).

2.12. Development of TPACK (Technological Pedagogical Content Knowledge)

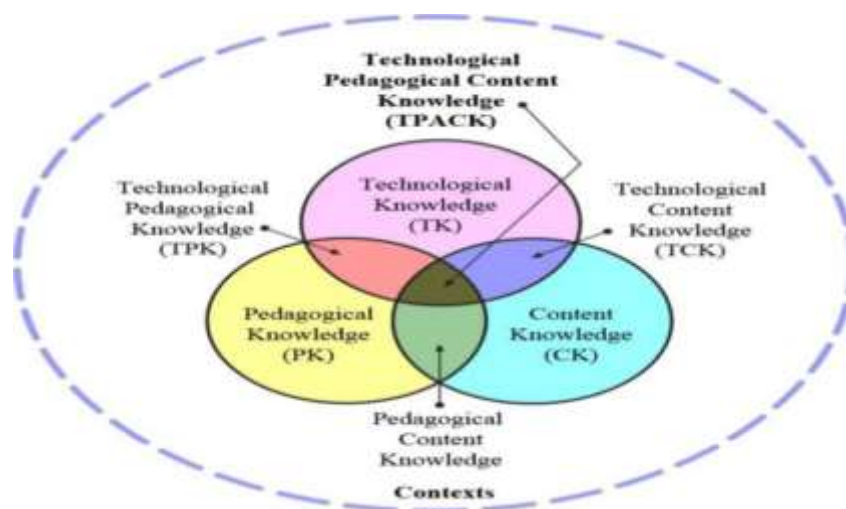
The review of related studies posits that having good information and abilities in technology- based classroom play a role in its proper application. A study conducted by Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur (2012) opined that instances where lecturer's knowledge and abilities in technology based classroom activities their level of self-confidence, views and attitudes can be replaced. In this research the TPACK structure provides a model to examine the opinions of English language students 'views, their knowledge in subject area, pedagogy, level of confidence as well as beliefs and attitudes towards incorporating computer-based classroom activities in their English literature teaching.

This framework was selected since it was designed firstly, for education of teachers' and proven efficient in different studies related to the present research (Chai, Koh, & Tsai 2013). From the beginning, this approach has put the wants of specific learners, compatible with a wants –investigation approach encouraged in teaching of language (Long, 2005).

The TPACK approach is an upgrade of the inventive PCK approach inspired by Shulman (1986). Shulman (1987) posits that the pedagogical content knowledge is a specific kind of information as is shown in Figure 1.

Figure 1

The TPACK Framework



Sourced from the TPACK Framework Forum <http://tpack.org/>

As seen in Figure 1, it explains the framework of the TPACK, which comprises of Technological pedagogical knowledge (TPK), Pedagogical Content Knowledge (PCK), and Technological Content Knowledge (TCK), within the context of these is also incorporated with Technological Knowledge (TK), Pedagogical Knowledge (PK) and Content Knowledge (CK).

Previously, the training of teachers in technology-based knowledge split teaching and learning from technology knowledge, the emphasis was on the knowledge of technology instead of the usage of the knowledge in teaching and learning (Mishra & Koehler, 2006).

Still, Mishra & Koehler developed and added the introduction of technology information into PCK. In context TPACK approach encourages link between content knowledge and teacher's pedagogy.

2.13. TPACK Components and the knowledge of Technology-based Classroom

This section discusses the seven descriptions of the parts of TPACK based on the works of Mishra and Koehler and Mishra (2006), Shulman (1989) as well as other studies which are in agreement with English language learning and teaching.

Koehler and Mishra (2006) explained the CK as the awareness of instruction in subjects' areas, it includes the "main facts, theories, ideas and processes and guidelines of sign as well as evidence" (Shulman, 1986, cited in Mishra & Koehler, 2006). The demands of the CK differ based on the subjects' differences, for instance in arithmetic or English language (Mishra & Koehler, 2006).

According to Kang, Ni, & Li, (2010), English language lecturers need to have some abilities and knowledge which will enable them to teach skills such (problem solving, conversation and vocabulary); components of linguistics (English language sounds knowledge, syntax and formation of words); and understanding the culture of countries that speak English language. The "what" of teaching are characterised by these components. Nevertheless, the "how" and "why" of teaching are also vital for teachers to understand, through the choices, they make that guide theories underpinning their understanding.

Chaaban (2014) posits that the knowledge of pedagogy does not change quickly as the knowledge of technology TK cannot be easily outlined due to its continuous change.

Teachers are continuously obligated to study and adapt to new technological ways at the basic level, whereas at an advanced level, TK assists learning to modify settings of computer, set up or change software of the computer and finally connect to the internet (Mishra & Koehler, 2006). A research conducted by Schmidt et al. (2009) enumerated additional ways, stressing that lecturers cultivate the important technology-based knowledge and abilities to solve mutual difficulties independently. Lecturers should be familiar with different new technologies and be able to understand ways of using new technologies. The TK knowledge of English language teachers comprises general knowledge of ICT devices and its operation as well as its application and technical knowledge of technology in order to regulate to the innovative skills in the classroom (Dinh, 2015).

In connecting PK and CK, Mishra and Koehler (2006) explain the PCK as a realisation of appropriate instruction methodologies in teaching of content, depth of ration, evaluation, procedures of reporting and sequence? Mishra and Koehler (2006) stressed on the requirement for educators and lecturers to know learners and their attitudes so they can be able to plan better teaching and learning strategies to cater for the wants of all learners. Without teachers' knowledge and understanding of the theoretical content it will be a great challenge to tech well. Murray and Christison (2010) included the following models to the PCK elements they find important for language learning teachers. They first recommended for teachers that it is important for them to amend the content they teach their students in order to satisfy different learner groups.

Secondly, lecturers are able to identify needs of their students, and through interaction negotiate significantly.

Thirdly, they supported strategies of teaching that use methods involving communicative language and appropriate strategies to cater for students' needs. Grouping and pairing of students was also proposed by Bax (2003).

Technological pedagogical knowledge (TPK) is the awareness of teachers' knowledge on the various technological programs, how useful these programs help and aid teaching and learning and also learns how to apply them. In the field of literature learning, TPK teachers' include the ability to select the appropriate technological materials and knowledge in EAL theories of learning. The chosen technological

applications must suit the different learning style, the use of ICT in lesson preparation, procedure in evaluation as well as classroom management (Dinh, 2015).

Lastly, Technological Pedagogical Content Knowledge (TPACK) deals with a makeup of knowledge that is multifaceted, it includes:

.....the understanding of this presentation of ideas via the technologies pedagogical skills that employ technologies in a productive ways, to educate content knowledge of what makes abstracts difficult or easy to learn and how technology can help correct these problems that scholars face; knowledge of students' prior knowledge and theories of epistemology, and knowledge of how technologies can be used to build on existing knowledge and to develop new epistemologies or strength old ones (Mishra & Koehler, 2006).

2.14. Type of Technological Devices in the Classroom (computer lab)

Figure 2

Shows a photo of desktop computers from ((<https://www.useof technology.com/wp-content/uploads/2017/09/ computer-education-technology.jpg>))



When Technology is stated the first thing that comes to mind is the computer, this is natural because technology started with the use of computers. Classroom computers come in different ways from normal desktops to convenient laptops computers. Any of these could be by the teacher only or offered to all the students in the classroom. Laptops in some cases are made available to every student. The use of these computers provides students and instructors with several options such as internet access to

research; learn how to type, and study educational materials. It can also be used to make class presentation watch slides of video, and other content of education. Computers given to students also have varieties of uses; in some schools educational websites are subscribed online for students to access the information on these sites. Many of these online sites also give rooms for lecturers to closely follow the learning phases of their students and give them proper guidance. Students sometimes use these devices to write their assignment and prepare slides for class presentation (Ivy, 2017).

2.14.1. Type of technological- device used in the classroom (Tablet)

Figure 3

Shows a photo of tablet from ((<https://www.useof technology.com/wp-content/uploads/2017/09/smartboard-education-technology.jpg>)



Tablet is yet another masterpiece of technological device that has succeeded in finding its way into the classroom. A tablet is a portable kind of computer fixed with a touch screen that is easy to be used and handled. Tablet has several different kinds of functions than computers; its connection to the internet is easy and can run different applications, subject to its system of operation. Tablets are very useful in the classroom because they are convenient and portable to use at anywhere within or outside the classroom. The only difference between tablet and computer is that they are less heavy and handy. Students most times use tablets to access content and information through the use of applications. Students use tablets to complement teaching in the classroom

and mostly use it to revise previous skills and information learned. Tablets are preferred by both teachers and students because it's very portable to use (Ivy, 2017)

2.14.2. Type of Technological Device Used in the Classroom (Smart-Board)

Figure 4

a photo of smart board (<https://www.useof technology.com/wp-content/uploads/2017/09/smartboard-education-technology.jpg>)



Smartboard are the most stylish and advanced technological apparatus in the classroom. It's a device that makes teaching and learning more fun, its interactive where the teacher can use pictures audio and other materials in the classroom. it enriches learning in so many ways; for example, its hands-on functionality and its capability to pair with tablets and laptop PC's gives a perfect combination for a perfect classroom setting. Its environmental friendliness is the most unique (Ivy, 2017).

2.14.3 Type of Technology-Based Device (Telephone for Social Media)

Figure 5

A photo of students using phone in class (<https://www.useof technology.com/wp-content/uploads/2017/09/smartboard-education-technology.jpg>)



Social media has gradually taken the world of the youth and it's now acknowledged as a form of learning in some ways in the classroom. Instructors use groups like scholastic teachers to provide wonderful assistance to educators. Several teachers communicate with students directly through social media; this gives teachers an opportunity to give one –on one support to the needs of students. Students also get the chance to interact with their friends through class group chats (Ivy, 2017).

2.14.4. An example of Technology- Based Classroom

Figure 6

a photo of technology-based classroom (<https://www.useof technology.com/wp-content/uploads/2017/09/ smartboard-education-technology.jpg>)



Ivy (2017) explains a classroom with all the technological tools, materials and like the under listed picture is a typical example of technology- based classroom, availability of computers, smart board linking tablets for students and other materials that make learning effective in the classroom.

2.15. Related Studies

This section discusses the various studies conducted in the area of technology integration in the classroom and the findings.

Cakir- Dilek (2019) MA's thesis at University of IOWA researched on the topic '*Methodical Evaluation of Assistive Technology –Based Education for Post- Secondary Students with Growing Disabilities*'. This thesis aim was to identify realistic studies that examine the usefulness of helping technology–based guidance to teach autonomous existing abilities with post-secondary learners of knowledge that deals with the variety

of autism syndrome. The outcome of this study revealed positive effectiveness of the help technology-based education offer to self-determining existing abilities.

A doctoral dissertation on the topic ‘*Examining the stages of Apprehension and Technology Incorporation Personality- Value Beliefs of English Language Pre-service Teachers*’, was conducted by Kayaduman (2017) at Middle East Technical University Ankara, Turkey. This dissertation was purposed to find out the effective strategies of instruction for psychoeducational clusters and how it is different from face to face. Findings prove positive, the instructional strategies improved dramatically.

In another study by Gök (2014) also a PhD thesis conducted at Middle East Technical University Ankara, Turkey. The study centered on ‘*Recent conditions, Practice, Manage and Incorporation of Smart Classroom Technologies within the Space of Fatih Project: A Multiple Case Study*’ This research was aimed to examine the present usage of the classroom technologies which have smart gadgets by teachers in a Turkish school. The research revealed teachers’ perceptions and that of school administrators were not examined before SCT were installed in schools and it affected its implementation.

Mohammed (2015) conducted a study at Istanbul Aydin University on the topic ‘*The opinions of learners and instructors about the advantages and obstacles to technology assisted EFL*. It was a Master’s thesis which centered on understanding of EFL learners and instructors view point about the usage of technology in learning and teaching process in English linguistic. The results revealed that even though instructors’ and learners view point impacted technology incorporation in EFL, the usage of this technology was inadequate.

Ngan (2019) as part of his doctoral studies at Edith Cowan University, Australia researched on a PhD dissertation titled ‘*An inquiry of ICT Plan Application in an EFL Tutor Instructive Program in Vietnam*’ Research was purposed to explore and understand pre-service EFL educators and lecturers’ insights, their skills and knowledge in the use of ICT in the practice of instruction and knowledge. The outcome of this study provided positive observations of professors and pre-service tutors with the implementation of educational technology in EFL teacher education programs.

Montgomery (2017) conducted a PhD dissertation at University of Maryland, USA on the subject ‘*Elements that Impact Technology Incorporation in the Classroom*’.

The research was purposed to examine variation of teacher integration on technology into instruction in the classes. The ratings of the work indicated that interest of personality, skilled growth, and availability had the biggest influence on teachers' decision to integrate technology.

In a study conducted by Francis (2017) at University of New England as partial fulfilment of his doctoral studies, his research is on the topic “*The Impact of Technology on Learners Incentive and Commitment in Classroom- Based Education*’” The study was purposed to examine the insights of learners’ on the use of technology in the classroom –based instruction. The findings of the study explained that learners felt inspired from the use of specific technology, it being for the reason of pedagogy or the use of Individual Educational Plan (IEP).

Ballew (2017) studies focus on the “*Observation of Educators ‘on Technology-Based Google Classroom*’” This doctoral thesis aim was to survey the perceptions concerning Google classroom and the effects it has on classroom learning. The results of this thesis revealed that teachers' Google classroom were found to be dependent upon their years of experience, grade level assignment and subject matter.

Tweed (2013) research on the topic “*Technology Application: Instructor’s Age, Skill, Self-Efficacy and Specialised Growth as Linked to Classroom Technology Incorporation*”, a PhD dissertation. It was purposed to research ways to find the mixture of issues that affect the application of new tools in the classroom. The results revealed that personality value of educators considerably linked to classroom expertise used by tutors.

Young (2008) at University of Wisconsin-Stout researched as part his Masters’ thesis on the subject “*the use of Technology Gadgets in the Local School Lessons*”. The study was aimed to determine the effects that computer technology used in the classroom had on learners’ scores, inspiration, attitude and presence. The conclusions of the investigation established that tutors’ and learner’s technology use and the use of technology everywhere largely depends on how well the teacher uses it in the classroom.

Salavati (2016) focused his PhD dissertation research on the subject “*using Digital Technologies in Teaching: The Intricacy of Educators’ Daily Practice*’” This study was done at Linnaeus University, Vaxjo- Sweden. The aim of this doctoral dissertation was

to lighten the complex nature of teachers' daily activities using digital skills. The consequence explains how difficult the everyday activities of teachers are but with the use of digital gadgets, the job of teachers becomes a little easy.

Yemothy (2015) conducted a doctoral thesis study at Walden University, USA, he researched on the topic '*Refining Instructive Technology Incorporation in the Classroom*'. The research was proposed to survey the obstacles facing the educators of technology integration. The study recognised social change as a remedy that focused school by improving their technology integration practices based on the evidence empirically.

Marti (2006) researched on the topic '*Lecturer teaching in ICT-Based Education Environment: Strategy and Application of An On-line Guidance Model for English Dialect Educators*'. This doctoral dissertation was purposed to provide an instructional model through an online to educate tutors of English Language in the use of educational technology by making use of pedagogy that is web-based. The outcome of this dissertation revealed positive results, through the usage of web-based instructional model English language teachers improved their methodology of teaching

Strickland (2003) researched on the topic "*an investigation of the Combination of Technology into Instructor's Teaching*" a PhD thesis conducted at Ohio State University, USA. The thesis was aimed at investigating the wants and issues of teachers which are extremely significant in understanding the challenges and benefits in the technology integration process in education. Grounded on the findings the researcher concluded that teacher educators faced issues and wants that directly influenced the benefits and challenges in the technology integration process.

Garling (2016) researched on the topic "*Overseas linguistic educators' technology views and application features: a diverse approach study*" a doctoral thesis at University of Iowa, USA. The study was proposed to examine technological views and obstacles to technology integration with classroom practices. The outcome revealed that both internal and external variables impacted the use of technology by teachers.

In a doctoral thesis conducted by Vogelge (2015) at University of Iowa, on the subject '*A varied approach revision of a technology-based personality –observatory intercessions*' The research was aimed to build on a line of research focussed on using technology-based, self- management intervention for students experiencing behavioural

difficulties in a classroom setting. The findings showed significant improvements in academic engagement and teacher perception of the feasibility and worth of intervention was reported as highly favourable.

Stecklein (2014) focussed his PhD dissertation on the subjects *‘Impacts on communicating technology tutor framework and response on university scholars’ theoretical growth in signal and force concepts’*. This thesis investigated the enlistment of instructional technologies, in particular tablets PC and Dy Know Interactive software in a technologically enhanced university- level, introductory physics course. The outcome of this qualitative case study produced good results (i.e. student learners dictate the leveraging of technology in any classroom.)

Kuda-Malwathumullage (2015) MA thesis focussed on the topic *‘Effect of Technology –instilled collaborative education settings on university professor’s directive choice exercises’*. The thesis was conducted at University of Iowa. The aim of this study was to examine college professors’ pedagogical reasoning behind incorporating different types of instructional technologies and teaching strategies to foster student learning in technology-infused interactive learning environments. The findings of the thesis established that college professor’s pedagogical decision-making process, their perceived benefits and challenges seemed to be interrelated and centered on the learners and their learning process.

Goo (2013) conducted a PhD dissertation at University of Iowa which he centered on the *‘How the use of computer-based video instruction in teaching students with intellectual disabilities and its Effectiveness on stuffs at the smaller markets’*. This study was purposed to investigate whether CBVI is an effective method for teaching students with intellectual disabilities the skills of locating grocery items in classroom settings and whether the skills acquired in classroom settings generalised to the actual grocery stores. The outcome revealed that CBVI is an effective means to teaching the skills of locating grocery items to students with intellectual disabilities and helped these students generalize the acquired skills to actual grocery stores.

CHAPTER THREE

III. METHOD

The research is a mixed method and has been conducted in a survey model. The survey model is intended to create statistics around a target populace. How this is done rests on gathering the characteristics of the aimed population from a section of respondents provided answers (Fowler, 2014).

3.1. Population and Sampling

The study was conducted at Firat University, Departments of English language. Firat University is a state university located in Elazig, Eastern Turkey. The departments of English language learning are one of the best departments as far as English learning is concern. In the department of English language at Firat University, student have to successfully complete four-year academic work to enable them attain a bachelor's degree in English language. Some students' need to take one-year preparatory class to enable them prepare well for the degree.

The participants of the study were undergraduate students in the preparation, first, second, third and fourth year classes. The population of the study was all the students studying English language at Firat University with a total number of five hundred and eighty three. The number of students who participated in this study was three hundred and three. The convenience sampling technique was used.

3.2. Data Collection Tools

A survey which is a data collection tool was adapted to determine students' opinions on technology-based classroom. The forms were delivered to all students in hard copy, and through distance education by google forms. The survey was developed by (James, 2017). However, the researcher made the needed revisions according to the aims and the context in which the survey would be used. The survey has 22 questions in all, with sub-questions totally to 56 questions divided into three sections, A B and C. The survey items were five-point Likert scale items demanding respondents to say whether they; “‘Strongly Agree’ which was represented by the number 5’, Agree” is 4, Neutral’ number is 3, Disagree’ is 2’ or ‘Strongly Disagree’ is 1’ with certain statements.

In the analysis result, the Kaser-Meyer-Olkin (KMO) measure of sampling adequacy was found to be 0.874 and the Bartlett test was 13202,921. The result of Bartlett test is significant since $p(\text{sig.}) = .000 < 0.05$.

The Cronbach alpha coefficients stipulates that a reliability coefficients of .70 or higher is considered 'acceptable' in most situations of research. The Cronbach alpha coefficient of this scale is 0.85. Based on this result it can be said that the scale has a high reliability coefficient. Refer to Appendix 3: (A, B, and C) for the survey.

3.3. Procedure of Data Collection

As a result, quantitative and qualitative research methods and techniques were used to examine the opinions of university students about technology-based classroom approach in terms of various variables.

In order to conduct a good study, the necessary permission was taken by the researcher at the departments of English languages. After the views of expert, the questionnaire was applied to 303 students for pre-application and the data was processed. About half of the survey were filled by students through the hard copy survey. The process of data collection changed from the hard copy survey to distance learning by way of google forms due the COVID 19 pandemic, students were not at school. About half of the survey was filled through the google forms distributed to students via emails; the data collection tool of the study was used with original language and structure.

3.4. Analysing of Data

The data was collected by applying the principles of data collecting tools and was organized in basic statistics. Using the survey model, the research was conducted by collecting data on quantitative and qualitative methods and techniques. IBM, Statistical package for social sciences (SPSS) 22 was used in the analysis of the collected quantitative data. Also, the data was analysed in comparative analysis techniques and factor analysis. (exploratory, frequencies and percentages, independent sample t- test, homogeneity of Variance, analysis of variance ANOVA). Qualitative data was analysed by using content analysis technique.

CHAPTER FOUR

IV. FINDINGS

4.1. Data Analysis Procedure

The findings were itemized from the analysis of the questionnaire as follows.

The first section of the survey seeks to unravel the opinions of English language students towards the usage of technology-based classroom when learning English.

The second section offers information about the data presented as quantitative by identifying students' use of technological devices for personal effect and the purposes of education, the analysis also seeks to know from students how long do they use technological devices for personal and educational purposes. Does the availability of technological resources support learning integration?

The third section data was analysed quantitatively to investigate the opinions of students with regards to technology-based classroom in relation to motivation in class, does technology-based classroom motivates them to learn English language in university settings.

In the fourth section, the data was analysed to seek the differences in students' perceptions towards the use of technology-based classroom in English language lesson due to their class level. Content analysis to explain the written suggestions of students about technology-based classroom in Firat University.

4.2. Findings

4.2.1. *Background Information of the Participants*

This part talks about the basic information on the characteristics of students who filled out the questionnaire.

Table 1*Frequency and Percentage of Gender, Age, and Class Level*

Gender	Frequency	Percentage
Male	118	38.9
Female	185	61.1
Age		
Under 21	113	37.4
21-29	184	60.9
30-39	6	1.7
Level of class of participants		
Preparatory class	69	22.7
First class	88	29.1
Second class	53	17.5
Third class	54	17.8
Fourth class	39	12.9
TOTAL	303	100.0

The table shows how many people participated in the study. After examining the Table 1, it was realised that 303 people participated in the survey.

The distribution of the participants according to their gender is included in this table. Looking at the table is 118 of the participants are male while 185 of them are female. At the same time, the participation rates of the genders of the participants are 38.9% male and 61.1% female respectively.

The age distributions of the participants and the distribution rates by age are included in this table. Looking at the table, there are 113 students under the age of 21 and their percentage distribution is 37.4%. 184 students between the ages of 21-29 participated and the percentage distribution of these participants is 60.9%. Finally, 6 students between the ages of 30-39 participated and the percentage distribution of these participants is 1.7%.

The distributions of the participants according to their educational status are included in this table. From the table it is realised 69 of the participants are prep class students and the percentage distribution of these participants is 22.7%. 88 first year students participated and the percentage distribution of these participants is 29.1%. 53 second year students participated and the percentage distribution of these participants is 17.5%. 54 third year students participated and the percentage distribution of these participants is 17.8%. Finally, 39 fourth grade students participated and the percentage distribution of these participants is 12.9%.

Table 2*Frequency and Percentage of the Devices Students Used*

Computer - How often do you use this device?	Frequency	Percentage
Everyday	230	75.9
Five times a week	73	24.1
Four time a week	-	-
Three times a week	-	-
Two times a week	-	-
Once a week	-	-
Phone -How often do you use this device		
Everyday	303	100.0
Five time a week	-	-
Four time a week	-	-
Three times a week	-	-
Two times a week	-	-
Once in week	-	-
Tablet -How often do you use this device?		
Everyday	21	6.9
Five times a week	0	-
Four time a week	1	0.3
Three times a week	2	0.7
Two times a week	3	1.0
No Tablet	276	91.1
Total	303	100.0

With the electronic device computer, the distribution of participants according to how many students uses the gadgets. 230 students representing 75.9% use their computer every day. 73 students' participants and their percentage distribution was 24.1% uses computer five times in a week.

All the participants had phone and uses them every day. After examining table 4b it was realised that 303 participants used phone every day and their percentage distribution is 100%.

Two hundred and seventy-six (276) participants didn't have the gadget tablet. The percentage distribution of these participants is 91.1%. 21 participants representing 6.9% uses the gadget tablet every day, the rest of the participants with the percentage distribution range of 1.0 and 0.3 respectively.

Table 3*Frequency and Percentage of Internet Access, Limited and Unlimited*

Is there internet connection in your dormitory/home?	Frequency	Percentage
Yes	269	88.8
No	34	11.2
If there is it's it		
Limited	30	9.9
Unlimited	273	90.1
Total	303	100.0

The distribution table of participants according to their internet access and usage, majority of the participants 269 with percentage distribution of 88.8% have internet access both at home and at the dormitory. 34 participants representing 11.2% had no internet access at home and the dormitory. With the question of if their internet access is limited and unlimited, from the distribution table 273 participants with percentage distribution of 90.1% had unlimited internet access while 30 participants representing 9.9 % had limited access to internet connection.

Table 4.

Frequency and Percentage of Hour's Students use Device at Home/Dormitory / School as well as the Place they usually use their device.

How many hours do you use your device at home/dormitory?	Frequency	Percentage
Less than one hour	16	5.3
1 hour	22	7.3
2 hours	41	13.5
3 hours	27	8.9
4 hours	27	8.9
5 hours	34	11.2
6 hours	136	44.9
Total	303	100.0
How many hours do you use your device at school?		
Less than one hour	38	12.5
1 hour	47	15.5
2 hours	96	31.7
3 hours	60	19.8
4 hours	25	8.3
5 hours	13	4.3
6 hours and more	24	7.9
Where you do usually used your device?		
School	29	9.6
Home	128	42.2
Dormitory	116	38.2
Cafe	19	6.3
Library	5	1.7
Park	6	2.0
Total	303	100.0

After examining table 4 we can see that majority of the participants totally 136 with percentage distribution of 44.9% spend 6 hours and more using their technological device at home/dormitory. The rest of the participants spend the following hours using their device at home. 41 participants with the 13.5% spend 2 hours using their device at home/dormitory, 27 participants spend four hours using their device, 34 participants representing 11.2% spend 5 hours using their device, 27 participants with 8.9% percent

spend 3 hours using their device while 22 and 16 participants spend 1 hour and less than 1 hour respectively.

As can be seen from table 4b, 96 participants with distribution percentage of 31.7% spend 2 hours using their technology device at school, 60 participants with 19.8% spend 3 hours using their device at school, 47 participants representing 15.5% spend 1 hour using their device at school. The rest of the participants with percentages ranging from 12.5% and 4.3% spend between less than 1 hour, 4 hours, 5 hours and 6 hours respectively.

From table 4c it can be seen that 128 participants with the distribution percentage of 42.2% use their technology device at home while 116 participants representing 38.2 used their device in the dormitory. Other participants with percentages ranging from 9.6% to 1.7% use their devices at school, café, library, and park respectively

Table 5.

Frequency and percentage of the availability of technology-based classroom in English language department of Firat University

Is there a good technology-based classroom in your school?	Frequency	Percentage
Yes	276	91.1
No	27	8.9
Total	303	100.0

After examining table 5 it can be seen that 276 participants with the distribution percentage of 91.1% believed that there is technology-based classroom at the department of English language learning whereas 8.9% of the participants think that there is no technology- based classroom in the department of English language learning.

Table 6

Frequency and percentage table of technology-based classroom having enough facilities

The technology-based classroom does not have enough facilities?	Frequency	Percentage
Yes	174	57.4
No	129	8.9
Total	303	100.0

With the question of technology-based classroom having enough facilities, it can see from table 6 that majority of the participants with 57.4% are of the view that technology-based classroom of English language department at Firat University have enough facilities while 42.6% of the participants think the facilities are not enough.

Table 7

Frequency and percentage of how often participants use their technology device for school related activities

How often do you utilize your technology device for homework and school related activities?	Frequency	Percentage
0-5 hours a week	71	23.4
6-10 hours a week	51	16.8
11-15 hours a week	49	16.2
16+ hours a week	132	43.6
TOTAL	303	100.0

Looking at table 7 it is realised that 43.6% of the participants spend 16 hours and more per week on their technology-based device for school related activities. 23.4% spend between 0-5 hours per week on their technology-based device. 16.8% of the participants spend between 6-10 hours a week and 16.2% of the participants spend between 11-15 hours a week for school related activities.

Table 8

Frequency and Percentage table for the importance of technology-based classroom in university settings

Should university use more or less technology than its currently using?	Frequency	Percentage
Yes	208	68.6
No	95	31.4
TOTAL	303	100.0

From table 8 it is understood that the distribution table has 208 participants representing 68.6% think that Firat University English language departments need more technology –based classroom than it currently has. 31.4% of the students believed that the existing technology-based classroom at Firat University English language department is good.

Table 9*Opinions of Students about the Use of Technology Based Classroom in English Language Departments*

	Strongly Agree		Agree		Neutral		Disagree		Strongly disagree		$\bar{X}$	SS
	f	%	f	%	f	%	f	%	f	%		
I can learn English on my own	102	33.7	116	38.3	57	18.8	20	6.6	8	2.6	3.93	1.01
I can direct my own learning without a lecturer's supervision	97	32.0	115	38.0	53	17.5	32	10.6	6	2.0	3.87	1.04
I can pronounce words correctly on my own	101	33.3	113	37.3	56	18.6	25	8.3	8	2.6	3.90	1.05
I can think on my own without a teacher's guidance	99	32.7	111	36.6	59	19.5	25	8.3	9	3.0	3.87	1.05
I can do Microsoft excel And word on my own	159	52.5	98	32.3	30	9.9	12	4.0	4	1.3	4.33	.89
I can send and receive email on my own	169	55.8	92	30.4	23	7.6	13	4.3	6	2.0	4.33	.93
I can use social networking sites	166	54.8	92	30.4	31	10.2	10	3.3	4	1.3	4.33	.88
I can use excel to analyse data	70	23.1	74	24.4	105	34.5	41	13.5	13	4.3	3.48	1.11
I can search for information from internet on my own	158	52.1	85	28.1	4	15.8	8	2.6	4	1.3	4.27	.91
I can solve English language problem on my own	64	21.2	123	40.6	95	31.4	17	5.6	4	1.3	3.74	.89
I understand the video watched in technology based classroom	60	19.8	126	41.6	94	31.0	19	6.3	4	1.3	3.72	.89
I developed speaking skills on my own	55	18.2	127	41.9	93	30.7	23	7.3	6	2.0	3.67	.92
I am sure about my ability to do my class exercise	58	19.1	132	43.6	88	29.0	20	6.6	5	1.7	3.71	.90
I am certain I can understand, do given assignment on my own	61	20.1	130	42.9	89	29.4	20	6.6	3	1.0	3.74	.88
I am certain I can learn the concept and ideas of English language in technology based classroom	53	17.5	130	42.9	89	29.4	23	7.6	8	2.6	3.65	.94
Students are motivated to come up with new ideas in technology based classroom	98	32.3	123	40.6	60	19.8	18	5.9	4	1.4	3.96	.93
The use of technology devices motivates you to learn fast.	97	32.0	131	43.2	50	16.5	17	5.6	8	2.6	3.96	.97

Table 9. Continuation

	Strongly Agree		Agree		Neutral		Disagree		Strongly disagree		$\bar{X}$	SS
	f	%	f	%	f	%	f	%	f	%		
c. Doing your homework with internet motivates you to be creative learner	97	32.0	124	40.9	58	19.1	17	5.6	7	2.3	3.94	.97
I am not motivated to learn English when my teacher uses technology while teaching English	63	20.8	99	32.7	66	21.8	42	13.9	33	10.9	2.61	1.26
Lecturers can adopt skills for special needs by using technology to insure equity	52	17.2	75	20.4	130	42.9	38	12.5	8	2.6	2.58	.99
Lecturers can use technology to translate English text for non-native speakers	53	17.5	73	20.2	121	39.9	48	15.8	6	2.0	2.60	1.01
Lecturers can diversify their teaching by providing options for students who finish class work early	51	16.8	80	26.4	125	41.3	42	13.9	5	1.7	2.57	.98
Lecturers can use online sign-up for conferences, parents' helper s and project presentation	62	20.5	93	30.7	99	32.7	43	14.2	6	2.0	2.64	1.03
Lecturers can provide feedback on students' success and challenges	67	22.1	104	34.3	90	29.7	36	11.9	6	2.0	2.37	1.01
I can access homework and projects via technology device online	103	34.3	145	47.9	41	13.5	10	2.3	4	1.3	4.09	.84
b. I can see my grades online immediately	101	33.3	144	47.5	42	13.9	11	3.6	5	1.7	4.07	.87
I can follow my class through class websites when am absent from class	103	34.0	136	44.9	40	13.2	13	4.3	11	3.6	4.01	.98
I can take digital notes on my tablets or IPAD	86	28.4	137	45.2	47	15.5	25	8.3	8	2.6	3.88	.99
I can have access to my digital portfolio	78	25.7	142	46.9	53	17.5	18	5.9	12	4.0	3.84	1.00
Smart boards are not enough in technology-based classroom	58	18.8	93	30.7	65	21.5	48	15.8	40	13.2	2.73	1.29
Computer laboratories are limited in technology-based classroom	92	30.4	90	29.7	60	19.8	29	9.6	32	10.6	2.40	1.29
Internet access is not enough in technology based classroom	52	17.2	81	26.7	66	21.8	49	16.8	55	18.2	2.91	1.35
I can interact with my friends every time and everywhere	106	35.0	138	45.5	39	12.9	16	5.3	4	1.3	4.07	.89

Table 9. Continuation

	Strongly Agree		Agree		Neutral		Disagree		Strongly disagree		$\bar{X}$	SS
	f	%	f	%	f	%	f	%	f	%		
The use of technology - based classroom has increased riendship among students	74	24.4	136	44.9	65	21.5	20	6.6	8	2.6	.381	.96
The relationship between lecturers and students improve in technology-based classroom	74	24.4	107	35.5	73	24.1	25	8.3	24	7.9	3.60	1.17
Students use technology device for social networking	96	31.7	146	48.2	35	11.6	19	6.3	7	2.3	4.00	.94
Lecturers are lazy in technology-based classroom	52	17.2	83	27.4	58	19.1	69	22.8	41	13.5	3.11	1.31
Technology classroom are time consuming	45	14.9	82	27.1	52	17.2	71	23.4	53	17.5	2.98	1.34
Lecturers can give homework online and assess students' performance easily	72	23.8	133	48.9	71	23.4	21	6.9	6	2.0	3.80	.94
Feedback on students' performance is prompt	72	23.8	137	45.2	71	23.4	17	5.6	6	2.0	3.83	.92
Determination of students' challenges are easy in technology based classroom	62	20.5	123	40.6	93	30.7	18	5.9	7	2.3	3.70	.93
Students learn different concept with technology-based classroom	57	18.8	128	42.2	94	31.0	18	5.9	6	2.0	3.69	.90
Students learn so many things at the same time in technologybased classroom	56	18.5	136	44.5	81	26.7	25	8.3	5	1.7	3.70	.91
Students learn how to be critical thinkers' in technology based classroom	65	21.5	123	40.6	86	28.4	18	5.9	11	3.6	3.70	.98
Traditional methods of teaching are avoided in technology-based classroom	53	17.5	124	40.9	91	30.0	29	9.6	6	2.0	3.62	.94
Students understand the kind of question to ask	38	12.5	118	38.9	108	35.6	27	8.9	12	4.0	3.47	.95
The use of technology-based classroom posed a challenge in English lessonin University settings.	13	4.3	71	23.4	77	25.4	98	32.3	44	14.5	2.70	1.10
Using technological based devices such computer smart board etc. make English lesson boring	14	4.6	51	16.8	73	24.1	123	40.6	42	13.9	2.57	1.06

Table 9. Continuation

	Strongly Agree		Agree		Neutral		Disagree		Strongly disagree		$\bar{X}$	SS
	f	%	f	%	f	%	f	%	f	%		
English lesson which make use of technology based classroom helps students understand lesson better	28	9.2	127	41.9	88	29.0	43	14.2	17	5.6	3.34	1.01
Students opinion about facilities in technology based English classroom is not necessary	17	5.6	44	14.5	78	27.5	116	38.3	48	15.8	3.44	1.09
The use of technology based classroom in my English classroom gives students greater opportunities to speak with other friends	30	9.9	131	43.2	81	26.7	40	13.2	21	6.9	3.35	1.05
The use of lecture method by teachers' in technology based classroom in English lessons is not beneficial	15	5.0	79	26.1	60	19.8	104	34.3	45	19.4	3.28	1.14
I develop my listening and writing skills in technology-based classroom in English lesson	34	11.2	159	52.5	47	15.5	51	16.8	12	4.0	3.50	1.02
The use of technology based classroom prepares students to become creative thinkers and problem solvers	51	16.8	153	50.5	76	25.1	13	4.3	10	3.3	3.73	.90
I can finish my homework and projects early when my English lesson is done in technology-based classroom	76	25	148	48.8	58	19.1	16	5.3	5	1.7	3.90	.89
Technology based classroom environments in university settings needs more improvements	152	50.2	99	32.7	31	10.2	12	4.0	9	3.0	4.23	.98

Students who participated in the study expressed an opinion on the impact of technology-based classroom, if the results are examined, it is seen that the average mean of the first variable '*I can learn English on my own*' ($\bar{X}$ =3.93). It seen that students expressed their opinions at the level of agreement that with technology-based classroom they able to study English on their own. In a study conducted by Hawkar (2010) agree with the opinions of students in this study, the explained that technology –based classroom encourages student to study on their own.

Students participating in the study agree with the statement of the variable '*I can direct my own learning without the lecturers' supervision*' ($\bar{X}=3.87$). This result portrayed that students feel comfortable in technology –based classroom and are able to direct their own learning when teachers are absent.

Students stated opinions approved the statement of the variable '*I can pronounce words correctly on my own*' ($\bar{X}=3.90$), when the result was examined it indicated that students improve their pronunciation skills in technology-based classroom.

Students participants in the study expressed an opinion that agree with the statement of the variable '*I can think on my own without a lecturer's guidance*' ($\bar{X}=3.87$). Based on the results it is seen that students in technology-based classroom can initiate their thinking to solve English language problem since technology-based classroom offered various opportunities for student to solve their problems.

The average mean ($\bar{X}=4.33$) of the statement of the variable '*I can do Microsoft excel and word on my own*', students were in total agreement of this statement, from the result it is seen that students' usage of technology- based gadgets in technology-based classroom were positive and improved their computer competency. This opinion of student agrees with the work of Mohammed (2011) which emphasised on student perception about technology-based classroom, Mohammed study concluded that students who studies in technology-based classroom developed their computer competence.

Students who participated in the study expressed an opinion about how technology-based classroom helped them to improve their computer and telephone use for the purposes of learning English language. The average ($\bar{X}=4.33$) of the variable '*I can send and receive email on my own*'. Based on the result, it is seen student agree with this statement totally.

'*I can use social networking sites*' ($\bar{X}=4.33$) statement of the variable revealed students' agreement with the statement, they expressed that with technology-based classroom their use of social networking sites for the learning of English language are very easy.

Students' participants expressed their opinion to the state of agreement with the variable '*I can use excel to analyse data*' ($\bar{X}=3.48$), based on this results it can be said that students use of technology-based classroom improved their skills of analysis.

With the variable of '*I can search for information from the internet on my own*' ($\bar{X}=4.27$). Students agreed that when teachers make use of technology-based classroom in English lesson it helps them to improve their research skills.

Students stated opinion revealed that they agree with the statement of the variable '*I can solve English language problems on my own*' ($\bar{X}=3.74$). Technology-based help develop student's ability to solve their English language problem on their own.

'I understand the videos watched in technology- based classroom'. Students who participated in the study conveyed an opinion on the effect technology-based classroom had on their understanding of watched videos. With this ($\bar{X}=3.72$) it can be seen that students agree with this statement totally.

Students participating in the study settled with the statement '*I develop speaking skills on my own*' ($\bar{X}=3.67$). Based on the results it is seen that students expressed their agreement with the statement that technology- based classroom improve their speaking skills

Students participants approved the statement of the variable '*I am sure about my ability to do my exercise*' ($\bar{X}=3.71$). From the outcome of the analysis it is seen that students' perception about the variable is in confirmation of the mean. Students believe that technology-based classroom help to exercise easily.

The mean of the variable '*I am certain I can understand and do given assignments on my own*' ($\bar{X}=3.74$). This results show that in technology-based classroom understanding of lesson of lesson is so high it helps students to do their assignment on their own.

Students stated opinions indicate that they agree with the statement of the variable '*I am certain I can learn the concept and ideas of English language in technology-based classroom*'. Based on the results of the mean ($\bar{X}=3.65$) it can be seen that students develop ideas and concepts of English language in technology-based classroom.

Scholars partaking in the study confirm with the statement of the variable '*Students are motivated to come out with new ideas in technology –based classroom*'. Based on this result ($\bar{X}=3.96$) it can be seen that technology-based classroom in English language department motivates student to come out with new-ideas.

'The use of technology devices motivates students to learn fast'. Based on the results of the mean ($\bar{X}=3.96$) it can be seen that students believed that technology-based devices in the classroom motivates them to learn fast.

Students' participants in this study expressed their opinion on the variable *'Doing homework with internet motivates learners to be creative learners'* ($\bar{X}=3.94$) if this statement is examined it can be seen that students agree with the statement and believed that technology –based classroom motivates learners to creative thinkers and learners.

Scholars stated opinions on the statement *'We are not motivated to learn English when our teachers use technology while teaching English'* ($\bar{X}=2.61$). Based on the results it is seen from the mean that student disagree with statement, they believed that with technology-based classroom students are motivated to perform better instead. The research of Klofer et al., (2009) had similar opinions about how technology-based classroom motivates students to do better in English language lesson.

'Lecturers can use technology to translate English text for non-natives' ($\bar{X}=2.60$). Based on the results it can be seen that students expressed their opinions in neutrality. They think technology-based classroom is rather important for the learning of English language.

Students participants stated an opinion on the variable of *'lecturers can diversify their teaching by providing options for students to finish class early'* ($\bar{X}=2.75$). Based on the results of the mean it is seen that student didn't agree or disagree with the statement of the variable, they stated neutral opinions.

Students who participated in the study expressed an opinion that was neutral to the statement of the variable *'lecturers can use online sign-up for conference, parents' helpers and project presentation'* ($\bar{X}=2.64$). The result from the mean shows students' neutrality about the statement.

'Lecturer can provide feedback on students' success and challenges' ($\bar{X}=2.64$). Based on the results it is seen that students expressed neutral on the statement of this variable, they concluded they don't agree or disagree with this statement

Students stated their opinion at the level of agreement with the statement of the variable *'I can access homework and projects via technology devices online'* with the average value of ($\bar{X}=4.09$). Based on this result it can be seen that students are of the

view that technology-based classroom provides them with easy access to online materials which promotes teaching and learning of English language.

Participants of the research confirmed with the variable '*I can see my grades online immediately*', with the mean value of ($\bar{X}=4.07$) it can be concluded that technology-based classroom offers students opportunity to see their grades immediately it is posted; this motivates them to study hard to improve upon the performance.

When the variable '*I can follow my lesson through class websites even if am absent in from class*' was examined participants argued that with technology-based classroom they can follow class discussion online even when they are absent from school. They think this is good for the learning of English. Based on the results ($\bar{X}=4.01$) it is evidenced that students agree this statement.

Students stated an opinion about the variable '*I can take digital notes on my tablet or IPAD*' ($\bar{X}=3.88$). Based on the result it can be seen that students agree with the statement of the variable, they believed that in technology-based classroom they can take digital notes which is important strategy for the learning of English language.

Students participants expressed their opinions to the level of agreement when the statement of the variable '*I can have access to my digital portfolio*' ($\bar{X}=3.84$). Based on the results we can conclude that digital portfolio help students to improve their performance

After examine the statements of the variable '*smartboard is not enough in technology-based classroom*' ($\bar{X}=2.73$), students stated their opinions staying neutral they think that technology –based classroom in English language is average, not too much or too little and more improvement is need in this field.

Students who participated in the research expressed their views on the statement of the variable '*computer laboratories are limited in technology-based classroom*' ($\bar{X}=2.40$). Looking at the results it is seen that students stayed in the middle, they did not agree or disagree with the statement.

If the statement of the variable '*internet access is not enough in technology-based classroom*' ($\bar{X}=2.91$). From the results it can be seen student selected neutral they don't agree or disagree with the statement.

Students stated their opinions in total agreement with the statement of the variable '*I can interact with my friends' every time and everywhere*' ($\bar{X}=4.07$). Based on the

results we can say that technology-based classroom interaction between students which is good for language development.

Students' opinion on the statement of the variable '*the use of technology-based has increased friendship among students*' ($\bar{X}=3.81$). They agree with the statement and they believed that with increment of friendship student can improve the speaking skills.

The opinions of the students agreed with the statement of the variable '*the relationship between lecturers and students improves in technology –based classroom*' ($\bar{x}=3.60$). Based on the results it is seen that through technology-based classroom student and lecturers' friendship increase which is very good for academic work.

Participants agree with the statement of the variable '*students use technology-based device social networking*' ($\bar{x}=4.00$). Based on the results it is seen that students spend a lot of time with friends interacting on social media; this improves thinking speaking and listening skills.

Students established the statement of the variable '*lecturers are lazy in technology-based classroom*' ($\bar{x}=3.11$). From the results it can be seen student believed that lecturers are lazy in technology-based classroom.

Students in the study preferred to stay neutral with the statement of the variable '*technology-based classroom is time consuming*' ($\bar{x}=2.98$). Based on the results it can be seen that students selected to stay middle they did not agree or disagree with this statement.

Students who participated in the study approved the statement of the variable '*lecturers can give homework online and assess student performance easily*' ($\bar{x}=3.80$). Based on the results it can be said that technology –based classroom does not only improve students' performances but is also help teachers to assess student performance easily.

Students' participants in the study settled on the statement of the variable '*feedback on students' performance is prompt*' ($\bar{x}=3.83$). From the finding it is seen that students believed that technology-based classroom ensures prompt feedback which is very important in language teaching.

Students participants expressed an opinion in agreement to the statement of the variable '*determination of student challenges are easy in technology –based classroom*' ($\bar{x}=3.70$). Based on the results it is seen that technology-based classroom help teacher

to determine challenges students faced and how best to help them overcome these challenges.

Students established with the statement of the variable '*learn different concept with technology-based classroom*' (3.69). Looking at the results it can be seen that students through technology-based classroom can learn and understand the four basics of reading, writing, listening and speaking at the lesson.

The stated opinions of students agree with the statement of the variable '*students learn many things at the same time in technology –based classroom*' ($\bar{x}$ =3.70). It can be seen from the result that students learn many things at the same time in technology-based classroom.

Students believed and agree with the statement of the variable '*students learn how to be critical thinkers in technology-based classroom*' ($\bar{x}$ =3.70). Based on the results it is seen that technology-based classroom promotes critical thinking in English language lesson.

'*Traditional methods of teaching are avoided in technology-based classroom*' from the results it is seen from the mean ($\bar{x}$ =3.62) that students agreed with the statement, they think that technology-based classroom prevents teachers of English language from using the lecture method which is believed to be out-moded methods.

Students who participated in the study expressed an opinion on the impact of technology-based classroom in university settings. They agree with the statement '*students understand the kind of question to ask*' ($\bar{x}$ =3.47). Based on the results it is seen that students in technology-based classroom understand the type of questions to ask before a lesson due to the previous videos watched online.

Students participants' in the study opined that technology-based classroom doesn't pose a challenge in English language lesson and disagree with the statement of the variable '*the use technology-based classroom posed a problem in English lesson in university settings*' ($\bar{x}$ =2.70). Students believed that technology-based classroom help students to solve their problems.

'*Using technological based devices such as computer, smartboard etc. makes English lesson boring*' ($\bar{x}$ =2.57). Students disagree with this statement, based on the results it is seen that technology-based classroom rather makes English lesson interesting.

Students participating in the study agree with the statement of the variable '*English lesson which makes use of technology-based classroom help students understand lesson better*' ($\bar{x}=3.34$). Based on this result it is seen that technology-based classroom help students perform better in English language lesson.

Students expressed disagreement with the statement of the variable '*students' opinions about facilities in technology-based English classroom is not necessary*' ($\bar{x}=3.34$), from the result it can be seen that students view are in disagreement with the statement of the variable.

Students who participated in this study expressed an opinion in agreement with the statement of the variable '*the use of technology-based classroom in English classroom give student opportunity to speak with friends*' ($\bar{x}=3.35$). Based on the result, it is seen that technology-based classroom provides students with the opportunity of to speak with friends and this helped to become better speakers of English language.

Students stated in their opinions about the statement of the variable '*the use of lecture method by lecturers in technology-based classroom in English lesson is not beneficial*' ($\bar{x}=3.28$). Students agree with the statement of the variable that lecture method is not beneficial in technology-based classroom since the method is not interactive.

Scholars agreed with the statement of the variable '*I develop my listening and writing skills in technology-based classroom in English lesson*' ($\bar{x}=3.50$). From the result it is seen that with technology-based classroom in English language lesson students listening and writing skills improved very well.

Students expressed an opinion which agreed with the statement of the variable '*the use of technology –based prepares students to become creative thinkers and problem solvers*' ($\bar{x}=3.73$). Based on this result it is seen that technology-based classroom helps students to solve English language problems.

Students opinion expressed in the study agree with the statement of the variable '*I can finish my homework and project early when English lesson are done in technology-based classroom*' ($\bar{x}=3.90$). From the results it is clear that students finished their project early in technology-based classroom.

'*Technology-based classroom environments in university settings needs more improvements*' ($\bar{x}=4.23$). Based on the results it is seen that students expressed their

opinions in agreement with the variable. Students believe that technology-based classroom needs more improvement in university environment. In a research by Ahmed (2012) that focussed on whether technology based education in university settings needs more improvement. The findings of the study established same results as this study.

Table 10

Opinions of Students about Technology-Based Classroom t-Test Results According to the Variable of Gender

Items	Sex	$\bar{X}$	ss	t	p
1	Male	3.96	1.02	.394	.649
	Female	3.91	1.01		
2	Male	3.88	1.03	.090	.928
	Female	3.87	1.04		
3	Male	3.86	1.08	.525	.600
	Female	3.92	1.01		
4	Male	3.88	1.04	.046	.963
	Female	3.87	1.05		
5	Male	4.34	.90	.623	.534
	Female	4.28	.89		
6	Male	4.35	.92	.287	.774
	Female	4.32	.93		
7	Male	4.34	.86	.119	.905
	Female	4.33	.90		
8	Male	3.44	1.11	.554	.580
	Female	3.51	1.11		
9	Male	4.31	.86	.661	.509
	Female	4.24	.90		
10	Male	3.83	1.11	1.423	.156
	Female	3.68	1.11		
11	Male	3.74	.88	.366	.715
	Female	3.70	.93		
12	Male	3.72	.93	.764	.446
	Female	3.63	.87		
13	Male	3.73	.82	.278	.781
	Female	3.70	.90		
14	Male	3.84	.93	1.610	.109
	Female	3.68	.86		
15	Male	3.61	.93	-.458	.647
	Female	3.67	.86		
16	Male	4.00	.89	.486	.627
	Female	3.94	.97		
17	Male	4.02	.92	.875	.382
	Female	3.92	.95		
18	Male	3.93	.93	-.215	.830
	Female	3.95	.99		

Table 10. Continuation

Items	Sex	$\bar{X}$	ss	t	p
19	Male	2.70	.96	.975	.330
	Female	2.55	.97		
20	Male	3.60	1.30	1,215	.226
	Female	3.46	1.23		
21	Male	3.55	.97	1.138	.256
	Female	3.42	.93		
22	Male	3.55	.90	.832	.406
	Female	3.45	1.00		
23	Male	3.63	.96	.308	.758
	Female	3.60	.90		
24	Male	3.72	.97	.336	.373
	Female	3.69	.96		
25	Male	4.08	1.00	-1214	.226
	Female	4.19	.87		
26	Male	4.07	1.02	-1,109	.268
	Female	4.17	.75		
27	Male	4.09	.78	-1137	.256
	Female	4.20	.77		
28	Male	3.97	.79	-244	.807
	Female	4.00	.77		
29	Male	3.97	.86	-747	.456
	Female	4.03	.83		
30	Male	2.68	1.30	-564	.573
	Female	2.77	1.29		
31	Male	2.33	1.25	-783	.435
	Female	2.44	1.32		
32	Male	2.75	1.35	-1641	.102
	Female	3.01	1.34		
33	Male	3.98	.92	-1424	.156
	Female	4.13	.87		
34	Male	3.72	1.02	-1386	.167
	Female	3.88	.92		
35	Male	3.67	1.07	.944	.346
	Female	3.55	1.22		
36	Male	4.03	.94	.402	.688
	Female	3.98	.94		
37	Male	3.19	1.30	.807	.421
	Female	3.07	1.31		
38	Male	3.05	1.38	.688	.492
	Female	2.94	1,31		
39	Male	3.87	.95	.990	.323
	Female	3.76	.93		
40	Male	3.88	.88	.890	.347
	Female	3.79	.94		
41	Male	3.72	.88	.163	.871
	Female	3.70	.96		
42	Male	3.69	.95	-.071	.943
	Female	3.70	.88		
43	Male	3.72	.86	.268	.789
	Female	3.69	.95		
44	Male	3.77	.97	.964	.336
	Female	3.65	.99		

Table 10. Continuation

Items	Sex	$\bar{X}$	ss	t	p
45	Male	3.61	.96	-198	.844
	Female	3.63	.93		
46	Male	3.46	.98	-084	.933
	Female	3.47	.94		
47	Male	2.65	1.09	-676	.500
	Female	2.74	1.11		
48	Male	2.43	1.00	-1707	.054
	Female	2.67	1.09		
49	Male	3.31	.95	-506	.614
	Female	3.37	1.05		
50	Male	3.38	1.09	-666	.506
	Female	3.47	1.09		
51	Male	3.40	.97	.637	.524
	Female	3.32	1.10		
52	Male	3.16	1.13	-1350	.178
	Female	3.35	1.15		
53	Male	3.45	1.07	-586	.559
	Female	3.52	.99		
54	Male	3.55	.93	-2644	.009*p< .05
	Female	3.84	.86		
55	Male	3.77	.91	-2059	.041*p< .05
	Female	3.98	.86		
56	Male	4.23	.92	.090	.928
	Female	4.22	1.03		

From the results of the analysis male and female students' opinions regarding technology-based classroom are at the level of 'Agree', and majority of the variables, from item 1- to item 53 and item 56. The p-value are higher than alpha value of 0.05 therefore it is concluded that there are no significant differences between these variables. However, with item 54 and 55 the p-value of the analysis are lower than the alpha value of 0.05 and therefore it is concluded that these two variables have meaningful significance.

Table 11*Students Opinions about Technology-Based Classroom in English Language Department: Homogeneity of variance Analysis Results for Class Level*

	$\bar{X}$	SS	Levene	P
1.I can learn English on my own	3.93	1.02	3.28	.062
I can direct my own learning without a lecturer's supervision	3.87	1.04	3.48	.058
I can pronounce words correctly on my own	3.90	1.05	2.72	.070
I can think on my own without a teacher's guidance	3.87	1.05	2.68	.062
I can do Microsoft excel and word on my own	4.33	.89	.886	.473
I can send and receive email on my own	4.33	.93	1.51	.199
I can use social networking sites	4.33	.88	1.08	.365
I can use excel to analyse data	3.48	1.11	1.74	.141
I can search for information from internet on my own	4.27	.91	.504	.733
I can solve English language problem on my own	3.74	.98	.416	.797
I understand the videos watched in technology based classroom	3.72	.89	.603	.661
I developed speaking skills on my own.	3.76	.92	1.26	.282
I am sure about my ability to do my class exercise	3.71	.90	.954	.433
I am certain I can understand do given assignment on my own.	3.74	.88	.645	.631
I am certain I can learn the concept and ideas on the English in technology based classroom	3.76	.94	1.08	.362
Students are motivated to come up with new ideas in technology based classroom	3.96	.93	2.18	.070
The use of technology devices motivates you to learn fast.	3.96	.97	1.52	.194
Doing your homework on the internet motivates you to be creative learner.	3.94	.97	1.22	.301
I am not motivated to learn English when my teacher uses technology while teaching English	2.61	1.26	1.12	.346
Lecturers can adopt skills for special needs by using technology to insure equity	2.58	.99	.874	.480
Lecturers can use technology to translate English text for non-native speakers	2.60	1.01	.971	.424
Lecturers can diversify their teaching by providing options for students who finish class work early	2.57	.98	1.81	.514
Lecturers can use online sign-up for conferences, parents' helpers and project presentation	2.64	1.03	.336	.854
Lecturers can provide feedback on students' success and challenges.	2.37	1.01	.431	.786
I can access homework and projects via technology device online	4.09	.84	1.29	.237
I can see my grades online immediately	4.07	.87	.510	.729
I can follow my class through class websites when am absent from class	4.01	.98	.247	.911
I can take digital notes on my tablets or IPAD	3.88	.99	1.43	.223
I can have access to my digital portfolio	3.84	1.00	3.31	.071
Smart boards are not enough in technology-based classroom	2.73	1.29	2.43	.057
Computer laboratories are limited in technology-based classroom	2.40	1.29	2.06	.068
Internet access is not enough in technology-based classroom	2.91	1.35	2.30	.059
I can interact with my friends every time and everywhere	4.07	.89	1.82	.125
The use of technology-based classroom has increased friendship among students	3.81	.96	1.64	.162
The relationship between lecturers and students improves in technology-based classroom	3.60	1.17	.870	.482
Students use technology device for social networking	4.00	.94	.712	.582
Teachers are lazy in technology-based classroom	3.11	1.31	3.25	.082
Technology classroom are time consuming	2.98	1.34	4.54	.061
Lecturers can give homework online and assess students' performance easily	3.80	.94	2.96	.052
Feedback on students' performance is prompt	3.83	.92	2.34	.055
Determination of students challenges is easy in technology based classroom	3.70	.93	2.86	.054
Students learn different concept with technology-based classroom	3.69	.90	3.83	.075
Students learn so many things at the same time in technology-based classroom	3.70	.91	1.81	.126
Students learn how to be critical thinkers in technology-based classroom	3.70	.98	2.76	.068
Traditional methods of teaching are avoided in technology-based classroom.	3.62	.94	1.91	.108
Students understand the kind of question to ask	3.47	.95	1.21	.303
The use of technology-based classroom posed a challenge in English lesson in university settings.	2.70	1.10	.609	.656
Using technological based devices such computer smart board etc. make English lesson boring	2.57	1.06	1.07	.368
English lesson which make use of technology-based classroom helps students understand lesson better	3.34	1.01	2.27	.068
Students opinion about facilities in technology based English classroom is not necessary	3.44	1.09	1.54	.189
The use of technology-based classroom in my English classroom gives students greater opportunities to speak with other friends.	3.35	1.05	1.58	.178
The use of lecture method by teachers in technology-based classroom in English lessons is not beneficial	3.28	1.14	2.48	.074
I develop my listening and writing skills in technology-based classroom in English lesson	3.50	1.02	1.47	.210
The use of technology-based classroom prepares students to become creative thinkers and problem solvers	3.73	.90	1.47	.211
I can finish my homework and projects early when my English lesson is done in technology-based classroom	3.90	.89	.805	.523
Technology based classroom environments in university settings needs more improvements	4.23	.98	1.97	.098

Homogeneity of variance

In order to be able to do analysis of variance, the statistics must be homogeneous; to determine the homogeneity of variance the p-value of the statistics must be higher than 0.05. As a requirement for the analysis of the variance test is that the variance of each comparison group are equal. This test is done using the Levene test. From the data analysis of this study it was realised the p- value of all the variables were greater than 0.05. The significance values of the homogeneity of variance of all variables are greater than 0.05. This shows that the requirement of the homogeneity of variance has been met.it means that the analysis is homogenous.



Table 12

Students Opinions about Technology-Based Classroom in English Language Department ANOVA Descriptive Analysis Result for Class Level

		<i>N</i>	$\bar{X}$	<i>ss</i>
I can learn English on my own	<i>prep class</i>	69	3.92	0.95
	<i>1st class</i>	88	3.86	0.89
	<i>2st class</i>	53	4.13	0.96
	<i>3st class</i>	54	4.16	0.88
	<i>4st class</i>	39	3.53	1.25
			3.86	1.01
. I can direct my own learning without teachers supervision	<i>prep class</i>	69	3.91	1.13
	<i>1st class</i>	88	3.86	0.92
	<i>2st class</i>	53	4.05	0.94
	<i>3st class</i>	54	4.03	0.93
	<i>4st class</i>	39	3.35	1.24
			3.87	1.04
. I can pronounce words correctly on my own	<i>prep class</i>	69	3.95	1.11
	<i>1st class</i>	88	3.80	1.00
	<i>2st class</i>	53	4.03	0.91
	<i>3st class</i>	54	4.09	0.89
	<i>4st class</i>	39	3.58	1.25
			3.90	1.03
. I can think on my own without lecturer's guidance	<i>Prep class</i>	69	3.88	1.19
	<i>1st class</i>	88	3.73	0.98
	<i>2st class</i>	53	4.05	0.88
	<i>3st class</i>	54	4.09	0.89
	<i>4st class</i>	39	3.58	1.25
			3.90	1.03
I can do Microsoft excel and word on my own	<i>Prep class</i>	69	4.33	0.99
	<i>1st class</i>	88	4.25	0.97
	<i>2st class</i>	53	4.37	0.73
	<i>3st class</i>	54	4.40	0.78
	<i>4st class</i>	39	4.15	0.90
			4.30	0.89
. I can send and receive email on my own	<i>Prep class</i>	69	4.34	0.98
	<i>1st class</i>	88	4.20	1.10
	<i>2st class</i>	53	4.47	0.66
	<i>3st class</i>	54	4.42	0.86
	<i>4st class</i>	39	4.30	0.83
			4.33	0.93
. I can use social networking sites	<i>Prep class</i>	69	4.30	0.98
	<i>1st class</i>	88	4.40	0.83
	<i>2st class</i>	53	4.43	0.69
	<i>3st class</i>	54	4.25	0.99
	<i>4st class</i>	39	4.23	0.90
			4.33	0.88
I can use excel to analyse data	<i>Prep class</i>	69	3.49	1.24
	<i>1st class</i>	88	3.48	1.12
	<i>2st class</i>	53	3.54	0.91
	<i>3st class</i>	54	3.42	1.09
	<i>4st class</i>	39	3.46	1.18
			3.48	1.11

Table 12. Continuation

		N	$\bar{X}$	ss
I can search for information from internet on my own	<i>Prep class</i>	69	4.33	0.96
	<i>1st class</i>	88	4.25	0.88
	<i>2st class</i>	53	4.32	0.77
	<i>3st class</i>	54	4.33	0.97
	<i>4st class</i>	39	4.05	0.97
			4.27	0.91
I can solve English language problem on my own	<i>Prep class</i>	69	3.89	0.95
	<i>1st class</i>	88	3.70	0.84
	<i>2st class</i>	53	3.67	0.82
	<i>3st class</i>	54	3.72	0.91
	<i>4st class</i>	39	3.69	0.97
			3.73	0.89
. I understand the videos watched in technology based classroom	<i>Prep class</i>	69	3.78	0.99
	<i>1st class</i>	88	3.59	0.86
	<i>2st class</i>	53	3.84	0.84
	<i>3st class</i>	54	3.69	0.92
	<i>4st class</i>	39	3.79	0.80
			3.72	0.80
I developed speaking skills on my own	<i>Prep class</i>	69	3.73	1.03
	<i>1st class</i>	88	3.56	0.81
	<i>2st class</i>	53	3.79	0.90
	<i>3st class</i>	54	3.68	0.86
	<i>4st class</i>	39	3.58	1.04
			3.67	0.92
I am sure about my ability to do my class exercis	<i>Prep class</i>	69	3.71	1.00
	<i>1st class</i>	88	3.55	0.86
	<i>2st class</i>	53	3.88	0.84
	<i>3st class</i>	54	3.79	0.83
	<i>4st class</i>	39	3.76	0.95
			3.71	0.90
I am certain I can understand do given assignment on my own	<i>Prep class</i>	69	3.75	0.97
	<i>1st class</i>	88	3.62	0.80
	<i>2st class</i>	53	3.90	0.83
	<i>3st class</i>	54	3.72	0.89
	<i>4st class</i>	39	3.82	0.94
			3.74	0.88
I am certain I can learn the concept and ideas on the English in technology based classr	<i>Prep class</i>	69	3.76	1.01
	<i>1st class</i>	88	3.39	0.98
	<i>2st class</i>	53	3.84	0.81
	<i>3st class</i>	54	3.66	0.84
	<i>4st class</i>	39	3.71	0.91
			3.65	0.94
Students are motivated to come up with new ideas in technology based classr	<i>Prep class</i>	69	3.92	1.07
	<i>1st class</i>	88	4.03	0.83
	<i>2st class</i>	53	3.90	0.76
	<i>3st class</i>	54	4.03	1.08
	<i>4st class</i>	39	3.87	0.92
			3.96	0.93
The use of technology devices motivates you to learn fast.	<i>Prep class</i>	69	3.91	1.10
	<i>1st class</i>	88	3.89	0.91
	<i>2st class</i>	53	3.98	0.84
	<i>3st class</i>	54	4.09	0.05
	<i>4st class</i>	39	3.79	.950
			3.96	.974

Table 12. Continuation

		N	$\bar{X}$	ss
Doing your homework on the internet motivates you to be creative le	<i>Prep class</i>	69	4.04	1.07
	<i>1st class</i>	88	3.96	.915
	<i>2st class</i>	53	3.90	.814
	<i>3st class</i>	54	3.92	1.06
	<i>4st class</i>	39	3.82	0.99
			3.94	0.97
I am not motivated to learn lecturer when my teacher uses technology while teaching English	<i>Prep class</i>	69	2.49	1.20
	<i>1st class</i>	88	2.65	1.27
	<i>2st class</i>	53	2.47	1.17
	<i>3st class</i>	54	2.75	1.38
	<i>4st class</i>	39	2.71	1.27
			2.61	1.26
Lecturers can adopt skills for special needs by using technology to insure equity	<i>Prep class</i>	69	3.85	0.98
	<i>1st class</i>	88	3.30	0.91
	<i>2st class</i>	53	3.43	0.86
	<i>3st class</i>	54	3.53	0.96
	<i>4st class</i>	39	3.48	0.91
			3.51	0.94
. Lecturers can use technology to translate English text for non-native speakers	<i>Prep class</i>	69	3.71	1.01
	<i>1st class</i>	88	3.25	0.92
	<i>2st class</i>	53	3.49	0.93
	<i>3st class</i>	54	3.46	1.02
	<i>4st class</i>	39	3.58	0.96
			3.47	.097
Lecturers can diversify their teaching by providing options for students who finish class work early	<i>Prep class</i>	69	3.71	1.01
	<i>1st class</i>	88	3.25	.092
	<i>2st class</i>	53	3.49	0.93
	<i>3st class</i>	54	3.46	1.02
	<i>4st class</i>	39	3.58	0.96
			3.78	0.94
Lecturers can use online sign-up for conferences, parents' helpers and project presentation	<i>Prep class</i>	69	3.85	0.98
	<i>1st class</i>	88	3.36	0.97
	<i>2st class</i>	53	3.56	0.99
	<i>3st class</i>	54	3.70	0.92
	<i>4st class</i>	39	3.69	1.00
			3.61	0.98
.Lecturers can provide feedback on students' success and challenges.	<i>Prep class</i>	69	4.02	0.95
	<i>1st class</i>	88	3.37	0.96
	<i>2st class</i>	53	3.77	0.91
	<i>3st class</i>	54	3.75	0.97
	<i>4st class</i>	39	3.71	0.85
			3.70	0.96
I can access homework and projects via technology device online	<i>Prep class</i>	69	4.20	0.77
	<i>1st class</i>	88	4.14	0.70
	<i>2st class</i>	53	4.24	0.73
	<i>3st class</i>	54	4.09	0.85
	<i>4st class</i>	39	4.02	0.87
			4.15	0.77
I can see my grades online immediately	<i>Prep class</i>	69	4.18	0.77
	<i>1st class</i>	88	4.12	0.73
	<i>2st class</i>	53	4.26	0.71
	<i>3st class</i>	54	4.07	0.86
	<i>4st class</i>	39	4.00	0.88
			4.13	0.78

Table 12. Continuation

		N	$\bar{X}$	ss
I can follow my class through class websites when am absent from cl	<i>Prep class</i>	69	4.23	0.75
	<i>1st class</i>	88	4.15	0.80
	<i>2st class</i>	53	4.26	0.76
	<i>3st class</i>	54	4.05	0.89
	<i>4st class</i>	39	4.02	0.87
			4.15	0.81
I can take digital notes on my tablets or IPAD	<i>Prep class</i>	69	4.08	0.87
	<i>1st class</i>	88	3.95	0.85
	<i>2st class</i>	53	4.09	0.79
	<i>3st class</i>	54	3.98	1.05
	<i>4st class</i>	39	3.76	0.90
			3.99	.899
I can have access to my digital portfolio	<i>Prep class</i>	69	4.21	0.74
	<i>1st class</i>	88	4.00	0.80
	<i>2st class</i>	53	4.00	0.73
	<i>3st class</i>	54	3.96	1.00
	<i>4st class</i>	39	3.69	0.92
			4.00	0.84
Smart boards are not enough in technology-based classroom	<i>Prep class</i>	69	3.00	1.42
	<i>1st class</i>	88	2.81	1.36
	<i>2st class</i>	53	2.50	1.23
	<i>3st class</i>	54	2.48	1.07
	<i>4st class</i>	39	2.76	1.20
			2.73	1.29
Computer laboratories are limited in technology-based classroom	<i>Prep class</i>	69	2.55	1.39
	<i>1st class</i>	88	2.54	1.36
	<i>2st class</i>	53	2.20	1.29
	<i>3st class</i>	54	2.18	1.10
	<i>4st class</i>	39	2.38	1.18
			2.40	1.29
Internet access is not enough in technology-based classroom	<i>Prep class</i>	69	3.24	1.44
	<i>1st class</i>	88	2.94	1.35
	<i>2st class</i>	53	2.83	1.36
	<i>3st class</i>	54	2.48	1.22
	<i>4st class</i>	39	2.97	1.22
			2.91	1.35
I can interact with my friends every time and everywhere	<i>Prep class</i>	69	4.02	1.05
	<i>1st class</i>	88	4.03	0.82
	<i>2st class</i>	53	4.03	0.82
	<i>3st class</i>	54	4.29	0.79
	<i>4st class</i>	39	3.92	.928
			4.07	0.89
The use of technology-based classroom has increased friendship among students	<i>Prep class</i>	69	3.84	1.05
	<i>1st class</i>	88	3.67	0.97
	<i>2st class</i>	53	3.88	0.84
	<i>3st class</i>	54	3.98	0.90
	<i>4st class</i>	39	3.79	1.00
			3.79	0.96
The relationship between lecturer's and students improves in technology-based classroom	<i>Prep class</i>	69	3.75	0.76
	<i>1st class</i>	88	3.40	1.19
	<i>2st class</i>	53	3.60	1.13
	<i>3st class</i>	54	3.74	1.04
	<i>4st class</i>	39	3.56	1.07
			3.60	1.17

Table 12. Continuation

		N	$\bar{X}$	ss
Students use technology device for social netwo	<i>Prep class</i>	69	4.04	0.97
	<i>1st class</i>	88	3.92	0.94
	<i>2st class</i>	53	4.09	0.86
	<i>3st class</i>	54	4.14	0.89
	<i>4st class</i>	39	3.82	1.04
			4.00	0.94
.Lecturers are lazy in technology-based classro	<i>Prep class</i>	69	2.92	1.50
	<i>1st class</i>	88	2.93	1.25
	<i>2st class</i>	53	3.24	1.31
	<i>3st class</i>	54	3.33	1.21
	<i>4st class</i>	39	3.41	1.11
			3.11	1.31
Technology classroom are time consuming	<i>Prep class</i>	69	2.79	1.56
	<i>1st class</i>	88	2.81	1.30
	<i>2st class</i>	53	3.30	1.26
	<i>3st class</i>	54	3.16	1.22
	<i>4st class</i>	39	3.00	1.21
			2.98	1.34
Lecturers can give homework online and assess students' performance easily	<i>Prep class</i>	69	3.91	1.01
	<i>1st class</i>	88	3.62	1.00
	<i>2st class</i>	53	4.00	0.75
	<i>3st class</i>	54	3.72	0.94
	<i>4st class</i>	39	3.87	0.86
			3.80	0.94
Feedback on students' performance is prompt	<i>Prep class</i>	69	3.98	0.96
	<i>1st class</i>	88	3.72	0.96
	<i>2st class</i>	53	3.92	0.78
	<i>3st class</i>	54	3.83	1.00
	<i>4st class</i>	39	3.66	0.77
			3.83	0.92
Determination of students challenges is easy in technology based classroom	<i>Prep class</i>	69	3.76	1.07
	<i>1st class</i>	88	3.57	0.93
	<i>2st class</i>	53	3.88	0.69
	<i>3st class</i>	54	3.81	0.91
	<i>4st class</i>	39	3.51	0.96
			3.70	0.93
Students learn different concept with technology-based classroom	<i>Prep class</i>	69	3.61	0.96
	<i>1st class</i>	88	3.64	0.98
	<i>2st class</i>	53	3.83	0.72
	<i>3st class</i>	54	3.61	1.01
	<i>4st class</i>	39	3.89	0.75
			3.69	0.90
Students learn so many things at the same time in technology-based classroom	<i>Prep class</i>	69	3.55	0.99
	<i>1st class</i>	88	3.76	0.93
	<i>2st class</i>	53	3.88	0.77
	<i>3st class</i>	54	3.59	0.98
	<i>4st class</i>	39	3.74	8.18
			3.70	0.91
Students learn how to be critical thinkers in technology-based classro	<i>Prep class</i>	69	3.73	0.98
	<i>1st class</i>	88	3.63	1.01
	<i>2st class</i>	53	3.84	0.76
	<i>3st class</i>	54	3.72	0.93
	<i>4st class</i>	39	3.56	0.94
			3.70	0.94

Table 12. Continuation

		N	$\bar{X}$	ss
Students understand the kind of question to a	<i>Prep class</i>	69	3.72	1.09
	<i>1st class</i>	88	3.44	0.96
	<i>2st class</i>	53	3.81	0.88
	<i>3st class</i>	54	3.64	0.90
	<i>4st class</i>	39	3.56	0.85
			3.62	0.95
The use of technology-based classroom posed a challenge in English lesson in university	<i>Prep class</i>	69	3.53	1.13
	<i>1st class</i>	88	3.34	1.05
	<i>2st class</i>	53	3.54	1.16
	<i>3st class</i>	54	3.51	1.04
	<i>4st class</i>	39	3.48	1.14
			3.47	1.10
Using technological based devices such computer smart board etc. make English lesson boring	<i>Prep class</i>	69	2.43	1.14
	<i>1st class</i>	88	2.82	1.01
	<i>2st class</i>	53	2.86	1.09
	<i>3st class</i>	54	2.81	0.94
	<i>4st class</i>	39	2.53	1.15
			2.70	1.06
English lesson which make use of technology-based classroom helps students understand lesson better	<i>Prep class</i>	69	2.30	1.18
	<i>1st class</i>	88	2.68	1.00
	<i>2st class</i>	53	2.66	1.04
	<i>3st class</i>	54	2.59	0.86
	<i>4st class</i>	39	2.69	0.93
			2.57	1.01
Students opinion about facilities in technology based English classroom is not necessary	<i>Prep class</i>	69	3.31	1.18
	<i>1st class</i>	88	3.35	0.95
	<i>2st class</i>	53	3.39	1.18
	<i>3st class</i>	54	3.42	1.12
	<i>4st class</i>	39	3.23	0.99
			3.34	1.09
The use of technology-based classroom in my English classroom gives students greater opportunities to speak with other friends.	<i>Prep class</i>	69	3.52	1.17
	<i>1st class</i>	88	3.52	1.09
	<i>2st class</i>	53	3.16	1.05
	<i>3st class</i>	54	3.59	0.88
	<i>4st class</i>	39	3.28	0.96
			3.44	1.05
The use of lecture method by teachers in technology-based classroom in English lessons is not beneficial	<i>Prep class</i>	69	3.11	1.27
	<i>1st class</i>	88	3.31	1.07
	<i>2st class</i>	53	3.37	1.24
	<i>3st class</i>	54	3.20	1.10
	<i>4st class</i>	39	3.46	0.99
			3.28	1.14
I develop my listening and writing skills in technology-based classroom in English lesson	<i>Prep class</i>	69	3.39	1.11
	<i>1st class</i>	88	3.44	1.02
	<i>2st class</i>	53	3.67	0.95
	<i>3st class</i>	54	3.64	1.01
	<i>4st class</i>	39	3.38	0.96
			3.50	1.02
The use of technology-based classroom prepares students to become creative thinkers and problem solvers	<i>Prep class</i>	69	3.75	0.79
	<i>1st class</i>	88	3.82	0.87
	<i>2st class</i>	53	3.58	1.06
	<i>3st class</i>	54	3.79	0.87
	<i>4st class</i>	39	3.58	0.96
			3.73	0.90
I can finish my homework and projects early when my English lesson is done in technology-based classroom	<i>Prep class</i>	69	3.89	0.85
	<i>1st class</i>	88	3.92	0.91
	<i>2st class</i>	53	3.90	0.92
	<i>3st class</i>	54	3.98	0.81
	<i>4st class</i>	39	3.58	0.98
			3.73	0.89
Technology-based classroom environments in university settings needs more improvements	<i>Prep class</i>	69	4.01	1.16
	<i>1st class</i>	88	4.28	1.00
	<i>2st class</i>	53	4.32	0.80
	<i>3st class</i>	54	4.27	0.78
	<i>4st class</i>	39	4.30	1.07
	<i>TOTAL</i>	303	4.23	0.98

To determine the homogeneity of the test it is very important to check the descriptive statistics whether the mean of the variables are the same not. From table 12 in the descriptive statistics, there is a little difference in mean scores of the five levels of the class variables. The data analysis shows that the second and third classes had a little higher mean than the other groups. The descriptive statistics of this analysis shows that there are little differences in the mean scores of all the classes that took part in this study. The descriptive statistics also provides views that show that the variables are homogeneous. In this case the study can proceed to conduct an ANOVA analysis of student's class levels.



Table 13.*Students Opinions on Technology-Based Classroom ANOVA Results on Class Level*

		Sum of Squares	df	Mean of Square	f	p
I can learn English on my own	Between Groups	11.539	4	2.885	2.882	.063
	Within Groups	298.269	298	1.001		
	Total	309.809	303			
I can direct my own learning without a teacher's supervision	Between Groups	13.662	4	3.415	3.246	.071
	Within Groups	313.572	298	1.052		
	Total	327.234	303			
I can pronounce words correctly on my own	Between Groups	7.741	4	1.935	1.811	.127
	Within Groups	318.483	298	1,069		
	Total	326.224	303			
I can think on my own without a teacher's guidance	Between Groups	6.450	4	1.612	1.465	.213
	Within Groups	328,032	298	1.101		
	Total	334,482	303			
I can do Microsoft excel and word on my own	Between Groups	2.055	4	.514	.632	.640
	Within Groups	242.400	298	.813		
	Total	244.455	303			
I can send and receive email on my own	Between Groups	2.974	4	.744	.850	.495
	Within Groups	260.689	298	,875		
	Total	263.663	303			
I can use social networking sites	Between Groups	1.793	4	.448	.566	.688
	Within Groups	236.194	298	.793		
	Total	237.987	303			
I can use excel to analyse data	Between Groups	.420	4	.105	,083	.987
	Within Groups	375.263	298	1.259		
	Total	375.683	303			
I can search for information from internet on my own	Between Groups	2.531	4	.633	.756	.554
	Within Groups	249.278	298	.837		
	Total	251.809	303			
I can solve English language problem on my own	Between Groups	2.136	4	.534	.660	.621
	Within Groups	241.296	298	.810		
	Total	243.432	303			
I understand the videos watched in technology based classroom	Between Groups	2.901	4	.725	.901	.463
	Within Groups	239.811	298	.805		
	Total	242.713	303			
I developed speaking skills on my own.	Between Groups	2.300	4	.575	.673	.611
	Within Groups	254.696	298	.855		
	Total	256.997	303			
I am sure about my ability to do my class exercise	Between Groups	4.233	4	1.058	1.298	.271
	Within Groups	24.922	298	.815		
	Total	247.155	303			

Table 13. Continuation

		Sum of Squares	df	Mean of Square	f	p
I am certain I can understand do given assignment on my own.	Between Groups	2.891	4	.723	.918	.454
	Within Groups	234.542	298	.787		
	Total	237.432	303			
I am certain I can learn the concept and ideas on the English in technology based classroom	Between Groups	8.858	4	2.215	2.538	.040* p< .05
	Within Groups	260.059	298	.873		
	Total	268.917	303			
Students are motivated to come up with new ideas in technology based classroom	Between Groups	1.321	4	.330	.372	.828
	Within Groups	264.349	298	.887		
	Total	265.670	303			
4b. The use of technology devices motivates you to learn fast.	Between Groups	2.257	4	.564	.591	.669
	Within Groups	284.344	298	.954		
	Total	286.601	303			
Doing your homework on the internet motivates you to be creative learner.	Between Groups	1.412	4	.353	.371	.829
	Within Groups	283.743	298	.952		
	Total	285.155	303			
I am not motivated to learn lecturer when my teacher uses technology while teaching English	Between Groups	3.827	4	.957	.599	.664
	Within Groups	475.994	298	1.597		
	Total	479.822	303			
Lecturers can adopt skills for special needs by using technology to insure equity	Between Groups	12.195	4	3.049	3.502	.080
	Within Groups	259.455	298	.871		
	Total	271.650	303			
Lecturers can use technology to translate English text for non-native speakers	Between Groups	8.801	4	2.200	2.335	.056
	Within Groups	280.810	298	.942		
	Total	289.611	303			
Lecturers can diversify their teaching by providing options for students who finish class work early	Between Groups	9.177	4	2.294	2.604	.036 * p< .05
	Within Groups	262.566	298	.881		
	Total	271.743	303			
Lecturers can use online sign-up for conferences, parents' helpers and project presentation	Between Groups	10.322	4	2.580	2.712	.055
	Within Groups	283.500	298	.951		
	Total	293.822	303			
Lecturers can provide feedback on students' success and challenges.	Between Groups	17.240	4	4.310	4.872	.062
	Within Groups	263.618	298	.885		
	Total	280.858	303			
I can access homework and projects via technology device online	Between Groups	1.455	4	.364	.604	.660
	Within Groups	179.562	298	.603		
	Total	181.017	303			

Table 13. Continuation

		Sum of Squares	df	Mean of Square	f	p
I can see my grades online immediately	Between Groups	1.997	4	.499	.808	.521
	Within Groups	184.181	298	.618		
	Total	186.178	303			
I can follow my class through class websites when am absent from class	Between Groups	2.224	4	.556	.845	.498
	Within Groups	196.172	298	.658		
	Total	198.396	303			
I can take digital notes on my tablets or IPAD	Between Groups	3.241	4	.810	1.016	.399
	Within Groups	237.729	298	.798		
	Total	240.970	303			
I can have access to my digital portfolio	Between Groups	7.024	4	1.756	2.516	.052
	Within Groups	207.973	298	.698		
	Total	214.997	303			
Smart boards are not enough in technology-based classroom	Between Groups	11.662	4	2.915	1.749	.139
	Within groups	496.741	298	1.667		
	total	508.403	303			
Computer laboratories are limited in technology-based classroom	Between Groups	7.891	4	1.973	1.178	.320
	Within Groups	498.987	298	1.674		
	Total	506.878	303			
Internet access is not enough in technology-based classroom	Between Groups	18.314	4	4.578	2.539	.060
	Within Groups	537.455	298	1.804		
	Total	555.769	303			
I can interact with my friends' every time and everywhere	Between Groups	3.858	4	.964	1.200	.311
	Within Groups	239.397	298	.803		
	Total	243.254	303			
The use of technology-based classroom has increased friendship among students	Between Groups	3.666	4	.916	.985	.416
	Within Group	277.351	298	.931		
	Total	281.017	303			
The relationship between teachers and students improves in technology-based classroom	Between Groups	5.956	4	1.489	1.086	.364
	Within Groups	408.724	298	1.372		
	Total	414.680	303			
Students use technology device for social networking	Between Groups	3.587	4	.897	1.003	.406
	Within Groups	266.399	298	.894		
	Total	269.987	303			
Lecturers are lazy in technology-based classroom	Between Groups	12.247	4	3.062	1.798	.129
	Within Groups	507.476	298	1.703		
	Total	519.723	303			
Technology classroom are time consuming	Between Groups	11.997	4	2.999	1.677	.155
	Within Groups	532.920	298	1.788		
	Total	544.917	303			

Table 13. Continuation

		Sum of Squares	df	Mean of Square	f	p
Lecturers can give homework online and assess students' performance easily	Between Groups	6.216	4	1.554	1.759	.137
	Within Groups	263.296	298	.884		
	Total	269.512	303			
Feedback on students' performance is prompt	Between Groups	4.111	4	1.028	1.214	.305
	Within Groups	252.305	298	.847		
	Total	256.416	302			
Determination of students challenges is easy in technology based classroom	Between Groups	5.497	4	1.374	1.581	.179
	Within Groups	258.946	298	.869		
	Total	264.442	303			
.Students learn different concept with technology-based classroom	Between Groups	3.493	4	.873	1.057	.378
	Within Groups	246.177	298	.826		
	Total	249.670	303			
Students learn so many things at the same time in technology-based classroom	Between Groups	4.413	4	1.103	1.310	.266
	Within Groups	250.855	298	.842		
	Total	255.267	303			
Students learn how to be critical thinkers in technology-based classroom	Between Groups	2.384	4	.596	.606	.658
	Within Groups	292.884	298	.983		
	Total	295.267	303			
Traditional methods of teaching are avoided in technology based classroom	Between Groups	5.607	4	1.402	1.573	.181
	Within Groups	265.502	298	.891		
	Total	271.109	303			
Students understand the kind of question to ask	Between Groups	2.222	4	.556	.601	.662
	Within Groups	275.289	298	.924		
	Total	277.512	303			
The use of technology-based classroom posed a challenge in English lesson in university settings	Between Groups	9.542	4	2.386	1.968	.099
	Within Groups	361.316	298	1.212		
	Total	370.858	303			
Using technological based devices such computer smart board etc. make English lesson boring	Between Groups	6.996	4	1.749	1.547	.189
	Within Groups	336.931	298	1.131		
	Total	343.927	303			
English lesson which make use of technology-based classroom helps students understand lesson better	Between Groups	1,046	4	.262	.250	.910
	Within Groups	311.871	298	1.047		
	Total	312,917	303			

Table 13. Continuation

		Sum of Squares	df	Mean of Square	f	p
Students opinion about facilities in technology based English classroom is not necessary	Between Groups	7.161	4	1.790	1.509	.200
	Within Groups	353.578	298	1.187		
	Total	360.739	303			
The use of technology-based classroom in my English classroom gives students greater opportunities to speak with friends	Between Groups	1.528	4	.382	.341	.850
	Within Groups	334.261	298	1.122		
	Total	335.789	303			
The use of lecture method by teachers in technology-based classroom in English lessons is not beneficial	Between Groups	4.087	4	1.022	.771	.545
	Within Groups	395.068	298	1.326		
	Total	399.155	303			
develop my listening and writing skills in technology-based classroom in English lesson	Between Groups	4.506	4	1.126	1.072	.371
	Within Groups	313.243	298	1.051		
	Total	317.749	303			
The use of technology-based classroom prepares students to become creative thinkers and problem solvers	Between Groups	3.029	4	.757	.924	.450
	Within Groups	244.318	298	.820		
	Total	247.347	303			
I can finish my homework and projects early when my English lesson is done in technology-based classroom	Between Groups	1.059	4	.265	.330	.858
	Within Groups	239.166	298	.803		
	Total	240.224	303			
Technology-based classroom environments in university settings needs more improvements	Between Groups	4.257	4	1.064	1.088	.363
	Within Groups	291.571	298	.978		
	Total	295.828	303			

In explaining the ANOVA result it is important to look for the value of f that appears in Between the groups' row. From the data analysis of this study the f -value doesn't reach significance with the p -value which is greater than 0.05 alpha levels. All the variables except item 3f and 5c have p -values higher than the alpha level value of 0.05. This means there is no statistically significant differences between the means of these variables. However, two variable's p -values are lower than the alpha value of 0.05, with these two values it is concluded that there is a significant difference between these two values. Nevertheless, since majority of the variable's p -values are greater than the 0.05 levels of the alpha, it can be concluded that the majority of the variables are not significant.

Table 14.*Students Opinion About Technology-Based Classroom Factor Analysis of Communalities*

	Initials	Extractions
Is there an internet connection in your dormitory or home?	1.000	.648
If there is? it's it	1.000	.619
How many hours do you use your device at home/dormitory?	1.000	.575
How many hours do you use your device at school?	1.000	.497
Where do you usually use your device?	1.000	.663
Is there a technology-based classroom in your school?	1.000	.651
The technology-based classroom does not have enough facilities?	1.000	.503
How often do you utilize your technology-based device for homework and school related activities	1.000	.551
Should university use more or less technology than it's currently been used?	1.000	.590
I can solve English language problem on my own	1.000	.772
I understand the videos watched in technology based classroom	1.000	.822
I developed speaking skills on my own.	1.000	.816
I am sure about my ability to do my class exercise	1.000	.787
I am certain I can understand do given assignment on my own.	1.000	.803
I am certain I can learn the concept and ideas on the English in technology based classroom	1.000	.712
Students are motivated to come up with new ideas in technology based classroom	1.000	.840
The use of technology devices motivates you to learn fast.	1.000	.800
Doing your homework on the internet motivates you to be creative learner.	1.000	.843
I am not motivated to learn English when my teacher uses technology while teaching English	1.000	.581
Lecturers can adopt skills for special needs by using technology to insure equity	1.000	.834
Lecturers can use technology to translate English text for non-native speakers	1.000	.797
Lecturers can diversify their teaching by providing options for students who finish class work early	1.000	.846
Lecturers can use online sign-up for conferences, parents' helpers and project presentation	1.000	.839
Lecturers can provide feedback on students' success and challenges.	1.000	.806
I can access homework and projects via technology device online	1.000	.749
I can see my grades online immediately	1.000	.792
I can follow my class through class websites when am absent from class	1.000	.773
I can take digital notes on my tablets or IPAD	1.000	.732
I can have access to my digital portfolio	1.000	.718
Smart boards are not enough in technology-based classroom	1.000	.780
Computer laboratories are limited in technology-based classroom	1.000	.721
Internet access is not enough in technology-based classroom	1.000	.761
I can interact with my friends every time and everywhere	1.000	.660
The use of technology-based classroom has increased friendship among students	1.000	.786
The relationship between teachers and students improves in technology-based classroom	1.000	.599
Students use technology device for social networking	1.000	.572
Lecturers are lazy in technology-based classroom	1.000	.750
Technology classroom are time consuming	1.000	.780
Lecturers can give homework online and assess students' performance easily	1.000	.713
Feedback on students' performance is prompt	1.000	.720

Table 14. Continuation

	Initials	Extractions
Determination of students challenges is easy in technology based classroom	1.000	.683
Students learn different concept with technology-based classroom	1.000	.817
Students learn so many things at the same time in technology-based classroom	1.000	.736
Students learn how to be critical thinkers in technology-based classroom	1.000	.707
Traditional methods of teaching are avoided in technology-based classroom.	1.000	.637
Students understand the kind of question to ask	1.000	.690
The use of technology-based classroom posed a challenge in English lesson in university settings.	1.000	.544
Using technological based devices such computer smart board etc. make English lesson boring	1.000	.536
English lesson which make use of technology-based classroom helps students understand lesson better	1.000	.643
Students opinion about facilities in technology based English classroom is not necessary	1.000	.686
The use of technology-based classroom in my English classroom gives students greater opportunities to speak with other friends.	1.000	.626
The use of lecture method by teachers in technology-based classroom in English lessons is not beneficial	1.000	.605
I develop my listening and writing skills in technology-based classroom in English lesson	1.000	.604
The use of technology-based classroom prepares students to become creative thinkers and problem solvers	1.000	.652
I can finish my homework and projects early when my English lesson is done in technology-based classroom	1.000	.701
Technology based classroom environments in university settings needs more improvements	1.000	.600

Common variance (communality); It is the amount of variance shared with other variables in a variable analysis. During the analysis, those with a factor load value of 0.5 or higher are included in the analysis, items with a factor load value below 0.5 are excluded from the analysis. In addition, since any item with a difference of less than 0.10 in more than one factor is considered an overlapping item, items from this feature are also removed from the scale. As seen in the table above; The load values of all 65 items were greater than 0.5, so all 65 items were taken and a 16 dimensional scale was obtained.

Table 15.

Students Opinions about Technology-Based Classroom Exploratory Factor Analysis of the Total Variance

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	16.479	25.352	25.352	16.479	25.352	25.352	5.607	8.626	8.626
2	3.912	6.018	31.370	3.912	6.018	31.370	4.834	7.437	16.063
3	3.371	5.186	36.556	3.371	5.186	36.556	4.309	6.630	22.693
4	2.886	4.440	40.996	2.886	4.440	40.996	4.049	6.229	28.922
5	2.555	3.931	44.927	2.555	3.931	44.927	3.039	4.675	33.597
6	2.286	3.517	48.444	2.286	3.517	48.444	2.766	4.255	37.852
7	2.058	3.166	51.610	2.058	3.166	51.610	2.761	4.247	42.099
8	1.913	2.943	54.554	1.913	2.943	54.554	2.740	4.216	46.315
9	1.777	2.734	57.288	1.777	2.734	57.288	2.541	3.909	50.224
10	1.595	2.454	59.742	1.595	2.454	59.742	2.462	3.788	54.012
11	1.418	2.181	61.923	1.418	2.181	61.923	2.264	3.483	57.495
12	1.301	2.001	63.924	1.301	2.001	63.924	2.085	3.207	60.702
13	1.210	1.862	65.786	1.210	1.862	65.786	1.976	3.041	63.743
14	1.181	1.817	67.603	1.181	1.817	67.603	1.931	2.970	66.713
15	1.150	1.769	69.372	1.150	1.769	69.372	1.415	2.177	68.891
16	1.014	1.561	70.932	1.014	1.561	70.932	1.327	2.042	70.932
17	.972	1.496	72.428						
18	.942	1.449	73.877						
19	.889	1.368	75.245						
20	.856	1.317	76.562						
21	.802	1.234	77.797						
22	.757	1.165	78.962						
23	.743	1.143	80.104						
24	.709	1.091	81.195						
25	.692	1.064	82.260						
26	.634	.976	83.236						
27	.623	.958	84.193						
28	.590	.908	85.102						
29	.572	.879	85.981						
30	.535	.824	86.805						
31	.515	.792	87.597						
32	.475	.731	88.328						
33	.455	.700	89.028						
34	.453	.697	89.724						
35	.411	.632	90.356						
36	.397	.610	90.966						
37	.386	.594	91.560						

Table 15. Continuation

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
38	.376	.579	92.139						
39	.348	.536	92.675						
40	.339	.521	93.196						
41	.311	.479	93.676						
42	.303	.467	94.142						
43	.287	.441	94.583						
44	.272	.419	95.002						
45	.265	.408	95.411						
46	.242	.373	95.783						
47	.224	.345	96.129						
48	.221	.340	96.468						
49	.205	.316	96.784						
50	.200	.308	97.092						
51	.185	.285	97.377						
52	.183	.281	97.658						
53	.170	.261	97.919						
54	.162	.249	98.169						
55	.149	.230	98.398						
56	.142	.219	98.617						
57	.132	.203	98.820						
58	.125	.192	99.012						
59	.113	.174	99.186						
60	.106	.163	99.349						
61	.102	.157	99.506						
62	.094	.144	99.649						
63	.079	.122	99.772						
64	.075	.115	99.887						
65	.073	.113	100.000						

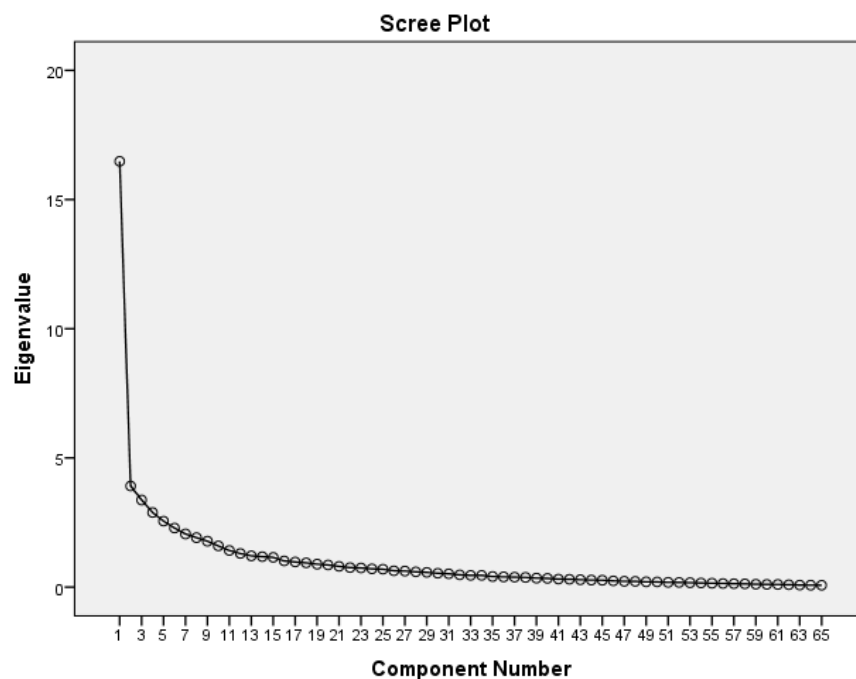
When the above table is examined; The explanation gives the total variance, the eigenvalues before and after the transformation and shows that 16 factors occurred. This means that there are 16 factors with eigenvalues greater than 1. The first factor made 8,626% of the total variance, the second factor 7.437%, the third factor 6,630%, the fourth factor 6,229%, the fifth factor 4,675%, the sixth factor 4,255%, the seventh factor 4,247%. eighth factor 4.216%, ninth factor 3.909%, tenth factor 3.788%, eleventh factor 3.483%, twelfth factor 3.207%, thirteenth factor 3.041%, fourteenth factor% 2,970, the fifteenth factor explains 2,177%, and the sixteenth factor explains 2,042%. The cumulative amount of variance explained by the eigenvalues is 70.932% of the total

variance. If the explanatory power of eigenvalues is 50% and above, it means that they are suitable for analysis. In this study, this value obtained is 70.932%. This shows that the self-values have good explanation power.

From the analysis, it is seen that the scale consists of 65 items and 16 dimensions.

Figure 7.

A Numerical Grapah Showing Scree Plot of 16 Factors of Eigenvalue with Component Number



In the scree plot above, these 16 factors are selected because there are 16 factors with eigenvalues of one and more ($\Lambda \geq 1$). The graph numerically supports the 16 factors obtained from the analysis with 65 items.

Written suggestions of students on how to improve technology-based classroom in university setting

The last section of the survey asked students to write their suggestions on how technology-based learning can be improved in university settings. This segment use qualitative method through content analysis to obtain written suggestions from the students about their views on how technology-based classroom in university setting can be improved. Majority of the students think that technology-based classroom in university settings is very important especially in the area of language development.

Students suggested that more facilities should be added to the existing facilities to make it better. Students believed that the university technology-based classroom is perfect.

With the question of how can technology-based classroom learning environment can be improved, bulk of the students suggested that both students and teachers should take technology education seriously; educators should create more content and diversify their methods with the aid of technology.

Also, students recommended the university should create both offline and online system where students should be given projects via technology-based classroom.

More importantly, students advised that Firat university English department should provide opportunities for students and encouraged them to use their electronic devices for educational purposes. Moreover, students who do not have access to these devices and materials should be provided by the university. Other students also suggested that the university through the Education Ministry can offer free technology –based devices to students with unrestricted data to help students stay online all the to do research on the internet, practice speaking skills with native foreign students.

Finally, the students believed that technology-based classroom in Firat University English language departments is satisfactory, but more can be done by the university authorities to improve upon it.

CHAPTER FIVE

V. DISCUSSIONS

5.1. Discussion of the Findings

The findings of the data analysis collected in chapter four (IV) were presented in sections of three: the first section results are the frequency, percentage, and t-test results of students' respondents in relations to their opinions about the use of technology-based classroom were discussed. In the second section, the findings of the availability of electronic instruments and materials own by students and how these instruments have supported their learning integration and improve their English language learning in university settings. The third section dwelt on the relationship between students 'motivation for learning in technology-based classroom. The last section concentrated of the differences of students' perceptions according gender, and class level.

Students' opinions about the use of technology-based classroom in university settings

To find the average mean and frequency of the usage of technology in relations to students' opinion at Firat University English Language Department, a survey was used for this purpose. The respondents threw more light on the importance of having technology-based classroom in learning of English language. Students stressed that devices such computer laboratory, smart boards LCD Projectors and internets connections are very essential materials that is contributing to their learning of English language. Majority of the students believed that the technology –based classroom in Firat University has sufficient facilities and need to be put under proper use by the departments.

They also stated that the use of these technology materials was not frequently used, even though they play an important role in teaching and learning process of English language learning. There are challenges of integrating technology at Firat university English language departments too, students think teachers are still not given the needed materials and tools to use to help them use in classroom effectively. Basically, students of Firat University think that English language department's technology-based

classroom has facilities that enhance proper learning of English language. This is in agreement with the TPACK model (Mishra et al., 2006) and the model of SMAR (Puentedura, 2006). These authors are of the view that, with these models tutors and scholars of education have an excess of materials and devices to help improve their teaching in English language environment. Students believe that the use of technology-based classroom help them to become self-directed learners, majority of the students think that with technology there are able to learn English on their own. There are able to direct their learning without a teacher's supervision.

A very important area this study has showcased is the one opined by Selwyn (2016) he believes that for technology to thrive in classroom teachers and students ought to be 'technicians instead of educators. The idea of technology-based classroom posits that teachers and students should see themselves as people transitioning from the 'olden days' way of teaching where teachers must speak in the classroom to more of a 'technician' in the modern day technology-based classroom. The teacher needs to become like a 'customer support' in the technology-based classroom instead of an educator who sits without supporting the students with the proficiency in technology (Selwyn, 2016).

The outcomes portrayed by respondents in this study demonstrated that even though technology-based classroom in this university is good but more things need to be done to upgrade the classrooms; improve upon the equipment, install modern devices and gadgets, introduce efficient courses for the training of teachers as well as educating students on the importance of technology-based classroom in language learning settings.

Majority of the students could direct their own learning by searching for information on the internet for a given homework or assignment. Moreover, students revealed that technology-based classroom develop their computer competence using Microsoft word and excel. They also indicated the important role of educational technology tools such as computers, smart boards, LCD projectors played in sustaining their interest in lessons extending their attention span in the classroom. These materials helped them to focus on what they were learning in the classroom. The idea is in confirmation to the studies conducted by Ahmed (2012) and Mohammed (2011) which revealed that in computer applications in educational field, there are two 'cognition enhance', the first one deals with computer materials which aid students to focus their

task of learning on constructing the skills of thinking called ‘Empowering environments’. This promotes critical thinking in students through the use of technology. The second part of ‘cognitive enhance’ talks about technology interactive media which combines all communications of the media like videos, pictures, CDs, DVDs, interactive games, animations, present lesson in the classroom and impact knowledge. Each of these cognitions help students improve their learning of English language and develop their knowledge and experience. According to the students, using technology-based learning in English language classrooms helped them improve their performance in listening, speaking, pronunciation and writing. Students are able to solve English language problems through technology without the help teachers. They use technology to do their assignment and homework through the internet. To be able to use technology tools and materials better in the classroom has a greater influence on the rate of using and implementing technology in English language learning; the process of students and teachers having adequate knowledge on technology educational materials promotes students’ confidence in technology-based classroom.

The availability of technological devices, materials and its usage as instructional tools in technology –based classroom in English language settings

This section explains the findings of the research questions that investigated the English language learning students’ ownership and availability of technological devices and instruments at Firat University. In this regard, questionnaires in this study were administered to the English language learning students. All of the students’ respondents own telephone and majority of them have access to computer. The respondents threw more lights on the importance of ownership and availability of electronic gadgets and instruments towards technology integration in the classroom in English language learning. Students stressed that telephone; computer, tablets and more importantly internet are very vital tools in their quest to study English language. The result of this study is parallel to several research conducted in the field of technology integration in the classroom (Awad & Alkaraki, 2013; Emhamed & Krishan, 2011; Eren, 2010; Samira, 2011). They agree that technology- based classroom aid learning process but majority of them use these tools for different things instead of learning English language. Also, students stated that, most of the time, they use their electronic gadgets

at home and dormitory, majority of the students spend 16 hours a week utilizing their devices, but the unfortunate thing is students spend these hours on social networking sites and other sites that don't improve their English language learning. Majority of the students believed that they have access to technology-based classroom and Firat university English language departments have facilities such as computer laboratory, smart boards. The outcomes of this study revealed that students of English language learning have enough technological tools and gadgets and the availability of internet is unlimited. However, majority of the students lack the knowledge of using the various technological tools for educational purposes. Students can use their gadgets for social networking very well but their knowledge in gadgets like telephone, computer, and tablet are limited for the purposes of education in English language learning. Furthermore, a higher percentage of the respondents of this study through the responses of the questionnaire confirmed that their knowledge on the use of technological instruments for the purpose of education is inadequate. This is due to lack of training on the part of students. Also, students believe that encouragement and motivation on the part of teachers towards the use of technology for educational purposes are inadequate in English language learning in university settings. This confirms the work conducted by Klofer et al., (2009), they are of the view that implementation of technology in the classroom is a difficult task for some teachers.

More importantly, students' usage and incorporation of technology into their daily activities as well as in classroom need to have a better information about the tools, materials and programs they are going to use, without these knowledge students will not be able to adequately use these instruments to their benefits, both in the classroom and outside the classroom. In addition, students' ability to operate and utilize technological materials and tools are vital and necessary for the development of English language. This is also very important for students and teachers with the intention of implementing technology-based learning into their classroom (Ismail, Almekhlafi & Al-Mekhlafi, 2010; Hawkar, 2010). Students' participants disagree with the notion that smartboards, computer laboratories and internet access are not enough, they think that it must be improved and developed to the level where every lesson in English language learning will be technology based. Also, respondents believed that with technology-based

classroom they were able to learn different concepts that developed their critical thinking skills.

Through the use of internet students are able to interact with each other at any time and any place, this situation has helped increased friendship among students. This has promoted affirmative attitudes in the classroom whereby students have better interaction to help improve their speaking skills. In terms of behaviour and attitudes, the majority of the respondents showed positive attitudes towards the use of technology-based classroom in English language lessons. The finding of this study is in agreement to the research of Akbulut (2008) and Karakaya (2011). The results of their research revealed that student and teacher's attitudes towards the implementation of technology into English language classroom encouraging. The current study also examined students who make use of technology in their classroom and the positive effect it had on learning outcomes. This study also revealed that with the availability of technology-based materials in the classroom, students' behaviour towards the learning of English language improved. Majority of them think that technology if implemented effectively in the classroom helps the process of learning. The technology-based classroom students improved their skills in all aspects including cognitive abilities, their speaking skills improved through the various links and sites where they could interact and communicate with native speakers via email and other social networking platforms. The watching of foreign movies in native English language contributed immensely to the speaking abilities of students. Several studies supported this idea (Kasapoğlu, 2010; Manar, 2009; Lai & Kristonis, 2006).

Majority of the students agreed that with technology-based classroom teachers are able to assess and evaluate students' performance easily as well as prompt feedback on their performance. This is good for student development. In addition, students agreed that with the absence of the various English languages printed books and resources, using and implementing technology resources in English language teaching and learning is a big challenge. To help overcome this challenge printed books of English language and other educational resources and materials should be provided by the authorities.

Lastly, students believed that technology-based classroom makes teaching more efficient in English language learning classroom, that is students learn many things and

by so doing improve their critical thinking skills. Also, traditional approach of teaching where the teacher is the center of attraction is avoided. Students think that university environment need improvement as far as technology is concerned.

Technology-based classroom motivates students in learning of English language

Students are motivated and encouraged to give out their best in technology-based as well as help integrate technology in teaching of language in the classrooms (Kumar, Rose & DaSilva, 2008; Han, 2008; Almekhlafi & Almedadi, 2010). Based on the findings, it can be said that there is a relationship between students motivation in the learning of English language. In addition, we can deduce that students and teachers who have better knowledge of the various types of technological instruments will implement and use technology more in their language learning and teaching than those whose knowledge are inadequate. Students come out with new ideas in technology-based classroom which motivates them to give out their best in classroom. Also, students learn fast and accomplish task early with technology device and materials in the classroom. In summary we can end by saying that students of English language need proper training to enable them to exploit the benefits of using and implementing technology in the classroom more efficiently. There were divided opinion in regards to this questionnaire, some students think that technology-based classroom helps teachers to deliver their lesson properly and adopt special skills for needy students; they also think that teachers can diversify their teaching with technology learning. Technology-based classroom gives the teacher the opportunity to provide early feedback on students' success and challenges. Besides, students of English language revealed that some of their teachers use the technology-based classroom in teaching of lessons, but their knowledge are limited, some students also explained that some teacher are lazy in technology-based classroom. The students believed that to help implement a better technology-based classroom in English language learning and teaching, authorities of the school should allocate and spend a lot of money in the field of educational technology, for teachers and students, more technological facilities such as computer laboratory, electronic and sound laboratory, new programs for teaching pedagogy.

To conclude, we can confidently say that through the responses of students' respondents on the use of technology-based classroom at Firat University. They think

that the department has facilities but need more room for improvement. Lacking proficiency and adequate knowledge on the part of students are not the only challenges students face in using technology- based classroom. Facilities and lack of knowledge on how to use these technological instruments and materials by students are some of the factors discouraging and preventing English language students from implementing technology in their learning.

Differences in student's perceptions towards the use of technology-based classroom according their gender, and class level

From the tables, it can be seen that majority of the variable shows that students perceptions on the use of technology-based classroom are positive according to gender. There are no major differences between their opinions. With the perceptions of students based on class levels, in majority of the variables students had similar opinions. The analyses of the opinions revealed that students believed in the technology-based classroom and there are no much differences between their perceptions on technology-based classroom based on class levels. However, two items of the variables had different opinions and had significancy.

Furthermore, there is a general consensus among English language learning students about the role technology-based classroom plays in their learning. Majority of the students think that technology helps them to fast track their work and finish it early with ease. With the help of the various technology materials students always come to class well prepared. Moreover, higher percentage of the respondents expressed encouraging result of the technology-based classroom; they think that integrating technology into their lessons is very essential because it provides them with several options of resources leading to creativity. Majority of the students also agree that technology -based classroom according class level is positive, and there are differences between the class level. Still, two variables on technology-based classroom due to class level results reported significant differences between these variables.

CHAPTER SIX

VI. CONCLUSION

6.1. Conclusion

The study obtained very important information about the importance and challenges of technology-based classroom and its implementation in English language learning from the opinion and perceptions of students in the departments of English language at Firat University.

A high percentage of the students' perceptions and opinions towards the use of technology -based classroom in teaching and learning process of English language were affirmative. There are no differences in the opinions of the majority of students according to gender and class level, however, only, two items of the variables had significant results for both gender and class level.

The development and improvement of technology in the last decade has caused dramatic changes in the life of humans in several ways. It has shifted the way people do things in many ways. This paradigm shift has certainly challenged the approaches of teaching and learning particularly in the field of English language learning, which entails modern methods, strategies, models and approaches that need the use of technological materials and instruments. These materials should be included into the curriculums of foreign language learning specifically language education system in a well- defined way.

Furthermore, teachers of English language learning should implement more educational technology into their classroom via the use of technology-based classroom with teaching and learning materials (TLMS) such as smart boards, computers DVDs and CD players as well as educational sites like Khan Academy in their teaching. Even though the attitudes of learners are critical towards the success of the technology integration, teachers must encourage them to use technology in their everyday learning.

In addition, the availability and ownership of technological gadgets by students are not enough; students must be taught how to use these gadgets, tools and materials for educational benefits.

In recent studies English language students' behaviour and opinions towards technology-based classroom has always been concrete. Other research conducted in this area revealed similar findings. A study conducted by Hawkar (2010) established that student' opinions and attitudes towards the implementation of technology in teaching and learning of language were encouraging, but the frequency of technology use in English language learning classrooms were inadequate because of insufficient technological materials.

Durdu (2003) investigated the perceptions of students and teachers of a web-based learning instrument for English courses as a second language at elementary level. It was a site developed as supplementary materials for students of 8th grade. The outcome of the study revealed that the majority of the participants enjoyed the lesson and their performance increased in terms of vocabulary learning and skills of speaking with the chat page.

Moreover, Tuncök (2010) provided in his study an evidence to show that the use of technology could help students perform authentic task that facilitate their improvement in the learning of English language. Tuncök study revealed that students develop skills through activities of real life from technological tools and materials which makes learning more enjoyable for student, through the means of technology, students are able to communicate via emails and chat with one another or even to a foreign pen friend who is a native speaker of English language to improve their speaking skills. Also, students feel relax and well- composed with little anxiousness when they study in technology-based classroom with materials and tools such as computer (Önsoy, 2004). It is in line with this that curriculums and educational materials of English language learning should be created in accordance with the wants and needs of students'. Teaching lessons with the use of interesting technological tools in the classroom will have a lasting effect on attitudes and opinions of students towards the learning of English language.

Another study by Ateş, Altunay and Altun (2006) came to a conclusion that implementing computer-assisted English instruction (CAEI) in an English language learning lesson had a bigger impact on students' of high school's attitudes and opinions towards educational technology.

A research conducted by Işman et al., revealed that because technology is part of students' life, they give more attention to lessons conducted on technology- based. Students of English language learning think that the use of technology, especially educational technology helps them to improve their skills in speaking, listening, reading and writing (Kasapoğlu, 2010).

Almekhlafi and Almeqdadi (2010) in their study enumerated the following suggestions to help improve the efficient implementation of technology into the classroom of English language learning;

(1) School should provide workshops that will develop the teacher professionally in the area of using technology to teach. (2) Include educational technology materials such as DVDs, smart-boards, videos and computers to enhance the curriculums of English language learning (3) Facilitate the collaboration between schools in the country in the area of technology pedagogy. (4) Give teachers the free hand to choose materials that will be beneficial to students' development and their teaching.

The results of the study revealed that all though the respondents, English language students' opinions about technology –based classroom were positive, they believed that there are technological materials at the department of English language of Firat university, but are not enough, they think that more modern gadgets, tools and programs need to be install and use in the classroom, teachers must also do more lessons in the technology-based classroom. However, the findings indicated that the infrequent usage of the technology-based classroom was due to the following challenges:

Firstly, lack of knowledge by both students and teachers contributed to the challenge of integrating technology into the classroom of English language teaching. Also, the constraints of technological gadgets and materials, lack of finance to procure the modern tools for teaching and learning of English language, inadequate access to technological tools, materials and programs, lack of proper information about the use of the various types of technological tools and materials. Inadequate courses for the training of students and teachers. Finally, the perceptions that technology –based learning takes a lot of students and teachers time in the classroom, in the sense that operating these gadgets and materials takes a lot of time.

Secondly, providing and assigning adequate support in terms of finances to technology education, efficient courses and guidelines to use by both students and

teachers, technical support and access to unlimited internet are some of the recommendations that will help the effective implementation of technology into the process of teaching and learning in English language classroom.

The outcome of this study revealed that the use of technology-based classroom for the teaching and learning of English language in the departments of English language at Firat University was inadequate even though the opinions and perceptions of students about technology-based classroom were optimistic. Nonetheless, these positive perceptions and opinions did contribute to their improvement in English language learning but were insufficient. The use of ICT in classroom needs a dramatic improvement to help the effective integration into the process of teaching and learning of English language.

The findings of this study also provided the following suggestion to help improve the use of technology-based classrooms in English language setting of Firat University.

First of all, technical support about the use of technology-based classroom must be improved and amplified in Firat university English language learning environment. Also, stakeholders and government should earmark and spend a lot of money on technology implementation in English language learning

Furthermore, the knowledge and understanding of students about how to use the various technological tools and materials are inadequate; to solve this problem, students and teachers must be educated to acquire enough knowledge to help integrate technology effectively into the process of learning and teaching of language.

In addition, students need to learn so much information about how to utilize their technological gadgets for educational benefits, majority of the students use their gadgets to watch movies and spend time on social networking sites which mostly are not beneficial to their academic work.

Moreover, teachers should teach students how to use internet resources to aid their English language learning through sites and other teaching models on the internet. The outcome of this study also recommends that students should be educated on the importance of technology educational programs just like their teachers. How to use technology-based classroom should not be the preserve of only the teacher but students too (Hawkar, 2010; Herman, 2002; Koçak, 2010)

6.2. Recommendation

From the findings of the study the following recommendations are proposed by the researcher.

Firstly, It is found in this study that student lack proper training on how best they can use technology –based classroom for effective learning in English language learning environments. This study proposed to the university authorities including Dean and Head of Department of English language learning to: Organise courses for training of students and teachers in the area of technology education should be established to help both teachers and students in English language learning department of the university. These courses should focus on how students and teachers can use technology-based classroom to aid teaching and learning.

Secondly, this study established that modern technological gadgets, tools, materials, and programs were inadequate in technology-based classroom of English language learning in the university. To overcome this challenge the researcher proposed to Government through the Education Ministry to supply the department of English language learning with modern technological gadgets, tools, materials, and programs that will enhance teaching and learning of English should be made available at the department of the university.

Furthermore, it is found in this study that students do have technological gadgets and tools but how to integrate and use them for the purposes of learning the English language is lacking. So it may be proposed to teachers to include how to use these tools into their teaching to help educate students on the use of these gadgets for educational benefits.

Also, it is found in this study that students' knowledge on the use of internet for educational purposes are limited, so it may be proposed to the lecturers of English language learning department to teach students how to use the internet for research purposes and other things that will complement their learning and also improve their skills of speaking, listening, reading and writing.

Besides, a mixed model was used in this research. In future studies experimental model can be used to elucidate reliable result.

Lastly, it was established from this study that technological gadgets, tools, materials and programs have many varieties. So it may be suggested for further research

to be done on a particular technological material or program to explore the opinions of other students on these technological tools and programs.



REFERENCES

- Adams, N. B. (2002). Educational computing concerns of postsecondary faculty. *Journal of Research on Technology in Education*, 34(3), 285-303.
- Ahmad, J. (2012). 'English Language Teaching (ELT) and Integration of Media Technology', JCC, King Abdul Aziz University, Jeddah. *Procedia- Social and Behavioral Sciences* 47(2), 924-929.
- Al Harbi, H. E. M. (2014). *Towards successful implementation of ICT in education*. Paper presented at the 2014 WEI International Academic Conference Proceedings, Vienna, Austria.
- Albugami, S. (2016). *Developing a strategic approach to ICT implementation in Saudi secondary schools*. (Doctoral dissertation), University of Salford, UK.
- Albugami, S., & Ahmed, V. (2015). Success factors for ICT implementation in Saudi secondary schools: From the perspective of ICT directors, head teachers, teachers and students. *International Journal of Education and Development using ICT*, 11(1), 18.
- Almekhlafi, A. G., & Almeqdadi, F. A 2010, 'Teachers' Perceptions of Technology Integration in the United Arab Emirates School Classrooms', *Educational Technology & Society*, 13 (1), 165-175.
- Angeli, C., & Valanides, N. (2009). Epistemological and Methodological issue for the conceptualization, development, and assessment of ICT-TPACK: Advances in technological pedagogical content knowledge (TPACK). *Computers & Educations*, 52(1), 154-168.
- Annual Meeting of the American Educational Research Association, March 24-28 2008, (pp. 1- 16). New York.
- Arkin, E. (2003). *Teachers' Attitudes towards Computer Technology Use in Vocabulary Instruction*, MA thesis, Bilkent University, Ankara: Turkey.
- Arslan, A. (2008). Implementing a holistic teaching in modern ELT classes: Using technology and integrating four skills. *International Journal of Human Sciences*, 5(1), 2-19.

- Ateş, A., Altunay, U., & Altun, E. (2006). The effect of Computer Assisted Language Instruction on High School Preparatory Students' Attitude towards Computers and English. *Journal o Theory and Practice in Education* 2 (2) 97-112.
- Atkins, N. E., & Vasu, E. S. (2002). Measuring knowledge of technology usage and stages of concern about computing: A study of middle school teachers. *Journal of Technology and Teacher Education*, 8(4). 279-302.
- Awad, A. K. A., & Alkaraki, S. M. S. (2013). Attitudes of EFL students towards using computers in learning English', *English for Specific Purposes World*, ISSN 1682-3247, <http://www.esp-world.info> 37(13).
- Aydin, S. (2013). Teachers' perceptions about the use of computers in EFL teaching and learning: The case of Turkey. *Computer Assisted Language Learning*, 26(3),214-233.
- Azmi, N. (2017). The benefits of using ICT in the EFL classroom: From perceived utility to potential challenges. *Journal of Educational and Social Research*, 7(1),111-118.
- Bai, X., & Lam, J. S. L. (2015). Dynamic regional port cluster development: case of the ports across Taiwan Strait. *Geo Journal*, 80(5), 619-636.
- Baker, W. M., Lusk, E. J., & Neuhauser, K. L. (2012). On the use of cell phones and other electronic devices in the classroom: Evidence from a survey of faculty and students. *Journal of Education for Business*, 87(1), 275–289.
- Balanskat, A., Blamire, R., & Kefala, S. (2006). The ICT Impact Report: A review of studies of ICT impact on schools in Europe, European Schoolnet. http://colccti.colfinder.org/sites/default/files/ict_impact_report_0.pdf
- Ballew, T.D. (2017). *Teacher Perceptions of a Technology –based Google Classroom*. (Doctoral Dissertation). Carson Newman University.
- Buabeng-Andoh, C. (2012). Factors influencing teachers' adoption and integration of information and communication technology into teaching: A review of the literature. *International Journal of education and Development using Information and Communication Technology*, 8(1), 136-155.
- Bui, T. H. G. (2015). *Using collaboration and technology to enhance Vietnamese students' English language writing skills*. (Doctoral dissertation), Queensland University of Technology, Australia.

- Carr, N. (2010). *The shallows: What the Internet is doing to our brains*. New York,: NY Norton.
- Cavin, R. (2008). *Developing technological pedagogical content knowledge in preservice teachers through microteaching lesson study*. Paper presented at the Society for Information Technology & Teacher Education International Conference, Las Vegas, Nevada, USA.
- Chai, C. S., Koh, J. H. L., & Tsai, C.-C. (2013). A review of technological pedagogical content knowledge. *Journal of Educational Technology & Society*, 16(2), 31-51.
- Chai, C.S., Koh, J. H. L., Tsai, C. C., & Tan, L. L. W. (2011). Modelling primary school pre-Service teachers' Technological Pedagogical Content Knowledge (TPACK) for Meaningful learning with information and communication technology (ICT). *Computers & Education*, 57(1), 1184- 1193.
- Chapelle, C. A. (2009). The relationship between second language acquisition theory and Computer- Assisted language learning. *The Modern Language Journal*, 93(1), 741-753.
- Collier, A.(2017).Technology in Classroom. Online material from open author retrieved from <https://www.oercommons.org/authoring/21922-technology> in the classroom on May12, 2017.
- Courville, K. (2011). *Technology and its use in education: Present roles and future prospects Paper* presented at the Recovery School District Technology Summit, Baton Rouge, LA.
- Creswell,J.W.(1994).*Research design; Qualitative and quantitative approaches*. Thousand Oaks, CA Sage.
- Cuban, L. (2001). *Oversold & underused: Computers in the classroom*. Cambridge, MA:Harvard University Press.
- Dang, A. T. K., Nguyen, H. T. M., & Le, T. T. T. (2013). The impacts of globalisation on EFL teacher education through English as a medium of instruction: An example from Vietnam. *Current Issues in Language Planning*, 14(1), 52-72.
- Dang, H. T., & Nguyen, T. H. N. (2014). An exploratory study of ICT use in English language learning among EFL university students. *Teaching English with Technology*, 14(4), 32-46.

- Dang, T. C., & Foster, J. (2015). Implementing e-Learning in a Vietnamese University: Towards a Configurational Approach. *Current Issues in Language Planning*, 14(1), 52-72.
- Dang, T. X. (2014). *ICT in foreign language teaching in an innovative university in Vietnam: Current practices and factors affecting ICT use*. (Doctoral dissertation), La Trobe University, Melbourne, Australia.
- Dang, X. T. (2011). *Factors influencing teachers' use of ICT in language: A case study of Hanoi University, Vietnam*. Paper presented at the International Conference 'ICT for Language Learning' 4th edition, Simonelli Editore, Florence, Italy.
- Dang, X. T., Nicholas, H., & Lewis, R. (2012). *ICT training and ICT use among foreign language teachers*. Paper presented at the Fifth International Conference on Ubiquitous Learning, Champaign-Urbana, Illinois, USA.
- Design Seminar: Integrating Content, Pedagogy and Technology. *Computers & Education* 49(3), 740-762.
- Dilek, C., B. (2019). *Systematic review of assistive technology-based instruction for postsecondary students with developmental disabilities*. MA (Master of Arts) thesis, University of Iowa, USA.
- Dinh, H. T. B. (2009). Factors Influencing EFL Novice Teachers' Adoption of Technology in Classroom Practice. *Online Submission*.5(1), 45-60.
- Dinh, H. T. B. (2015). *Factors influencing English as a Foreign Language (EFL) teachers' use of Information and Communication Technology (ICT in classroom practice: A mixed study at Hanoi University, Vietnam*. (Doctoral Dissertation).RMIT University, Melbourne, Australia.
- Doukakis, S., Psaltidou, A., Stavradi, A., Adamopoulos, N., Tsiotakis, P., & Stergou, S.(2010). *Measuring the technological pedagogical content knowledge (TPACK) of in-service teachers of computer science who teach algorithms and Programming in upper secondary education*. Paper presented at the Readings in technology and education: Proceedings of ICICTE, Corfu, Greece.
- Drenoyianni, H. (2004). Designing and implementing a project-based ICT course in teacher education setting: rewards and pitfalls. *Education and Information Technologies*, 9(4), 387 404.

- Durdu, L. (2003). *Web-based Learning Tool: Design and Development of an Online Basic English Support Material for Young Children at Elementary Level*. Master's Thesis, Middle East Technical University, Ankara, Turkey.
- Eren, Ö. (2012). Student's Attitudes towards Using Social Networking in For Language Classes: A Facebook Example. *International Journal of Business and Social Science* . 3(20), 288.
- Ebert, A., K. (2015). *Behaviorism vs. constructivism in the technological secondary Education classroom*. Retrieved from <https://sites.google.com/a/boisestate.edu/edtechtheories/behaviourism-vs-constrctivism-in-the-technological-secondary-education-classroom-1ü>
- Eckstein, M. (2009). Enrichment 2.0: Gifted and talented education for the 21st century. *Gifted Child Today*, 32(1), 59–63.
- Edwards, B. (2009). Classic PCs vs. new PCs: Their true cost. *Technologizer*, 3(1). Retrieved from <http://www.technologizer.com>
- Egbert, J. (2009). *Supporting learning with technology: Essentials of classroom practice*. Upper Saddle River, NJ: Prentice Hall.
- Ehrlich, S. B., Spote, S. E., & Sebring, P. (2013). *The use of technology in Chicago public schools 2011: Perspectives from students, teachers, and principals*. Retrieved from University of Chicago, Consortium on Chicago School Research website: https://consortium.uchicago.edu/sites/default/files/publications/Technology%20Report%202013_0.pdf
- Emhamed, D., E., H., & Krishnan, S., K (2011). 'Investigating Libyan Teacher Attitudes towards Integrating Technology in Teaching English in Sebha Secondary Schools', *Academic Research International*, 1(3) 34-44.
- Elmore, R. F. (1978). Organizational models of social program implementation. *Public policy*, 26(2), 185-228.
- Ertmer, P. A., Ottenbreit-Leftwich, A. T., Sadik, O., Sendurur, E., & Sendurur, P. (2012). Teacher beliefs and technology integration practices: A critical relationship. *Computers & Education*, 59(2), 423-435.

- Ertmer, P. A., Ottenbreit-Leftwich, A., & York, C. S. (2006). Exemplary technology using teachers: Perceptions of factors influencing success. *Journal of Computing in Teacher Education*, 23(2), 55-61.
- Ertmer, P. A., Ottenbreit-Leftwich, A., Sadik, O., Sendurur, E., & Sendurur, P. (2012). Teacher beliefs and technology integration practices. Examining the alignment between espoused and enacted beliefs. In J. König (Ed.), *Teachers' pedagogical beliefs. Definition and operationalisation—connections to knowledge and performance—development and change Conference paper* presented in Munster, Germany: Waxmann.
- Farrell, S. C. (2011). Explaining the professional role identities of experienced ESL teachers through reflective practice. *System*, 39(2011), 54-62.
- Flanagan, S., Bouck, E. C., & Richardson, J. (2013). Middle school special education teachers' perceptions and use of assistive technology in literacy instruction. *Assistive Technology* 25, 24–30. doi:10.1080/10400435.2012.682697.
- Floyd, K. K., & Judge, S. L. (2012). The efficacy of assistive technology on reading comprehension for postsecondary students with learning disabilities. *Assistive Technology Outcomes and Benefits*, 8, 48–64. doi:10.1080/10400435.2012.682697
- Fomsi, E. F., & Orduah, S. E. (2017). Gender differences in the use of ICT among teachers in model primary schools in Rivers state, Nigeria. *British Journal of Educational Technology*, 5(4), 88- 94.
- Ford, K., & Lott, L (2011). *The impact of technology on constructivist pedagogies*. Retrieved from <https://sites.google.com/a/boisestate.edu/edtechtheories/the-impact-of-technologyon-constructivist-pedagogies-1>
- Fowler, F. J. (2014). *Survey Research Methods*. Fifth Edition, SAGE Publications.
- Fu, J. S. (2013). ICT in Education: A Critical Literature Review and Its Implications. *International Journal of Education and Development using Information and Communication Technology*, 9(1), 112.
- Fullan, M. (1991). *The new meaning of educational change*. London: Cassell.
- Fullan, M. (2007). *The new meaning of educational change* (4th Ed.). New York, NY: Teachers College Press.

- Futurelab. (2009). *Using digital technologies to promote inclusive practices in education*. Retrieved from http://www.creativetallis.com/uploads/2/2/8/7/2287089/digital_inclusion3.pdf7
- Gao, P., Tan, S. C., Wong, A. F. L., Choy, D., & Wang, L. (2010). Nurturing preservice teachers' understanding of technology-enhanced pedagogy through reflection. *Ascilite, Sydney: Curriculum, Technology & Transformation for an Unknown Future*. Sydney. Perceptions and use of assistive technology in literacy instruction. *Assistive Technology*, 25, 24–30. doi:10.1080/10400435.2012.682697.
- Garling, B. A. (2016). *Foreign language teachers' technology beliefs and implementation factors: a mixed methods study*. PhD (Doctor of Philosophy) thesis University of Iowa, USA.
- Garrett, K. N. (2014). *A quantitative study of higher education faculty self-assessments of technological, pedagogical, and content knowledge (TPACK) and technology training*. (Doctoral dissertation), University of Alabama Libraries.
- Gensburg, R., & Herman, B. (2009). *An analysis of the theory of constructivism as it relates to pre-service and in-service teachers and technology*. Retrieved from https://sites.google.com/a/boisestate.edu/edtechtheories/an-analysis-of-the-theory-of_constructivism-as-it-relates-to-pre-service-and-in-service-teachers-and-technology-1
- Gilakjani, A., P. (2012). An Analysis of Factors Affecting the Use of Computer Technology in English Language Teaching and Learning', *International Journal of Information and Education Technology*, 2(2), 45-65.
- Godzicki, L., Godzicki, N., Krofel, M., & Michaels, R. (2013). *Increasing motivation and engagement in elementary and middle school students through technology-supported learning environments* (Master's research project, Saint Xavier University). Retrieved from ERIC database. (ED541343)
- Gok, A. (2014). *Current Situation, Usage, Management and Integration of Smart Classroom Technologies with the Scope of Fatih project: A multiple of Case study*. (Doctoral thesis) Middle East Technical University, Ankara-Turkey.
- Goktas, Y., Gedik, N., & Baydas, O. (2013). Enablers and barriers to the use of ICT in primary schools in Turkey: A comparative study of 2005–2011. *Computers & Education*, 68, 211-222.

- Goktas, Y., Yildirim, S., & Yildirim, Z. (2009). Main Barriers and Possible Enablers of ICTs Integration into Pre-service Teacher Education Programs. *Educational Technology & Society*, 12(1), 193-204.
- Goktas, Y., Yildirim, Z., & Yildirim, S. (2008). A review of ICT related courses in preservice teacher education programs. *Asia Pacific Education Review*, 9(2), 168-179.
- Goodin, L. M. (2012). *Incorporating technology into the instruction of social studies* (Master's research project, Saint Xavier University). Retrieved from ERIC database. (ED531350)
- Graham, C. R. (2011). Theoretical considerations for understanding technological pedagogical content knowledge (TPACK). *Computers & Education*, 57(3), 1953-1960.
- Hakami, A., Hussin, C., & Dahlan, M. (2013). Critical success factors necessary for curriculum integration of computer based testing into Saudi secondary schools. *Information Systems Research and Innovation (JISRI)*, 4(3), 22-30.
- Halat, E. (2013). Experience of elementary school students with the use of WebQuests. *Mevlana International Journal of Education*, 3(2), 68–76. Retrieved from ERIC database. (ED543594)
- Hammond, T. C., & Manfra, M. M. (2009). Giving, Prompting, Making: Aligning Technology and Pedagogy within TPACK for Social Studies Instruction. *Contemporary Issues in Technology and Teacher Education*, 9(2), 160-185.
- Harris, J., Mishra, P., & Koehler, M. J. (2009). Teachers' Technological Pedagogical Content Knowledge and Learning Activity Types: Curriculum-based Technology Integration Reframed. *Journal of Research on Technology in Education*, 41(4), 393-416.
- Han, W. (2009). Benefits and barriers of computer assisted language learning Teaching, *US-China Foreign Language*, 6(9), 40-43.
- Hassanzadeh, V., Gholami, R., Allahyar, N., & Noordin, N. (2012). Motivation and personality traits of TESL postgraduate students towards the use of information and communications technology (ICT) in second language teaching. *English Language Teaching*, 5(4), 74.

- Hawkar, A. (2010). *Administrators', teachers' and students perceptions about the benefit of and Barriers to TELL at koya University'* Bilkent University.MA thesis, Ankara, Turkey.
- Heafner, T. (2004). Using technology to motivate students to learn social studies *Contemporary Issues in Technology and Teacher Education*, 4, 42–53. Retrieved from <http://www.citejournal.org>
- Herman, L., P. (2002). *Case Study of a Professional Development Program: Meaningful Technology Integration in Secondary Education*. PhD dissertation, Drexel University.
- Himmelsbach,V. (2019). Technology in the classroom in 2019:6 Pros and Cons. Online material retrieved from www.himmelsbachvawn.com on July 15th, 2019.
- Hoang, N. T. (2015). *EFL teachers' perceptions and experiences of blended learning in a Vietnamese university*. (Doctoral dissertation), The Queensland University of Technology.
- Hofer, M., & Grandgenett, N. (2012). TPACK development in teacher education: A longitudinal study of preservice teachers in a secondary MA Ed. program. *Journal of Research on Technology in Education*, 45(1), 83-106.
- Hosseini, Z., & Kamal, A. (2013). A Survey on Pre-Service and In-Service Teachers' Perceptions of Technological Pedagogical Content Knowledge (TPCK). *Malaysian Online Journal of Educational Technology*, 1(2), 1-7.
- Houcine, S. (2011).The effects of ICT on learning/teaching in a foreign language.RetrievedFrom[https://conference.pixelonline.net/conferences/ICT4LL2011/common/DownloadPaperpdf/I BL69-437-FP-Houcine-ICT4LL.11/](https://conference.pixelonline.net/conferences/ICT4LL2011/common/DownloadPaperpdf/I%20BL69-437-FP-Houcine-ICT4LL.11/)
- Housand, B. C., & Housand, A. M. (2012). The role of technology in gifted students'motivation. *Psychology in the Schools*, 49, 706–715. doi:10.1002/pits.21629
- Howard, S. K., & Mozejko, A. (2015). Teachers: technology, change and resistance. In M. J. Henderson & G. Romeo (Eds.), *Teaching and digital technologies: Big Issues and critical questions* 5(2), pp. 307-317.
- Hu, L. (2007). *Teachers' beliefs and attitudes towards information and communication technology (ICT) and related pedagogy for English for business purposes (EBP) in Chinese higher education*. King's College London.

- Hu, Z., & McGrath, I. (2011). Innovation in higher education in China: Are teachers ready to integrate ICT in English language teaching? *Technology, Pedagogy and Education*, 20(1), 41-59.
- Iacob, I. (2009). The Effectiveness of Computer Assisted Classes for English as a Second Language, *Annals. Computer Science Series*, 7(1), 141-148.
- Ismail, S., Almekhlafi, A., & Al-Mekhlafy, M. (2010). Teachers' perceptions of the use of technology in teaching languages in United Arab Emirates' schools', UAE University. *International Journal for Research in Education (IJRE)*, (91) 27.
- İşman, A., Çağlar, M., Dabaj, F., & Altun, Z. (2004). Attitudes of Students toward Computers. *The Turkish Online Journal of Education Technology*, (3)1.
- ISTE. (2008). ISTE Standards Teachers. <http://www.iste.org/standards>
- Jacobsen, D. M., & Lock, J. V. (2005). Technology and teacher education for a knowledge era: Mentoring for student futures, not our past. *Journal of Technology and Teacher Education*, vol. 27, pp. 37-56.
- Jalali, S. Panahzada, V., & Firouzmand. A. (2014). Attitude towards Computers and Classroom Management of Language School Teachers', Urmia University, Urmia, Iran. *International Journal of Instruction*, Vol. (7)2.
- Jalali, S., & Dousti, M. (2014). Attitudes of Iranian EFL learners towards CALL: The effect of treatment length investigated', Urmia University, Iran. *Malaysian Journal of ELT Research*, 10(1), pp. 46-62.
- James, F. (2017). *The Effects of Technology on Student Motivation and Engagement in Classroom- Based Learning*. (Doctoral dissertation) University of New England All Theses And Dissertations. 121. <http://dune.une.edu/theses/121>
- Javad, M., R, Allahyar, N., & Tan Kok, E. (2012). Technology in Language Education: Benefits and Barriers. *Jornal of Education and Practice*, (3)5 25-30.
- Jordan, K. (2014). *Adapting an instrument to measure teacher TPACK*. Paper presented at the Now It's Personal-Australian Computers in Education Conference.
- Kadzera, C., M. (2006). *Use of Instructional Technologies in Teacher Training colleges in malawi*, PhD dissertation, the faculty of Virginia Polytechnic Institute and State University.
- Kang, J., Ni, X., & Li, G. (2010, Mar 29, 2010). *Preparing foreign language teachers to implement a technology-rich curriculum*. Paper presented at the Society for

- Information Technology & Teacher Education International Conference, San Diego, CA, USA.
- Karagiorgi, Y., & Charalambous, K. (2006). ICT in-service training and school practices: In search for the impact. *Journal of Education for Teaching*, 32(4), 395-411.
- Kasapoglu-Akyol, P. (2010). Using Educational Technology Tools to Improve Language and Communication Skills of ESL Students, *Novitas ROYAL (Research on Youth and Language)*, 4 (2), 225-241.
- Kayaduman, H. (2017). *Investigating Stages of Concern and Technology Integration Self-Efficacy beliefs of Language pre-service teachers*. (Doctoral thesis) Middle East Technical University, Ankara- Turkey.
- Kazu, I. Y., & Erten, P. (2014). Teachers' Technological Pedagogical Content Knowledge Self-Efficacies. *Journal of Education and Training Studies*, 2(2), 126-144.
- Keen, A. (2011). *The Cult of the Amateur: How blogs, Myspace, YouTube, and the rest of today's user-generated media are destroying our economy, our culture, and our values*. Boston, MA: Nicholas Brealey.
- Keengwe, J., & Kang, J.-J. (2013). Preparing in-service language teachers to design and Implement technology-rich curriculum. *Education and Information Technologies*, 18(4), 609-619.
- Kern, J. (2008) Digital constructivism a study in the integration if constructivism and digital technology in social studies', Retrived from [http://www.Usfca.edu/uploadedFiles/Destinations/School_of_Education/documents DML/Kernj_Digital_Constructivism.pdf](http://www.Usfca.edu/uploadedFiles/Destinations/School_of_Education/documents/DML/Kernj_Digital_Constructivism.pdf)
- Kersaint, G., Horton, B., Stohl, H., & Garofalo, J. (2003). Technology beliefs and practice of mathematics education faculty. *Journal of Technology and Teacher Education*, 11(92) 549-577.
- Kershaw, L. H. (2016). Journeys towards expertise in technology-supported teaching. *Australasian Journal of Educational Technology*, 29(3), 434-449.
- Khamkhien, A. (2012). Computer Assisted Language Learning and English Language Teaching in Thailand: Overview Faculty of Liberal Arts and Science, Kasetsart University. *Mediterranean Journal of Social Sciences*. Vol. 3(1), 55-62.

- Klopfer, E., Osterweil, S., Groff, J., & Haas, J (2009). 'Using the technology of today, in the classrooms today, the instructional power of digital games networking simulation', The Education arcade. Massachusetts Institute of Technology. Retrieved from http://education.mit.edu/papers/GamesSimeSocNets_EdArcade.pdf
- Knowledge of Singapore Pre-service Teachers with a Large-scale Survey. *Journal of Computer Assisted Learning*, 26(6), 563– 573.
- Koçak, A. (2010) *The Attitudes of one Teachers and her Students towards using Internet sources to develop students' reading skills'*, MA thesis, Bilekent Uiniversity. Ankara, Turkey.
- Kocoğlu, Z. (2009). Exploring the technological and pedagogical content knowledge content knowledge of preservice teachers in language education. *Procedia-Social and Behavioral Sciences*, 1(1), 2734-2737
- Koehler, M. J., & Mishra, P. (2008). Introducing TPACK. In AACTE Committee on Innovation and Technology (Ed.), *Handbook of Technological Pedagogical Content Knowledge (TPCK) for Educators* (pp. 3-29). New York: Routledge.
- Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge *Contemporary Issues in Technology and Teacher Education*, 9(1), 60-70.
- Koehler, M. J., Mishra, P., & Yahya, K. (2007). Tracing the Development of Teacher Knowledge in a
- Koehler, M. J., Mishra, P., Bouck, E.C., DeSchryver, M., Kereluik, K., Shin, T.S. et al. (2011). Deep- play: Developing TPACK for 21st Century Teachers. *International Journal of Learning Technology*, 6(2), 146–163.
- Koh, J. H. L., Chai, C. S., & Tsai, C. C. (2010). Examining the Technological Pedagogical Content
- Koh, J. H. L., Chai, C. S., Hong, H.-Y., & Tsai, C.-C. (2015). A survey to examine teacher's Perceptions of design dispositions, lesson design practices, and their relationships with technological pedagogical content knowledge (TPACK) *Asia-Pacific Journal of Teacher Education*, 43(5), 378-391.
- Koh, J. H., & Divaharan, H. (2011). Developing pre-service teachers' technology integration expertise through the TPACK-developing instructional model. *Journal of Educational Computing Research*, 44(1), 35-58.

- Kolikant, Y. B.-D. (2010). Digital natives, better learners? Students' beliefs about how the Internet influenced their ability to learn. *Computers in Human Behavior*, 26(6), 1384- 1391.
- Kuda-Malwathumullage, C. P. (2015), *Impact of technology-infused interactive learning Environments on college professors' instructional decisions and practices*. MS (Master of Science) thesis, University of Iowa, <https://doi.org/10.17077/etd.09iuf6s0>
- Kumar, N., Rose, R. C., & D'Silvia, J. L (2008). Teachers' Readiness to Use Technology in the Classroom: An Empirical Study, *European Journal of Scientific Research*, 21(4), 603-616.
- Kurt, G., Mishra, P., & Kocoglu, Z. (2013). *Technological pedagogical content knowledge development of Turkish pre-service teachers of English*. Paper presented at the meeting of the Society for Information Technology and Teacher Education, New Orleans, LA.
- Larson, L. C., & Miller, T. N. (2011). 21st century skills: Prepare students for the future *KappaDelta Pi Record*, 47(3), 121-123.
- Law, N., Chow, A., & Yuen, A. H. (2005). Methodological approaches to comparing pedagogical innovations using technology. *Education and Information Technologies*, 10(1-2), 7-20.
- Le, M. X. (2015). *Lecturers' Adoption and Integration of Information and Communication Technology in English Teacher Education at Two Universities in the Mekong Delta, Vietnam*. (Doctoral dissertation), The University of Sydney.
- Mahdi, H. S., & Al-Dera, A. S. a. (2013). The impact of teachers' age, gender and experience on the use of information and communication technology in EFL teaching. *English Language Teaching*, 6(6), 57.
- Mama, M., & Hennessy, S. (2013). Developing a typology of teacher beliefs and practices concerning classroom use of ICT. *Computers & Education*, 68, 380-387.
- Marti, M., M.C. (2006). Teacher Training in ICT-Based Learning Settings: Design and Implementation of an on-line Instructional Model for Foreign Language Teachers. (Doctoral Thesis). Universitat Rovira I VIRGILI.

- McNulty, A., & Lazarevic, B 2012, ' *Best practice in using video technology to promote second language acquisition*', Concordia University Chicago, USA. *Teaching English with Technology*, 12 (3), 49-61, <http://www.tewtjournal.org>
- Mirriahi, N., Dawson, S., & Hoven, D. (2012). *Identifying key actors for technology adoption in higher education: A social network approach*. Paper presented at the Future Challenges - Sustainable Futures, Wellington, New Zealand.
- Mishra, P., & Koehler, M. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *The Teachers College Record*, 108(6), 1017-1054.
- Mishra, P., & Koehler, M. J. (2008). Introducing Technological Pedagogical Content Knowledge.
- Mishra, P., Koehler, M. J., Zellner, A., & Kereluik, K. (2012). Thematic Considerations in Integrating TPACK in a Graduate Program. In D. Polly, C. Mims & K. A. Persichitte (Eds.). *Developing Technology-Rich Teacher Education Programs: Key Issues* (pp. 1-12). Hershey, PA: IGI Global.
- Mofarreh, A., & Ibrahim, Y. (2016). *Implementation of ICT policy in secondary schools in Saudi Arabia*. (Doctoral dissertation), University of Wollongong, Australia.
- Muhammad, A., E. (2012). *Technology Enhanced Language Learning Environment to Support Constructive Teaching in Social Studies particularly in Sociology at Salahaddin University in Erbil, Iraq*, (Master Thesis), Bilkent University, Ankara, Turkey.
- Mohammed, M. I. (2015). The perceptions of students and teachers about the benefits of and barriers to technology aided EFL. *Journal of Literature, Languages and Linguistics*, 13, 85-99.
- Mominó, J. M., & Carrere, J. (2016). A model for obtaining ICT indicators in education. from Unesco
<http://disde.minedu.gob.pe/bitstream/handle/123456789/4348/A%20Model%20or%20Obtaining%20ICT%20Indicators%20in%20Education.pdf?sequence=1&Allowed=y>
- Montgomery, M. C. (2017). *Factors that influence Technology Integration in the Classroom*. (Doctoral Thesis). University of Maryland.

- Mouza, C. (2002). Learning to teach with new technology: implications for professional development. *Journal of Research on Technology in Education*, 35(2), 272- 289.
- Mulrine, C. F. (2007). Creating a virtual environment for gifted and talented learners. *Gifted Child Today*, 30(2), 37–40. doi:10.4219/gct-2007-30
- Murphy, P., & Iverson, G. (2003). Pedagogy and cultural knowledge: a sociocultural perspective. *Pedagogy, Culture & Society*, 11(1), 5-9.
- Murray, D. E., & Christison, M. (2010). *What English Language Teachers Need to Know I: Understanding Learning*. New York, NY: Routledge.
- Newby, L., Hite, J., Hite, S., & Mugimu, C. (2013). Technology and education: ICT in Ugandan secondary schools. *Education and Information Technologies*, 18(3).
- Ng, W., Nicholas, H., & Williams, A. (2010). School experience influences on preservice teachers' evolving beliefs about effective teaching. *Teaching and Teacher Education*, 26(2), 278-289.
- Nguyen, H. (2015b). *Teacher learning in Vietnam*. (Doctoral dissertation), University of Nottingham, UK.
- Nguyen, H. T. M., & Baldauf Jr, R. B. (2015). Beginning Teachers: Supporting One Another and Learning Together. *Teacher Education and Practice*, 28(1), 75-90.
- Nguyen, T. T. L. (2019). *Using ICT to foster collaborative writing for EFL university students in Vietnam*. (Doctoral Dissertation), Edith Cowan University, Australia.
- Nguyen, T. T. T. (2015c). *Information and Communication Technology (ICT) and Teaching English in Rural Vietnamese Primary Schools: Policies, Practices and Implementation Factors*. (Doctoral dissertation), University of South Australia, Australia
- Nguyen, T. T., Dekker, R., & Goedhart, M. J. (2008). Preparing Vietnamese student teachers for teaching with a student-centered approach. *Journal of Mathematics Teacher Education*, 11(1), 61-81.
- Niess, M. L., Ronau, R. N., Shafer, K.G., Driskell, S.O., Harper, S. R., Johnston, C. et al. (2009). Mathematics Teacher TPACK Standards and Development Model. *Contemporary Issues in Technology and Teacher Education*, 9(1), 4-24.
- Nim Park, C., & Son, J.-B. (2009). Implementing computer-assisted language learning in the EFL classroom: Teachers' perceptions and perspectives. *International Journal of Pedagogies and Learning*, 5(2), 80-101.

- Nomlomo, V., & Desai, Z. (2014). Reflections on the development of a pre-service language curriculum for the B.Ed (Foundation Phase). *South African Journal of Childhood Education*, 4(3), 87-102.
- Önsoy, S. (2004). *Students' and Teachers' attitudes towards the use of Computer-assisted Language Learning at the Preparatory school of Celal Bayar University'*, Master thesis, Bilkent University. Ankara, Turkey.
- Oyaid, A. (2009). *Education policy in Saudi Arabia and its relation to secondary school Teachers' ICT use, perceptions- and views of the future of ICT in education.* (Unpublished doctoral dissertation), University of Exeter, Exeter, England.
- Öz, H. (2015). Assessing Pre-Service English as a Foreign Language Teachers' TechnologicalPedagogical Content Knowledge. *International Education Studies*, 8(5), 119-130.
- Pandolfini, V. (2016). Exploring the Impact of ICTs in Education: Controversies and Challenges. *Italian Journal of Sociology of Education*, 8(2), 28-53.
- Parker, K., Lenhart, A., & Moore, K. (2011). *The Digital Revolution and Higher Education: College Presidents, Public Differ on Value of Online Learning* Retrieved from <https://eric.ed.gov/?id=ED524306>
- Paudel, N. R. (2009). A critical account of policy implementation theories: status and reconsideration. *Nepalese Journal of Public Policy and Governance*, 25(2), 36-54.
- Pham, T. T. N. (2014) [ICT application in English teaching at English department, University of foreign language studies, the University of Danang the teacher capability, problems and recommendations]. *Technology Science Journal of Danang University*, 10(83), 28.
- Piaget, J. (1955). *The construction of reality in the child*. London, United Kingdom Routledge.
- Prensky, M. (2001). Digital natives, digital immigrants, On the Horizon, 9(5), 1-6.
- Pourhosein, A., Banou, N., & Zabihniaemran, A. (2015). What are the barriers in the use of computer technology in EFL instruction? *Review of European Studies*, 7(11).
- Puentedura, R. (2006) Transformation, Technology, and Education [Online] Available <http://hippasus.com/resources/tte/>, [Accessed 16th January 2019]

- Sa'd, H., S. (2014) 'Implementing Internet-based EFL Teaching in Iran:(Disadvantages, Obstacles and Challenges from EFL Learners' Viewpoint', *Journal of Language and Literature Education*, 10(1),24- 40.
- Sadeghi, M., R. (2013) 'Computer Assisted Language Instruction in EFL Academic Environment: A Hindrance or a Facilitator', *Basic Research Journal of Education Research and Review*,2(6),93-98.
- Şahin, İ. (2011). Development of Survey of Technological Pedagogical Content Knowledge (TPACK). *TOJET-The Turkish Online Journal of Educational Technology*, 10(1), 97-105
- Salavati, S. (2016). *Use of Digital Technologies in Education: The Complexity of Teachers' Everyday Practice*. Doctoral Dissertation Linnaeus University Dissertations No 264/2016, ISBN: 978- 91-88357-39-9.
- Samira, M., B. (2011). Attitude of Egyptian Teachers towards Computers', *Contemporary Educational Technology*, 2(4), 308-318.
- Sani, A. G. (2014). Towards the effective integration of ICT in educational practices; review of the situation in Nigeria *American Journal of Science and Technology*, 1(3), 116- 121.
- Schmidt, D. A., Baran, E., Thompson, A. D., Mishra, P., Koehler, M. J., & Shin, T. S. (2009). Technological Pedagogical Content Knowledge (TPACK): The Development and Validation of an Assessment Instrument for Preservice Teachers. *Journal of Research on Technology in Education*, 42(2), 123-149.
- Selwyn, N (2016) *Is Technology Good for Education?* New Jersey: John Wiley & Sons.
- Shin T.S., Koehler, M. J., Mishra, P., Schmidt, D. A., Baran, E., & Thompson, A. D. (2009). Changing Technological Pedagogical Content Knowledge (TPACK) Through Course Experiences. In I. Gibson et al. (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2009*, (pp. 4152-4159). Chesapeake, AACE.
- Shoffner, M. (2007). Pre-service English teachers and technology: a consideration Weblogs for the English classroom. *Contemporary Issues in Technology and Teacher Education*, 7(4), 245-255.

- Shoffner, M. (2009). "Because I know how to use it": Integrating technology into preservice English teacher reflective practice *Contemporary Issues in Technology and Teacher Education*, 9(4), 371-391.
- Shulman, L. S. (1986). Those Who Understand: Knowledge Growth in Teaching. *Educational: Researcher*, 15(2), 4-14.
- Shulman, L. S. (1987). Knowledge and Teaching: Foundations of the New Reform. *Harvard Educational Review*, 57(1), 1-22.
- Smith, R., Erdoğan, S., Lamb, T., & Reinders, H. (2008). Teacher-learner autonomy. *Learner and teacher autonomy*, 83-102.
- Stecklein, J. J. (2014). *Effects of interactive technology, teacher scaffolding and feedback on university students' conceptual development in motion and force concepts.* PhD (Doctor of Philosophy) thesis. University Iowa. <https://doi.org/10.17077/etd.kedc3ovl>
- Strickland, S. J. (2003). *An Exploration of the Integration of Technology into Teacher Education.* (Doctoral Dissertation). Ohio- State University .
- Thomas, K. M., O'Bannon, B. W., & Bolton, N. (2013). Cell phones in the classroom: Teachers' perspectives of inclusion, benefits, and barriers. *Computers in The Schools*, 30(1), 295–308.
- Tondeur, J., Van Keer, H., van Braak, J., & Valcke, M. (2008). ICT integration in th classroom: Challenging the potential of a school policy. *Computers & Education*, 51(1), 212-223.
- Tweed, S. R. (2013). *Technology Implementation: Teacher Age, Experience, Self-Efficacy, and Professional Development as Related to Classroom Technology Integration.* East Tennessee State University. Electronic Theses and Dissertations. Paper 1109. <https://dc.etsu.edu/etd/1109>
- Twining, P. (2007). Discussing ICT, aspirations and targets for education: International perspectives. *International Journal of Knowledge and Learning*, 3(2-3), 154-170
- Umm Al-Qura University. Aykaç, M. (2005). *Student and teachers' attitudes towards the use of computer- mediated communication voice and text chat as an instructional resource to improve skill.* Unpublished master's thesis, Bilkent University, Ankara: Turkey.

- Usher, A. (2012). *What non-traditional approaches can motivate unenthusiastic students?* Washington, DC: Center on Education Policy.
- Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 36(1), 157-178.
- Verma, C., & Dahiya, S. (2016). Gender difference towards information and communication technology awareness in Indian universities. *SpringerPlus*, 5(1), 370.
- Vogelgesang, K. L. (2015). *A mixed methods study of a technology-based self-monitoring intervention*. PhD (Doctor of Philosophy) thesis, University of Iowa.
- Volman, M., & Van Eck, E. (2001). Gender equity and information technology in education: The second decade. *Review of educational research*, 71(4), 613-634.
- Webb, M., & Cox, M. (2004). A review of pedagogy related to information and communications technology. *Technology, Pedagogy and Education*, 13(3), 235-286.
- Yemothy, N.E. (2015). *Improving Educational Technology Integration in the Classroom*. (Doctoral Dissertation). Walden University.
- Zhao, Y. (2003). Recent Developments in Technology and Language Learning: A 98 Literature Review and Meta-analysis', Michigan State University. *CALCO Journal*, 21 (1), p-p 7-27.
- Zimlich, S. L. (2015). Using technology in gifted and talented education classrooms: The teachers' perspective. *Journal of Information Technology Education: Innovations in Practice*, 14, 101-124.

APPENDIX

Appendix 1. Ethic Committee Report

Evrak Tarih ve Sayısı: 03/01/2020-369402

T.C.



FIRAT ÜNİVERSİTESİ REKTÖRLÜĞÜ

Sosyal ve Beşeri Bilimler Araştırmaları Etik Kurulu

Sayı :97132852/302.14.01/
Konu :Etik Kurul Değerlendirmesi

EĞİTİM BİLİMLERİ ANABİLİM DALINA

Anabilim Dalımız Öğr.Üyesi Doç.Dr.İbrahim Yaşar KAZU'nun danışmanı olduğu yüksek lisans öğrencisi Yakubu ISSAKU'ya ait "Students Opinions on Tecnology Based Classroom Approach:Case Study of Firat University English Language Department" konulu çalışma ile ilgili Etik Kurul Kararı ekte sunulmuştur.

Gereğini ve bilgilerinizi rica ederim.

e-imzalıdır.
Prof. Dr. Mehmet Nuri GÖMLEKSİZ
Kurul Başkanı

Firat Üniversitesi Rektörlüğü 23119 ELAZIĞ/TÜRKİYE
Tel: 0 (424) 237 00 00 Faks: 0 424 2122717
E-Posta: : Elektronik ağı: <http://www.firat.edu.tr>

Ayrıntılı bilgi için iribet : Pinar Arslan

Bu belge 5070 sayılı Elektronik İmza Kanununun 5. Maddesi gereğince güvenli elektronik imza ile imzalanmıştır.

ETİK KURUL KARARI

TOPLANTI TARİHİ	TOPLANTI SAYISI	KARAR NO	ÇALIŞMACILARIN ADI SOYADI
26.12.2019	41	10	Sorumlu Araştırmacı : Doç.Dr.İbrahim Yaşar KAZU Yardımcı Araştırmacı: Yakubu ISSAKU

KARAR

“Students Opinions on Tecnology Based Classroom Approach:Case Study of Firat University English Language Department” konulu çalışma etik kurulumuzda görüşülmüş olup; çalışmanın etik kurallara uygun olduğuna oybirliğiyle karar verilmiştir.

Prof. Dr. Mehmet Nuri GÖMLEKSİZ (Başkan)			
Prof. Dr. Sebahattin DEVECİOĞLU (Üye)	İmza	Doç. Dr. Rıfat BİLGİN (Üye)	İmza
Doç. Dr. Süleyman İLHAN (Üye)	İmza	Doç.Dr. Haki PEŞMAN (Üye)	İmza
Doç. Dr. İrfan EMRE (Üye)	İmza	Doç.Dr. Yunus Emre KARAKAYA (Üye)	Bulunamadı
Doç. Dr. Taner YILDIRIM (Üye)	Bulunamadı	Dr. Öğr. Üyesi Serkan BİÇER (Üye)	Bulunamadı
Doç.Dr. Erkan Turan DEMİREL (Üye)	İmza	Dr.Öğr. Üyesi Ayşe Ülkü KAN (Üye)	İmza

Appendix 2. Permit Document

Evrak Tarih ve Sayısı: 06/10/2020-416483

T.C.



FIRAT ÜNİVERSİTESİ REKTÖRLÜĞÜ

Yabancı Diller Yüksekokulu Müdürlüğü

Sayı :39345886/100/
Konu :İzin İsteği (Yakubu ISSAKU)

EĞİTİM FAKÜLTESİNE

İlgi :23/09/2020 tarihli, 413543 sayılı ve "İzin İsteği (Yakubu ISSAKU)" konulu yazı

Danışmanlığı Doç.Dr.İbrahim Yaşar KAZU'nun yaptığı yüksek lisans öğrencisi Yakubu ISSAKU ile birlikte yürüttükleri "Students' Opinions on Tecnology-Based Classroom Approach: A Case Study of Firat University English Language Department" başlıklı çalışmada yer alan ölçek çalışmasını 15.10.2020 - 15.11.2020 tarihleri arasında Yabancı Diller Yüksek Okulu öğrencileri ve Fakültemiz Yabancı Diller Bölümü öğrencileri ile yapılması uygundur.

Bilgilerinizi rica ederim.

e-imzalıdır.
Prof. Dr. İhsan DAĞTEKİN
Yüksekokul Müdürü

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Bu belge 5070 sayılı Elektronik İmza Kanununun 5. Maddesi gereğince güvenli elektronik imza ile imzalanmıştır.

Appendix 3. Survey Questions

Republic of Turkey
Firat University
Institute of Educational Sciences
Department of Educational Sciences

Dear Sir/Madam,
STUDENTS OPINIONS ON TECHNOLOGY-BASED CLASSROOM APPROACH A SAMPLE STUDY OF FIRAT UNIVERSITY
ENGLISH LANGUAGE DEPARTMENT

STUDENTS QUESTIONNAIRE

This questionnaire is designed to determine students' opinion about technology based classroom. Your answers will remain anonymous and will be strictly confidential.

Technology based classroom is the use of technological tools in the classroom to aid teaching and learning, the technique basically resort to the use of technology devices in classroom to ensure full participation of all students.

Instruction: Read the following question carefully and place a tick (✓) in the box that corresponds with the chosen answers.

Section A. Background of the respondent:

- Gender : ☐ Male ☐ Female
- Age : ☐ under 20 ☐ 21-29 ☐ 30-39 ☐ 40 and above ()
- Academic qualification of respondent (university class): ☐ Preparatory class ☐ 1st class ☐ 2nd class ☐ 3rd class ☐ 4th class
- Which of the following do you have? (You can choose more than one) / How often do you use your electronic device?

	☐ Computer	☐ Phone	☐ Tablet	☐ Nothing	☐ Others
Everyday					
Once a week					
Twice a week					
Three times in a week					
Four times in a week					
Five times in a week					
Never					

- Is there an internet connection in your dormitory or home? ☐ Yes ☐ No
- If there is? it's it: ☐ Limited ☐ Unlimited
- How many hours do you use your device at home/dormitory?
☐ less than one hour ☐ 1 hour ☐ 2 hours ☐ 3 hours ☐ 4 hours ☐ 5 hours ☐ 6 hours and more
- How many hours do you use your device at school?
☐ less than one hour ☐ 1 hour ☐ 2 hours ☐ 3 hours ☐ 4 hours ☐ 5 hours ☐ 6 hours and more
- Where do you usually use your device?
☐ School ☐ Home ☐ Dormitory ☐ Café ☐ Library ☐ Park
- Is there a technology-based classroom in your school? ☐ Yes ☐ No
- The technology-based classroom does not have enough facilities? ☐ Yes ☐ No
- How often do you utilize your technology-based device for homework and school related activities?
☐ 0-5 hours/week ☐ 6-10 hours/week ☐ 11-15 hours/week ☐ 16+ hours/week
- Should university use more or less technology than it's currently been used? ☐ Yes ☐ No

Section B:

Indicate the extent to which you agree or disagree with the following statement by putting a tick (✓) in the appropriate box using the following scale.		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Ⓐ Strongly Agree Ⓑ Agree Ⓒ Neutral Ⓓ Disagree Ⓔ Strongly Disagree						
1. The use of technology in the classroom help students in becoming self-directed learners						
(a) I can learn English on my own.		Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(b) I can direct my own learning without a teacher's supervision		Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(c) I can pronounce words correctly on my own		Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(d) I can think on my own without a teacher's guidance		Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
2. The use of technology in the classroom leads to computer competence						
(a) I can do Microsoft excel and word on my own		Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(b) I can send and receive email on my own		Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(c) I can use social networking sites		Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(d) I can use excel to analyze data		Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ

(e) I can search for information from Internet on my own.					
Indicate the extent to which you agree or disagree with the following statement by putting a tick (✓) in the appropriate box using the following scale. Ⓐ Strongly Agree Ⓑ Agree Ⓒ Neutral Ⓓ Disagree Ⓔ Strongly Disagree	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
3. The use of technology promotes self-efficacy in classroom					
(a) I can solve English language problem on my own	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(b) I understand the videos watched in technology based classroom	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(c) I developed speaking skills on my own.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(d) I am sure about my ability to do my class exercise	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(e) I am certain I can understand do given assignment on my own.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(f) I am certain I can learn the concept and ideas on the English in technology based classroom	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
4. Students are motivated to learn in technology based classroom In English lesson					
(a) Students are motivated to come up with new Ideas In technology based classroom	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(b) The use of technology devices motivates you to learn fast.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(c) Doing your homework on the internet motivates you to be creative learner.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(d) I am not motivated to learn English when my teacher uses technology while teaching English	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
5. Using technology in the classroom will make teachers' work easier					
(a) Lecturers can adopt skills for special needs by using technology to insure equity	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(b) Lecturers can use technology to translate English text for non-native speakers	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(c) Lecturers can diversify their teaching by providing options for students who finish class work early	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(d) Lecturers can use online sign-up for conferences, parents' helpers and project presentation	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(e) Lecturers can provide feedback on students' success and challenges.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
6. The use of technology-based classroom will aid my learning process					
(a) I can access homework and projects via technology device online	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(b) I can see my grades online immediately	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(c) I can follow my class through class websites when am absent from class	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(d) I can take digital notes on my tablets or IPAD	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(e) I can have access to my digital portfolio	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
7. Availability of technological tools used as instructional materials in your English classroom is not enough					
(a) Smart boards are not enough in technology-based classroom	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(b) Computer laboratories are limited in technology-based classroom	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(c) Internet access is not enough in technology-based classroom	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
8. The use of technology in my classroom has influenced interaction					
(a) I can interact with my friends every time and everywhere	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(b) The use of technology-based classroom has increased friendship among students	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
(c) The relationship between teachers and students improves in technology-based classroom	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
Indicate the extent to which you agree or disagree with the following statement by putting a tick (✓) in the appropriate box using the following scale. Ⓐ Strongly Agree Ⓑ Agree Ⓒ Neutral Ⓓ Disagree Ⓔ Strongly Disagree					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
9. Technology based class doesn't improve student understanding of concept in English classroom					

(a) Students use technology device for social networking	③	①	③	②	①
(b) Lecturers are lazy in technology-based classroom	③	②	③	②	①
(c) Technology classroom are time consuming	③	②	③	②	①
10. The use of technology-based classroom promotes easy assessment and evaluation					
(a) Lecturers can give homework online and assess students' performance easily	①	③	①	②	①
(b) Feedback on students' performance is prompt	③	②	③	②	①
(c) Determination of students challenges is easy in technology based classroom	③	①	③	②	①
11. The use of technology-based facilities by teachers makes teaching more efficient in English classroom					
(a) Students learn different concept with technology-based classroom	①	②	①	②	①
(b) Students learn so many things at the same time in technology-based classroom	③	③	③	②	①
(c) Students learn how to be critical thinkers in technology-based classroom	③	②	③	②	①
12. The use of technology-based classroom helps students to ask questions and get immediate feedback					
(a) Traditional methods of teaching are avoided in technology-based classroom.	①	①	①	②	①
(b) Students understand the kind of question to ask	③	②	③	②	①
13. The use of technology-based classroom posed a challenge in English lesson in university settings.	③	②	③	②	①
14. Using technological based devices such computer smart board etc. make English lesson boring	③	②	①	②	①
15. English lesson which make use of technology-based classroom helps students understand lesson better	③	①	③	②	①
16. Students opinion about facilities in technology based English classroom is not necessary	①	②	③	②	③
17. The use of technology-based classroom in my English classroom gives students greater opportunities to speak with other friends.	③	②	③	②	③
18. The use of lecture method by teachers in technology-based classroom in English lessons is not beneficial	①	②	③	②	③
19. I develop my listening and writing skills in technology-based classroom in English lesson	③	①	③	②	①
20. The use of technology-based classroom prepares students to become creative thinkers and problem solvers	③	①	③	②	①
21. I can finish my homework and projects early when my English lesson is done in technology-based classroom	③	②	③	②	①
22. Technology based classroom environments in university settings needs more improvements	③	②	③	②	①

Section C:

Instruction: Read the following questions and write your opinions on the dotted lines.

23. What do you think about the technology-based classroom in this university?

.....

.....

.....

24. How can we improve technology-based learning environment in this university?

.....

.....

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Appendix 4. Thesis Originality Report

 FIRAT ÜNİVERSİTESİ EĞİTİM BİLİMLERİ ENSTİTÜSÜ		FORM 20
I - ÖĞRENCİ BİLGİLERİ		
Adı ve Soyadı	Yakubu Issaku	Öğrenci No: 172401108
Bilim Dalı	Eğitim Bilimleri Anabilim Dalı	
Programı	☒ Yüksek Lisans ☐ Doktora ☐ Dönüştürücü Doktora	
II - TEZ BİLGİLERİ		
Tez Başlığı (Enstitü Tescilli)	Students' Opinions on Technology-Based Classroom Approach: A Sample Study of Firat University English Language Department	
Danışman	Assoc. Prof. Dr. İbrahim Yaşar KAZU	
II. Danışman		
III - ENSTİTÜ BENZERLİK RAPORU		
Yukarıda bilgileri verilen öğrencimizin tezi, CD ortamında MSWORD ve PDF formatında vermiş olduğu kopyaları kullanılarak aşağıda belirtilen filtreler uygulanmak suretiyle TURNİTİN intihal tespit programında analiz edilmiştir:		
1. Kaynaklar bölümü hariç 2. Özet ve Abstract dâhil, diğer ön bölümler hariç 3. Alıntılar dâhil 4. Benzerlik oranı %1 ve üzeri ise dâhil		
İntihal tespit programının ürettiği rapora göre ilgili tezin benzerlik oranı		
Tez savunma sınavından önce taranan sayfa sayısı (88)	%_4_	
Tez Savunma Sınavından sonra taranan sayfa sayısı (105)	%_4_	
değerlerine sahip olup Enstitümüzce uygulanan kabul edilebilir üst sınır %25'dir.		
Kontrol Personeli Celal YILMAZ Bilgisayar İşletmeni	☐ Tez, veri tabanına saklanmıştır. ☐ Saklanmamıştır.	_02_/_02_/20_21_ İmza
Sınav Jüri Üyesi Doç.Dr. İbrahim KAZU (Unvanı, Adı ve Soyadı)	Düşünce:	
AÇIKLAMA		
1. Form öğrenci tarafından bilgisayar ortamında doldurulur ve üst yazı ekinde savunma sınavı jüri üyelerine gönderilir. 2. Her bir jüri üyesi bu raporu dikkate alarak Tez Bireysel Değerlendirme Formu'nda ve bu formda ilgili alanları doldurmaktadır.		
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