ABSTRACT

The field of ICT in recent years has been a subject of remarkable developments which in turn has created great technological breakthrough and transformations in opportunities for obtaining information using various time efficient methods. In regards to this tremendous growth and in view of these developments, it seems that many students currently show an interest in educational activities based on modem technology and electronic resources. This research investigates the acceptance of using web based technological learning system by university students to support their learning, the current study aim to investigate the acceptance of university students to use web based technology learning systems based on the factors that affect their usage, as a means of learning support. A theoretical model was designed which contained factors such as Information Quality (IQ), System Quality (SQ), System Interactivity (SI), Satisfaction for User (US), Usefulness as Perceived (PU), Ease of Use as Perceived (PEoU). A survey questionnaire was designed and distributed to 700 students across 6 universities in North Cyprus. The result of the questionnaire survey showed that all results were important in the acceptance level determination of the web based technological learning system usage. The acceptance and adoption gives the student more control and flexibility on their learning path. It would also assist the educators and instructors to determine extent of student engagement and learning outcomes.

Keywords: Acceptance of web based learning; TAM; UTAUT; web based learning system; technology adoption; university students

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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last name:

Signature:

Date:

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To my family...

ABSTRACT

The field of ICT in recent years has been a subject of remarkable developments which in turn has created great technological breakthrough and transformations in opportunities for obtaining information using various time efficient methods. In regards to this tremendous growth and in view of these developments, it seems that many students currently show an interest in educational activities based on modem technology and electronic resources. This research investigates the acceptance of using web based technological learning system by university students to support their learning, the current study aim to investigate the acceptance of university students to use web based technology learning systems based on the factors that affect their usage, as a means of learning support. A theoretical model was designed which contained factors such as Information Quality (IQ), System Quality (SQ), System Interactivity (SI), Satisfaction for User (US), Usefulness as Perceived (PU), Ease of Use as Perceived (PEoU). A survey questionnaire was designed and distributed to 700 students across 6 universities in North Cyprus. The result of the questionnaire survey showed that all results were important in the acceptance level determination of the web based technological learning system usage. The acceptance and adoption gives the student more control and flexibility on their learning path. It would also assist the educators and instructors to determine extent of student engagement and learning outcomes.

Keywords: Acceptance of web based learning; TAM; UTAUT; web based learning system; technology adoption; university students.

ÖZET

Bilişim ve iletişim teknolojileri dalı son yıllarda gösterdiği dikkate değer gelişim ile, bilginin çeşitli ve zaman açısından etkin yöntemlerle elde edilebilmesini sağlayacak olanaklarda büyük teknolojik gelişim ve değişimlere neden olmuştur. Bu alandaki muazzam büyümeye istinaden, pek çok öğrencinin günümüzde modern teknoloji ve elektronik kaynaklara dayalı eğitime ilgi gösterdiği görülmektedir. Bu çalışma, universities öğrencilerinin web tabanlı teknolojik öğrenim sistemlerini kullanmayı ne derecede kabullendiklerini araştırmaktadır. Sunulan bu çalışma ile öğrencilerin bu sistemleri öğrenme desteği olarak kullanma miktarlarını etkileyen faktörleri göz önüne alarak kabullenme yaygınlığını araştırılması hedeflenmektedir. Bilgi Kalitesi, Sistem Kalitesi, Sistem İnteraktifliği, Kullanıcı Memnuniyeti, Algılanan Yarar ve Algılanan Kullanım Kolaylığı gibi faktörleri içeren teorik bir model tasarlanmıştır. Kullanım kabulü seviyesinin tespiti için yapılan anket sonuçları, web tabanlı öğrenim sistemi kullanımı kabulü için hemen hemen tüm sayılan faktörlerin önemli olduğunu göstermiştir. Kabul ve benimsemeleri, öğrencilerin öğrenme için takip ettikleri yolda daha kontrolü olmalarını sağlar. Ayrıca, eğitimci ve öğretmenlerin öğrencilerin katılım derecelerini ve öğrenim çıktılarını tespitlerinde yardımcı olur.

Anahtar kelimeler: Web tabanlı öğrenme kabulü; teknoloji kabul modeli; teknoloji kabul ve kullanım birleştirilmiş modeli; web tabanlı öğrenim modeli; teknoloji benimsenmesi; üniversite öğrencileri.

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LIST OF ABBREVIATIONS

1PSQ	Perceived System Quality
2PSQ	Perceived System Quality
CMS:	Content Management Systems
EE	Effort Expectancy
FC	Facilitative Condition
ICT:	Information Communication Technology
ISS	Information System Success
IT:	Information Technology
LISREL	Linear Structural Relations Software
PEoU	Perceived Ease of Use
PU:	Perceived Usefulness
QS	Quality of System
QWL:	Quality of working life
SCORM:	Shareable Content Object Reference Model
SCT	Social Cognitive Theory
SEC:	Self-Efficacy of Computer
SEM	Structural Equation Modelling
SI	Social Influence
SN	Social Normalcy
SPSS	Statistical Package for Social Science
STEM	Student Technology Engineering and Mathematics
TAM:	Technology Acceptance Model
TRA	Theory of Reasoning Action

UTAUT: The Unified Theory of Acceptance and Use of Technology

WBLS: Web Base Learning Systems .

CHAPTER 1

INTRODUCTION

This is the opening chapter of the research work, it contains the background of the study, statement problem, aim, objectives, study hypothesis, research limitations and lastly the study overview

1.1 Background

In recent times, technological advancement has transformed the way people carry out their day to day activities (Kukkonen & Harjumaa, 2018). And this is because technology makes things easy for people which has led to its rapid adoption and growth across the world (Goldin & Katz, 2018). The internet technology has received a lot of attention recently and has been used in institutes of higher education to improve the performance of learning experiences amongst students which has attracted a lot of learning institutes to heavily invest in the internet technology to support learning such as the web based learning systems (Edwards, 2018). The web based learning system provides a medium to which students learn over the web using web based technological tools anytime, anywhere (Huda et al., 2018). However, the web based technology is categorized into formal and informal. The formal web based learning system is organized in learning institutions such as universities by instructors. While the informal web based learning system is available over the web by an unknown sources (Anderson & Dron, 2018).

Moreover, the requirement to meet up with students' educational needs could be a pedagogical constant challenge, most especially for the courses that are complex and strictly follows a rule-based pattern (Jelev et al., 2018). Therefore, educationalists should continually get used to the learning styles of students and make it a top priority to enable them effectually engage the students in the learning process. Initially, educators requires to fully know the students learning preferences and then afterwards figure out innovative methods to meet up with these preferences. Nevertheless, there are factors which hinders the adoption of web based learning technology which would affect the success of web based learning technology in the long run, and in addition little investigation has been carried out to understand the role students, social

and institutional factors plays in the adoption of web based learning technological systems most especially in North Cyprus. The researcher is motivated to undertake a study that encourages self learning freedom, and as well promoting student to student and student to teacher interaction and cooperation.

Therefore, the study integrated 2 models to investigate the factors which affects the acceptance or adoption of web based learning systems, the models are Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT), these models are used to determine the acceptance of technological adoption by users using some series of factors as its variables and the variables include dependent and independent (Abbas et al. 2018).

The aim of the research is to investigate university students' acceptance of web-based learning system use to support learning as well understand the failures that has been recorded in North Cyprus whilst making recommendations as to how web-based learning can be used effectively and its uses can be optimized.

1.2 Problem Statement

Web based learning systems has been receiving high approval ratings over the years, years and a fact which has drawn the attention of many researchers, being that the technology has added value to teaching and learning. Web based learning systems have made provision for students to access their information from all over the world without being in a specific location, the basic fact we then be a restriction of availability of internet connection (Ghazizadeh et al., 2012). To this effect, web based learning systems supports collaborative learning as well as builds a student's self-confidence. However, it is important to note that there have been reports of series of challenges in the literature and these reports have been mostly related to usability issues, acceptance issues, cost and internet access problems etc. (Liu et al., 2015), this is apparently a medium of motivation for the researchers particularly in North Cyprus to carry out a study such as this in order to find out if the challenges is same in North Cyprus. A few other problems that becomes the researchers need to venture into this study includes , conventional teaching methods are usually very individualistic and boring to the students,

student spends much on purchasing some study tools with additional classes such as tuitions, and there has not been any solid availability of time for student teacher communication.

1.3 Aim and Objectives of Study

The aim of the research is to investigate university students acceptance of web-based learning system use to support learning as well understand the failures that has been recorded in North Cyprus as well, the research also aim at making recommendations as to how web-based learning can be used effectively, and its uses can be optimized. The objectives of the research includes the following.

- To find out the level of university student acceptance for web-based learning system
- To find out the factors that influence and explain why the students perceive WBLS as a learning support system
- To find out the factors influencing student's acceptance towards web-based learning in Universities
- To find out the key issues and critical success factors that are essential to ensure successful development and the use of learning web-based systems

The hypothesis below were proposed in order to accomplish the study aim

- **H1:** Perceived Ease of Usage has a positive effect on Use for Support Learning
- **H2:** Perceived Usefulness has a positive effect on Use for Support Learning
- **H3:** System Interaction has a positive effect on Use for Support Learning
- **H4:** Quality of System has a positive effect on Use for Support Learning
- **H5:** Information Quality has a positive effect on Use for Support Learning
- **H6:** User Satisfaction has a positive effect on Use for Support Learning

1.4 Importance of Research

This research is important in University Students' Acceptance of Web-based Technological Learning System as a Support for Learning and also to involve all the elements that need to be in place for WBLS development. This work would be a valuable addition to the numerous existing literatures available for CIS student's consultation and it would also give insight to the extent of WBLS acceptance as a learning support tool among university students in North

Cyprus . There have been series of research by different researchers in areas geared towards the discovery of web based learning systems acceptance and majority of these researchers have focused" on the adoption of Unified Theory of Acceptance and Use of Technology (UTAUT) or the Technology Acceptance Model (TAM), but this research makes use of a model developed by the researcher. Acceptance and full deployment of WBLS offers the required platform to obtaining blended learning within the department thus bridging the communication and consultation needs within CIS. Educators and education developers as well as university managers would find the findings of this research to be of great interest. Further importance to developers and education providers are given below.

- **Developers:** The staffs in charge of IT support along with the system administrators will be able to identify the limitations and challenges that students have as that limits their level of acceptance to utilizing the web-based learning systems hence the need for a vital implementation information.
- **Education providers:** Students will be able to identify their challenges and restrictions as regards the use of this technology, as well as make suggestions to improvements, with respect to their expectations

1.5 Limitations of Study

The researcher expects that there will be some limitations during the study and these limitations would range from lack of cooperation from research community, to failure of the respondents to answer the questions in the questionnaire.

The researcher experienced some limitations during the study and these limitations includes lack of cooperation from research community, failure to respond and answer the questions contained in the questionnaire. Another vital constraint is to which degree the Blackboard system has been embraced as a framework for distance learning and a supplement for the class room instructing in under research institution. Time constraint:

Data collection was conducted on a limited time and quiet strenuous as the researcher had to collect data from all six universities.

In the case of the Research participants: The data collection was also restricted to university students. The researcher wished that the data collection would have included faculty members, university administrations etc.

The study focused mainly on collecting data from 6 universities in Northern part of Cyprus which could be easily accessible for the research.

The data collection was a questionnaire method, and it was that based on the honest responses of the participants this is a limitation.

1.6 Overview of the Study

The study consists of six chapters, the chapter contents are as explained below

Chapter one: the first chapter consist of the study background of the subject matter, the problem statement, the aims and objective of thesis, the experienced limitations of the research as well as the thesis overview

Chapter two: This section entails literatures of research that are related to the study, detail explanation of WBLS models as well as previous studies on the benefits of WBLS.

Chapter three: This section talks about the theoretical frame work as regards acceptance and effective use of the Web based learning systems

Chapter four: this chapter explains the model that was designed and used for the research in the course of the data analysis, it also shows the research participants the data collection tools and other details for the survey analysis.

Chapter five: in this chapter the result of the study is shown with the description and explanation

Chapter six: in this chapter the summary of the thesis is given as well as a concrete discussion of the results, the chapter also entails the conclusion and the recommendation for future research.

CHAPTER 2

RELATED RESEARCH

This section of the study entails literatures of research that are related to the study subject area, the detail explanation of WBLS models as well as previous studies on the benefits of WBLS.

2.1 Students Acceptance of Web-Based Learning System Use to Support Learning

The web based learning systems technology tries to replace the primitive way of learning systems, this replacement will bring about improving the learning performance and experience of students. However, some factors are affecting users to accept this new technological tool to improve their learning performances, skills and experience. A research conducted by Tarhini et al. (2013) to investigate the acceptance web based learning systems and the role played by these technology socially amongst the European higher education utilizing an extended TAM model which includes individual, social, institutional factors. They collected data across different universities in Britain amongst 604 users. Their findings stated that the quality of working life (QWL) was the most vital factor amongst other adopted factors which include social normalcy (SN), perceive useful (PU), perceived ease of usage (PEOU), facilitative condition (FC) and self-efficacy of computer (SEC). Additionally, they stated that these aforementioned factors are all significant factors affecting the adoption of web based learning technologies. From a point of view, the data collected is small and could in one or the other affect the outcome of the study findings.

However, Liao et al. (2004) carried out an empirical investigation regarding students from undergraduate adoption of web based learning technological systems, they conducted the research because of the recent need and importance of utilizing this trending technology and there is an increase of learning contents across the web. The study utilized a model called the Unified Theory of Acceptance and Use of Technology (UTAUT), this model is used to determine the acceptance of technological adoption by users using some series of factors as its variables. The variables include dependent and independent. The study declared the independent variable as the users' intention to utilize the web learning systems while the dependent variables include the social influence, effort expectation, facilitating conditions,

system interaction and performance expectancy which were all found to be significant. Moreover, the study finds that network quality could also affect the acceptance of web technology for learning because these learning contents are very large in size to stream online. The study utilized just one model which it has been reported by Scherer et al. (2018) that integrating two or more models produces a better result.

Al-Adwan et al. (2013) researched the acceptance of electronic learning over the primitive type of learning in Jordanian universities amongst students. They stated that it is critical to understand the end users acceptance processes in order to get to know the factor that affects the adoption of these technologies in schools. However, they followed the Technological Acceptance Model (TAM) in exploring students' acceptance of the web based technology. The major reason behind the investigation ascertain significant aspects that which could help the continuous acceptance of the web based learning system technology in the long run in the Jordanian universities by students. The study utilized just one model which it has been reported by Scherer et al. (2018) that integrating two or more models produces a better result.

An investigation in the acceptance of Moodle amongst students in Moroccan university was carried out by Yeou (2016). Moodle is also a very powerful and accepted web based learning system in the world, however for this technology to be successful in Moroccan universities there is need for students to accept the learning system. Moreover, the researcher utilized the TAM model to access the students' acceptance of web based learning system. The study was conducted amongst 47 students in different universities in morocco. The findings shows the significance of the TAM model and that perceived usefulness with computer self-efficacy has an accounting attitude for Moodle utilization in Moroccan universities. With regards to this study, the investigation was conducted on only one web based learning system and the data used was also too small in which could affect the final result in a negative way.

Jung et al. (2008) carried out an investigation based on challenges faced by undergraduates accepting electronic learning by adopting the technological acceptance model (TAM). However, the study was conducted across some Swedish universities amongst students from the school business. The findings shows that amongst the TAM variables the most significant factor is the Perceived Usefulness (PU). These shows that perceived usefulness is the main

factor that drive students to accept electronic learning in Swedish universities. The study utilized just one model which it has been reported by Scherer et al. (2018) that integrating two or more models produces a better result.

Fidani and Idrizi (2012) investigated the factors that hinder the acceptance of Learning Management Systems because of its proven importance in today's learning techniques. The study was conducted in Macedonia at the University of Tetova, the school decided to conduct this study before they adopted these technology, they wanted to investigate these factors so that the system could be accepted in masse. They stated that the UTAUT was the optimal model for predicting users' acceptance. The data used was harvested using empirical method. The findings stated that behavioral intention could be predicted through a user attitude toward using technology. Additionally, their study helped the university in promoting the use of electronic learning.

Song (2010) conducted a study to investigate web based learning system technology based on purely hospital programs, the study was conducted in the United States amongst 6 universities located in the cities of Florida, Virginia, Texas, Nevada and Iowa. They harvested the study data using a web based survey, although the study adopted a different model utilizing just two variables perceived infrastructure quality (1PSQ) and interaction quality (2PSQ). The study result stated that the acceptance of web based learning systems is driven by interaction instead of system driven quality or information. However, the choice of data collection could have identity issues because the data was collected virtually using the web .

Asampana et al. (2017) carried out a research in the University of Professional Studies located in Accra Ghana amongst the university students in order to find out the reasons for poor post acceptance of web based learning systems technologies. Moreover, they a TAM and other sequential methods for the study model, the investigated perceive ease of use, attitude toward use, perceived usefulness and other social variables. The data was collected from 4555 students for the experiment. The findings shows that the poor acceptance of web based learning system was based on the intention to use this technology, bad infrastructure for information technology, lack of proper training, and the significance of the web based learning system to a qualitative lecture delivery. The research needs to be conducted across other

schools so as to compare and contrast the study findings. Although their findings has identified the main factors affecting the adoption of this technology.

Chen et al. (2013) integrated three models of information systems theory for accepting the use of technology namely Social Cognitive Theory (SCT), Theory of Reasoning Action (TRA) and Technology Acceptance Model (TAM), they stated that by doing so the expected findings will be more accurate. Moreover, they investigated the factors that hinder the utilization of university students' intention to adopt web base learning systems. However, their study indicated that universities students got a lot of positive intention towards the usage of these systems with great readiness to accept using the web based learning systems.

A study was conducted by Calisir et al. (2014) to determine the acceptance of web based learning systems amongst 546 adult individuals, moreover they proposed an extended TAM to get their results. The proposed model contained the TAM model plus the proposed factors which are the perceived quality of content, system and image. They utilized the Linear Structural Relations software (LISREL) to test the integrated proposed study model . The study results shows that perceived usefulness (PU) was the most significant factor amongst others in determining the behavioral intention to adopting the web based learning systems. The result could have been optimized if the data was collected from more people Alharbi and Drew (2014) and their choice of integrating some factors to the TAM models was good as reported by Scherer et al. (2018) that integrating two or more models produces a better result.

Lwoga (2014) carried out a research to determine the significant factors that hinders the usage of web based learning systems amongst 408 undergraduate students in Tanzania whilst stating that determining these factors will be of help when implementing a successful web based learning systems in Tanzania. Moreover, the study adopted a different approach by utilizing a model called Information System Success (ISS) while for the data analysis adopting the Structural Equation Modelling (SEM). The findings shows that factors related to instructor and system quality were found to be significant. The study was carried out in just one university and amongst just the undergraduate this means that a similar study could be conducted in another university with different result. The study should have been carried out across several universities in Tanzania which would have had a better result.

Fathema et al. (2015) found out that a lot of students are not utilizing the learning systems to their fullest despite the enormous amount of investment been made in implementing these learning systems. They addressed the problem by investigating the factors that affects the usage of these technologies amongst students. They adopted the Technology Acceptance Model (TAM) and collected data from 560 students from two distinctive universities while analyzing the obtained data with the Structural Equation Modelling (SEM). The study findings shows that Perceived Self-efficacy (SEM), Quality of System (QS) and Facilitating Conditions (FC) were found to be significant factors in hindering the acceptance of learning systems. The study utilized just one model which it has been reported by Scherer et al. (2018) that integrating two or more models produces a better result.

2.2 Summary of Related Research

The study reviewed numerous past literatures based on the factors that hinders the acceptance of web based learning system in the academic environment. Based on the review, it was found that most studies adopted the Technological Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) while some studies integrated the two models UTAUT and TAM. Meanwhile, carrying out the research based on just one model will come with some form of limitations as stated by Scherer et al. (2018) which can be a study gap. In addition, some studies limited it coverage on just one school and one web based learning system which in turn could have non qualitative result which is also another study gap. To get a better result there is need to collect data from different sources and diversity as stated by Alharbi and Drew (2014). With regards to the aforementioned gaps based on previous literatures this study integrated UTAUT and TAM. And collected data from different sources in order to get a true and precise result in the end.

CHAPTER 3

THEORETICAL FRAME WORK

This part of the study discussed the research quality models for the effective adoption of web based technologies for electronic learning used in schools of higher education. Additionally, this part of the study also explored the services of web based technologies for e-learning that are presently trending in schools of higher education.

3.1 Perceived Ease of Usage

The idea of percieve ease of usage is vital, and it’s eccentric to building of web based learning systems and its explanation is separated from the contrast same as to the complexed one. The defination of multi-faceted nature regards distresses a wide ranging framework though ease of use is a round development. Among others, affirmed the similitudes between these ideas (Barnard et al., 2013).

To purchasers, two things rings a bell when the word ease is used, they are item and administration. An approach to decide if an item or administration is simple or convinent relies upon time and exertion. An item or administration is thought to be simple when it spares time for a user. Then again, an item or administration is thought to be simple when it brings down the psychological, enthusiastic and physical weights for a user. Analysts have inspected the simple of an item or administration by five measurements including time, put, obtaining, use, and execution. In any case, trusted that simple in getting to technology isn't identified with goal to use technology, and simple being used is like ease of use in TAM.

3.2 Perceived Usefulness

This alludes to the unmistakable attributes which could make a user of an application well disposed in which show’s up on the application’s interface (Gong et al. 2004). Versatile learning apps ought to be used to accomplish palatable results through giving careful consideration to the useful and non-practical necessities keeping in mind the end goal to upgrade ease of use. The user interface ought not be excessively entangled to such an extent that it's troublesome, making it impossible to work without preparing, the user interface ought to be cordial and simple to use. Counting an assistance menu on the interface or an initial visit

road map can likewise be helpful to the new users. Usability is additionally influenced by different reasons, for example, constrained memory, poor display determination, size of the screen. Ease of use is a measure of more than basic ease of use; it alludes to shoppers' subjective encounters after utilizing an application. Ease of use additionally catches more quantifiable perspectives, for example, regardless of whether users, in utilizing the application, are really ready to achieve what they set out to accomplish. In e-learning applications, this second viewpoint is particularly significant. It is conceivable to evaluate how much an individual has learned using an E-learning application, and this appraisal uncovers data with respect to the adequacy and proficiency of the application.

An appealing interface of users could empower an enthusiasm of users. It's vital for web based technological learning applications that represents the accompanying highlights to be specific; allure, ease of usage, learnability and satisfation by users. It's crucial for engineers to mull over the users when outlining the interface and in-collaborate unique user prerequisites that might be required for instance in-participating some brail capacities to provide food for dazzle understudies. Strong frameworks of high caliber will pick up a more extensive acknowledgment level and consistency on various m-learning stages ought to be kept up.

3.3 Use for Supplementary Learning

Materials used for learning are tangible medium for supporting student learning. High quality learning supplements are based on standards and frameworks which determines how well it can be used and how important it is to the students (McCutcheon et al. 2015). Issues policy and education planners must put into consideration the productivity with respect to outcome, selection, the targeted user in order to be able to meet their basic need. Education planners also need to ensure that relevant professional development for teachers is in place, and that supervisors support teachers' integration of new practices. Using supplemental learning tools could let the lecture hall more appealing and inspiring if this tools are appropriately designated at the instance of preparing for classes. Once a class teacher could determine what type of learning material to utilize in classes, then it should be significant to deliberate its relevance and suitability so as to attain the projected goals.

3.4 System Interactivity

A couple of analysts have offered rules for planning in fact intelligent Web-based learning capacities (French, 1999) contend that many Web pages have worked in intelligence, even without collaboration with different students or teachers for example, input frames and web searching tools. At the following level of intuitiveness them rundown such instruments as email, notice sheets, and chat places set up together a rundown of association modes that incorporates single string non concurrent exchange discussions, strung announcement loads up, constant synchronous chatrooms, and email (Trumpy et al., 2015) did not examine inserted intelligence in Web frameworks. A few investigations have tended to intelligence in business sites, and have revealed information that could be valuable for separate learning examination and plan. Arnab et al. (2015), in their gauge examination of business sites' intelligence, characterized intuitiveness as the degree to which the communicator and group of onlookers react to—or will encourage—each other's correspondence needs.

- **Playfulness:** estimated by the nearness of such interest exciting gadgets as Question and Answers configurations and amusements.
- **Choice:** estimated by the quantity of choices for shading, speed, dialect, and other non-instructive viewpoints.
- **Connectedness:** estimated by the nearness of data about the item, organization, outsiders, and other substance important to guests.
- **Information gathering:** estimated by the nearness of such checking systems as enlistment structures and counters.
- **Reciprocal correspondence:** estimated by the nearness of reaction components, including the Webmaster's email address, overviews, and buy orders. The essential distinction amongst Ha and James' investigation and those that went before it is that the previous talked about intuitiveness inside the particular setting of sites, and in this way may be reflected as giving more helpful intelligence procedures in that unique situation. In another article concentrated on business sites, Linnenluecke (2017) consider intuitiveness as a compelling component in enhancing commercial site quality. They depict intuitiveness in a Web setting as a multidimensional idea

including five of 23 conceivable intelligent capacities: client bolster (e.g., online issue diagnostics, input), showcasing research (e.g., webpage reviews), individual decision partners (e.g., catchphrase look, merchant locators), publicizing/advancements/reputation (e.g., online request, sweepstakes), and excitement (e.g., recreations). Their thorough rundown incorporates all conceivable intelligent capacities. A few, for example, arrange status following are exceptionally business and shopper situated; in a learning setting, this specific capacity could be utilized with the end goal of class-status, task finish, or inquiries to-be-addressed following (the last one tracks understudies' inquiries to be reacted to by the educator/instructing associate.

3.5 User Satisfaction

Feedback from a user of a particular system is essential for the achievement of any e learning usage (Lwoga, 2014). Criticism acquired from partners will encourage organizations, and additionally the framework suppliers to surveying advancement and negative input will empower them to know which regions still should be chipped away at, and also know how fulfilled the client is. To improve conduct goal to utilize it is additionally basic to study clients and comprehend what precisely they anticipate that the framework will do and by so doing client fulfillment is upgraded when conditions are met.

3.6 Information Quality

The accessibility of solid, exact, and state-of-the-art data is vital for any basic leadership. Contrasted with ideas like information honesty and security which have been considered in detail since the presentation of social database innovation, the thought of data quality is moderately youthful and its general conceptualization and in addition the techniques created to survey and enhance data quality are extremely various (Calisir et al., 2014). Data quality demonstrates a consistently developing enthusiasm among experts and specialists as data is progressively observed as the most significant resource of an association and managing data quality issues can be extremely costly and tedious. A further reason which drives the work on data quality is the expanding interconnectivity among data makers, primarily impelled through the advancement of the Internet and web based data frameworks.

A second gathering of creators are examining data quality in circumstances where the data suppliers are self-governing and can't be straightforwardly overseen as in a hierarchical setting. The issue of guaranteeing data quality with regards to electronic data frameworks falls into this classification, since the Web is an open data space comprising of data from self-ruling data suppliers. Because of the absence of reasonability, the creators centered around evaluating data quality so as to help data buyers in their choice whether to utilize certain data or data hotspots for achieving particular undertakings.

3.7 System Quality

One of the most significant definition of quality of service is the definition which explains quality of system as a relationship of reliability, response, content quality, and security. But again we can say that the major meanings of nature of administration have concentrated chiefly on clients impression of and their fulfillment with the administrations being advertised. nature of administration can likewise be viewed as what a client figure a specialist co-op should offer as opposed to what they are as of now advertising. Another meaning of nature of administration is that it is a client evaluation of the general predominance of the administration. The magnificence of administrations being given to clients can influence the level of acknowledgment of new innovation. demonstrated that understudies' view of online help benefit quality may be considered as a key factor influencing their social goal towards the acknowledgment of e-learning (Jensen et al., 2016).

3.8 Acceptance Theory for Web Based Learning Systems

In the past many investigations have been conducted to comprehend the acceptance of technology by individuals in general, moreover the TAM and UTAUT models are the most widely utilized models for this purpose. Meanwhile the study integrated the two models UTAUT and TAM because carrying out the research based on just one model could come with some form of limitations as stated by Scherer et al. (2018).

3.8.1 Technology Acceptance Model (TAM)

Davies (1989) developed the Technology Acceptance Model (TAM) primarily to assist researchers to fully understand the findings behind accepting new technology, since then the

model has been adopted in many studies for investigations relating technology acceptance. The model consists of six constructs but in essence the Perceived Ease of Usage (PEU) and Perceived Usefulness (PU) are the two most vital and forms the model backbone. The PU can be defined as the level of how an individual thinks a new technology is of importance to him while PEU can be defined as how an individual sees the forbearance for the use a new technology. The following Figure 3.1 depicts the Technology Acceptance Model (TAM) .

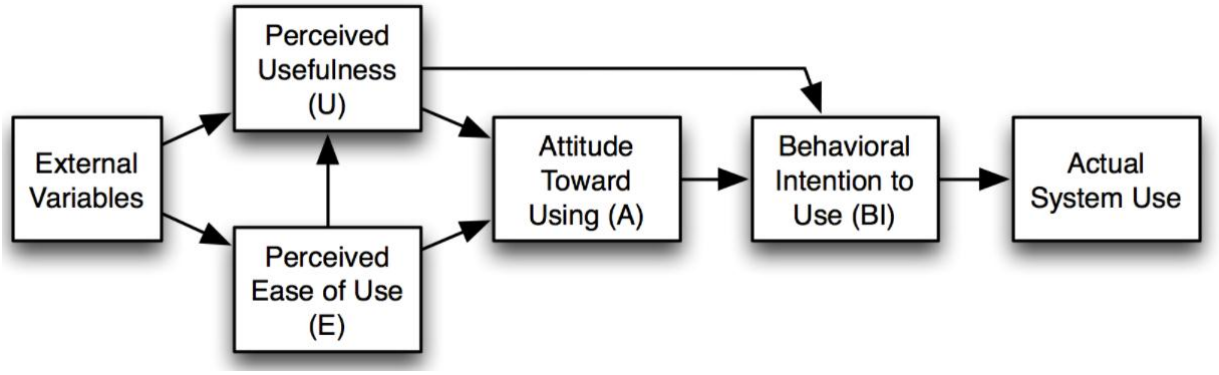

Figure 3.1: Technology Acceptance Model (TAM) (Davis, 1989)

3.8.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) is similar to the TAM model and was developed by Venkatesh et al. (2003). The UTAUT was a product of the TAM but differs in the sense that the UTAUT tries to define the level of acceptance and adoption of new technological use amongst individuals. In addition, the theory attempts to evaluate if an individual got the capacity to accept new technology while calculating the individual ability to manage the new technological systems. Meanwhile, the UTAUT consists four vital constructs namely Social Influence (SI), Facilitating Conditions (FC) Performance Expectancy (PE) and Effort Expectancy (EE). The following Figure 3.2 depicts the Unified Theory of Acceptance and Use of Technology (UTAUT) for further clarity of the model.

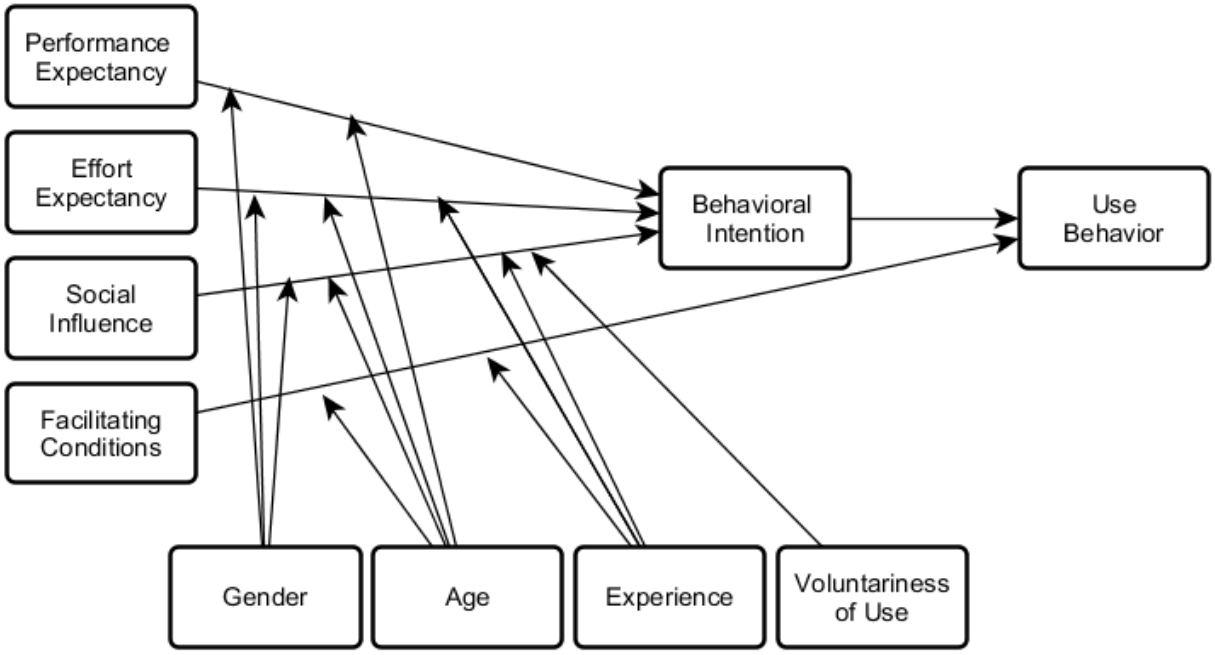

Figure 3.2: UTAUT (Venkatesh et al., 2003)

3.9 Summary of Theoretical Framework

In order to achieve the study aim, there are factors that hinders adoption of web based learning technology which would affect the success of web based learning technology in the long run, and in addition little investigation has been carried out to understand the role students, social and institutional factors plays in the adoption of web based learning systems most especially in North Cyprus.

Therefore, the study integrated two models to investigates factors that affects the adoption of web based learning systems, the models are Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT), these models are used to determine the acceptance of technological adoption by users using some series of factors as its variables and the variables include dependent and independent (Abbas et al. 2018).

CHAPTER 4

METHODOLOGY

The adopted methodology of the study was discussed in this section, the research model that was adopted during data analysis by the examiner. The research setting, participants, demographic analysis, data collection tool, data analysis as well as reliability test were all explained.

4.1 Research Model

Thus, the study is focused on investigating the acceptance or adoption of web based technological system use by students to support learning. In order to fully investigate the association that connects the dependent variables and independent variables in the research, the following Figure 4.1 depicts the study model which was proposed and used for this study. The proposed research model is integrated to contain the essential attributes from a trio technological models termed as; Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT) in order to fully understand whether this new technology is well adopted by students. Apparently, the researcher is motivated to carry out this research because previous research done on the subject has some form of limitations or the other.

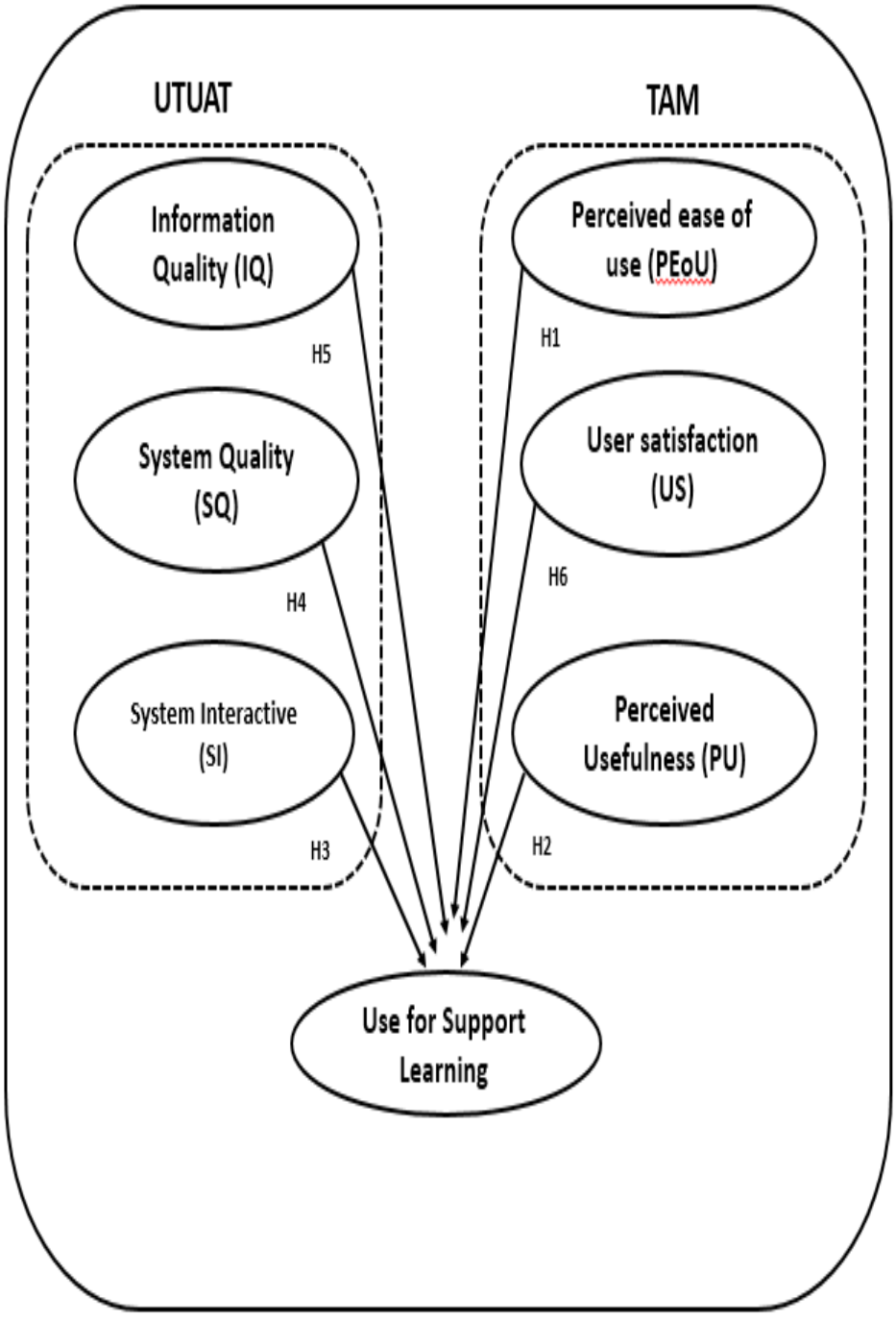

Figure 4.1: Research model

4.2 Research Setting

The questionnaire used in this study was established by the researcher which is in accordance to the questions from the previous study as related to the research the study was carried out in six different universities in North Cyprus with no special attachments as to faculties or departments of respondents.

4.3 Research Participants

The survey of the study focused on students from different faculties who are at the moment enrolled in six universities in North Cyprus. Universities were chosen to enable the researcher get concrete student opinions across diverse areas in North Cyprus, another criteria was the accessibility of the university to the researcher. This research is to ascertain students acceptance level, hence students was selected as research participants. Through interactions and official university websites, it was discovered that the institutions are adopting WBLS. The total student population in the six different universities in North Cyprus is 92900 in 2018. At 5% margin of error and 95% confidence interval, the expectation was a normally distributed response (50%). It means that 383 is the stipulated minimum sample size but this research made use of 700 valid responses and were statistically analysed. The sample size is enough for analysis with the Convenience method utilised as sampling method .

The student populations for the participant universities are 27000, 18000, 18000, 18000, 9200 and 2700 respectively. Apparently, the departments were distinctively divided into two categories, STEM and others. STEM representing students studying degrees related to Technology, Science, Engineering and Mathematics. The reason why STEM was chosen was because the researcher was interested in finding out if there was any difference in knowledge and acceptance rates between IT and science students versus other non-scientific students who are not exposed to technology a lot. The participants of the survey were students and they were chosen randomly without special considerations on faculty or department. The questions were filled voluntarily by the participants and the total number of participants in the study were 700 in numbers which are all students, 345 participants were made up of undergraduate students while 355 participants were made up of the postgraduate students (Master and PhD). The participated students all are from various universities situated in the Northern part of Cyprus.

The questionnaire is made up of 40 questions which were designed to access the participant's level intention of use. A 5 Likert scale was adopted for the participants to answer from, the items were labelled as "strongly disagree" (1 point), "disagree" (2 point), "Neutral" (3 point), "agree" (4 point), and "strongly agree" (5 point). The participant items that were selected, were reviewed centered upon their comments and recommendations. In the end, the reliability of the questionnaire was determined using the most preferred method called the Cronbach's Alpha.

4.3.1 Demographic analysis

Table 4.1 below describes the demographic data of participants. There were 404 male participants (55.3%) and 296 female participants (44.7%). The age group which had the highest number of participants was 17-22 years which had 397 participants followed by the 23-27 age group which had 220 participants and the last group had 83 participants and this was the 28 years and above age group. Most participants were masters students as seen by the highest number of participants which were 316, followed by undergraduate students which were 296, while the fewest amount of participants where PhD students which had 59 participants. 54% of the students are studying in the STEM departments and 46% of the students are studying in departments not relating to the STEM. Furthermore, participants were asked to tell us more about their e-learning experience and results showed that 56.4% of the students always use e-learning 23.3% of participants frequently use e-learning, while 4.1% have never used e-learning before.

Table 4.1: Demographic data of research participant

Demographic	Number	Percentage
Gender:		
Male	404	57.7%
Female	296	42.3%
Total	700	100%
Age Group:		
17-22	412	58.9%
23-27	206	29.4%
28 & above	82	11.7%
Total	700	100%
Education Level:		
Undergraduate	345	49.3%
Masters	296	42.5%
PhD	59	8.4%
Department:		
STEM	378	54%
Others	322	46%
Experience:		
I never used LMS	82	4.1%
I rarely use LMS	10	1.7%
I occasionally use LMS	184	14.4%
I frequently use LMS	43	23.3%
I always use LMS	381	56.4%

4.4 Data Collection Tool

The adopted process of collecting data for this study was a paper based questionnaire form, the questionaires was conveyed to participants who are currently students and enrolled at 6

universities in North Cyprus. The questionnaire consist of two distinct sections, the first section contains the demographic information and the last part included 7 dimensions related to the research model namely; Perceived Usefulness having 6 questions, Percived Ease of Usage having 6 questions, System Quality having 7 questions, System Interactivity having 3 questions, Quality of Information having 5 questions, Satisfaction by User having 3 questions, Use for Supplimentary Learning having 4 questions, (see Appendix 1).

4.4.1 Reliability

The importance of conducting a reliability test was to asertain the reliability of the results obtained by the questionnaire. in this study the research conducted a reliability test for the results using SPSS. The Cronbach alpha reliabilities of each dimension was calculated and results ranked from the highest to the lowest are as follows; Percive ease of use 0.880, user satisfaction 0.803, Perceived Usefulness 0.779, information quality had 0.872, use for support learning 0.710, information quality 0.872, system quality 0.802. the test showed percived ease of use to have the lowest, while user for support learning had the highest Cronbach Alpha. According to previous researchers (George and Mallery 2003), the researchers described the results of Cronbach alpha in that, if it is 0.90and above it is excellent, 0.80 and above is good, between 0.70 could be accepted, between 0.60 could be doubtful, between 0.50 is very poor and below 0.50 is rejected. Cronbach Alpha reliability of factors was shown to be within acceptable ranges for data analysis.

Table 4.2: Test of reliability result

Construct	Items	Cronbach Alpha
Percived Ease of use	6	0.880
User satisfaction	3	0.803
Percived Usefulness	6	0.779
System interaction	3	0.727
Use for support learning	4	0.710
İnformation Quality	5	0.872
System quality	7	0.802
Total	**34**	**0.80**

Table 4.3: Questionaire sources

Construct	Number questions	References
Percived Ease of Use	6	Gong et al. (2004)
User Satisfaction	3	Lwoga (2014)
Percived Usefulness	6	Barnard et al. (2013)
System Interaction	3	French (1999)
Use for Support Learning	4	McCutcheon et al. (2015)
İnformation Quality	5	Calisir et al. (2014)
System Quality	7	Jensen et al. (2016)
Total	**34**	

4.5 Analysis of Data

The analysis and interpretation of the data was conducted utilizing the version 21.0 of SPSS, although the data was sourced from the questionnaire. Frequency & percentage, the Cronbach alpha was used in the calculation of the reliability of the survey. Furthermore, a descriptive statistics and the Pearson correlation was conducted on the data.

4.6 Procedure

The study was conducted to comprehend the student's intention to the use of web based learning management systems, the success of this study depends majorly on the active participation of the participants, who in this case were students from various North Cyprus universities. The research conducted a review of past literatures in the subject area to fully understand the subject matter. After which TAM and UTUAT models were selected for the study. Then a questionnaire was adopted based on the integrated two models to achieve the desired study aim and objectives. The questionnaires were distributed but to get a high amount of participation and a unified sampling method the researcher targeted and obtained 700 questionnaires within 3month from these university students. Another important factor for the research was the analytical methods of the survey to get the results, and for this research the researcher made use of the SPSS analytical software to which the data analysis were discussed in details. After which a resulting report of the analysis was drafted.

Table 4.4: Thesis schedule

Proceedure	**Duration (weeks)**
Writting of proposal	4
Proposal submission	2
Questionair design	1
Literature review	7
Sample data collection	3
Collected data analysis	8
Compiling last chapters	3
Submission of work to supervisor	2
Correction and ammendment of thesis	2
Total	**33 Weeks**

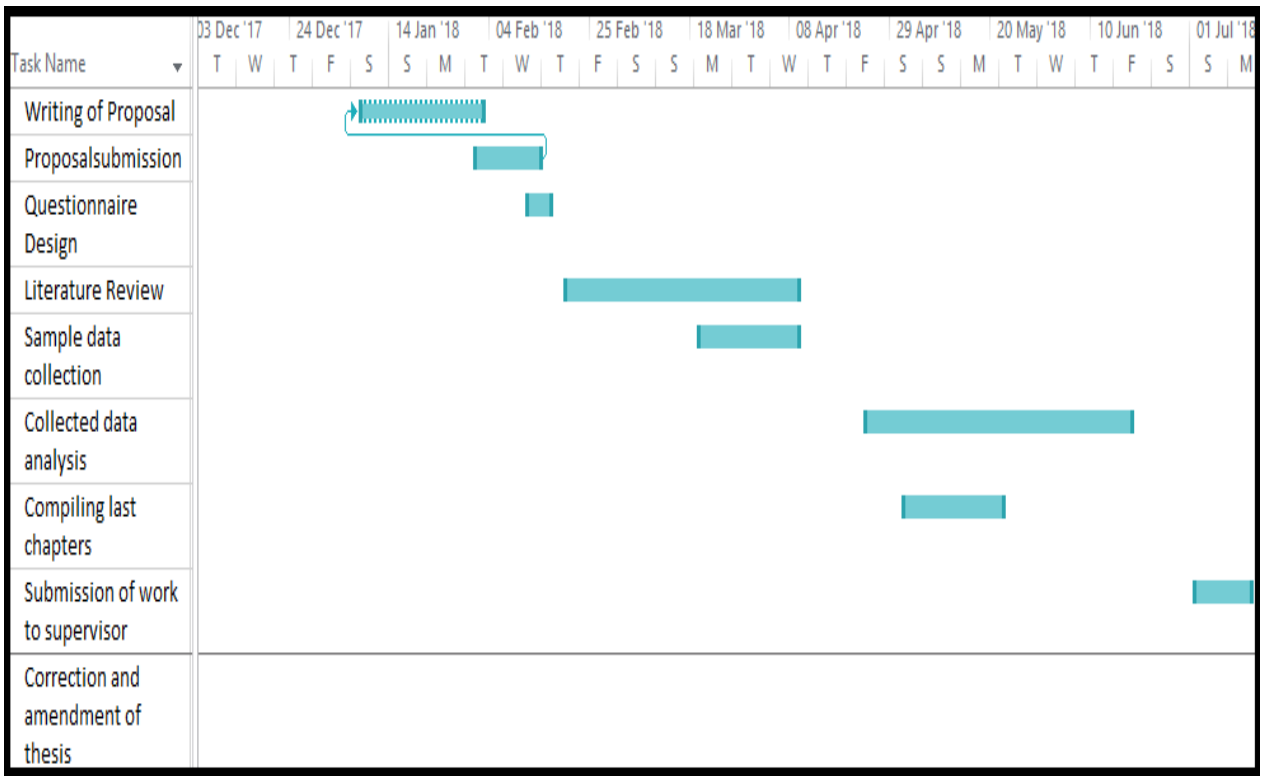

Figure 4.2: Study Gantt chart

CHAPTER 5
RESULTS AND DISCUSSION

This chapter makes a compilation of the data analysis and the result of the study is shown with the description and explanation.

5.1 The Relationship between Perceived Ease of Usage and Use for Support Learning in WBLS

H1: Perceived Ease of Usage has a positive effect on Use for Support Learning

In pursuance of getting the relationship that exists between perceived ease of usage and usage for support learning, analysis of Pearson correlation was conducted, this relationship depicts the H1 hypothesis. The Table 5.1, shows the results of findings as regards the H1 hypothesis, the correlation support learning and PEU showed that there exists a strong relationship between both variables, which was significant at p=0.000 and r=0.267 meaning there exists a relationship between PEU and Use for Support Learning in WBLS. Apparently the below scatter plot in figure 5.1 also showed the strong relationship between both variables. An investigation led by Tarhini et al (2013) have a similar findings, concluding that a positive relationship exists between perceived ease of usage and use for support learning when adopting a web based learning system. Stressing that it is the most vital factor.

Table 5.1 Perceived ease of usage

		Use for Support Learning	**Perceived Ease of Usage**
Use For Support Learning	Pears. Corr.	1	.267**
	Significant (2-tail)		.000
	N	700	700
Perceived Ease Of Use	Pears. Corr.	.267**	1
	Significant (2-tail)	.000	
	N	700	700

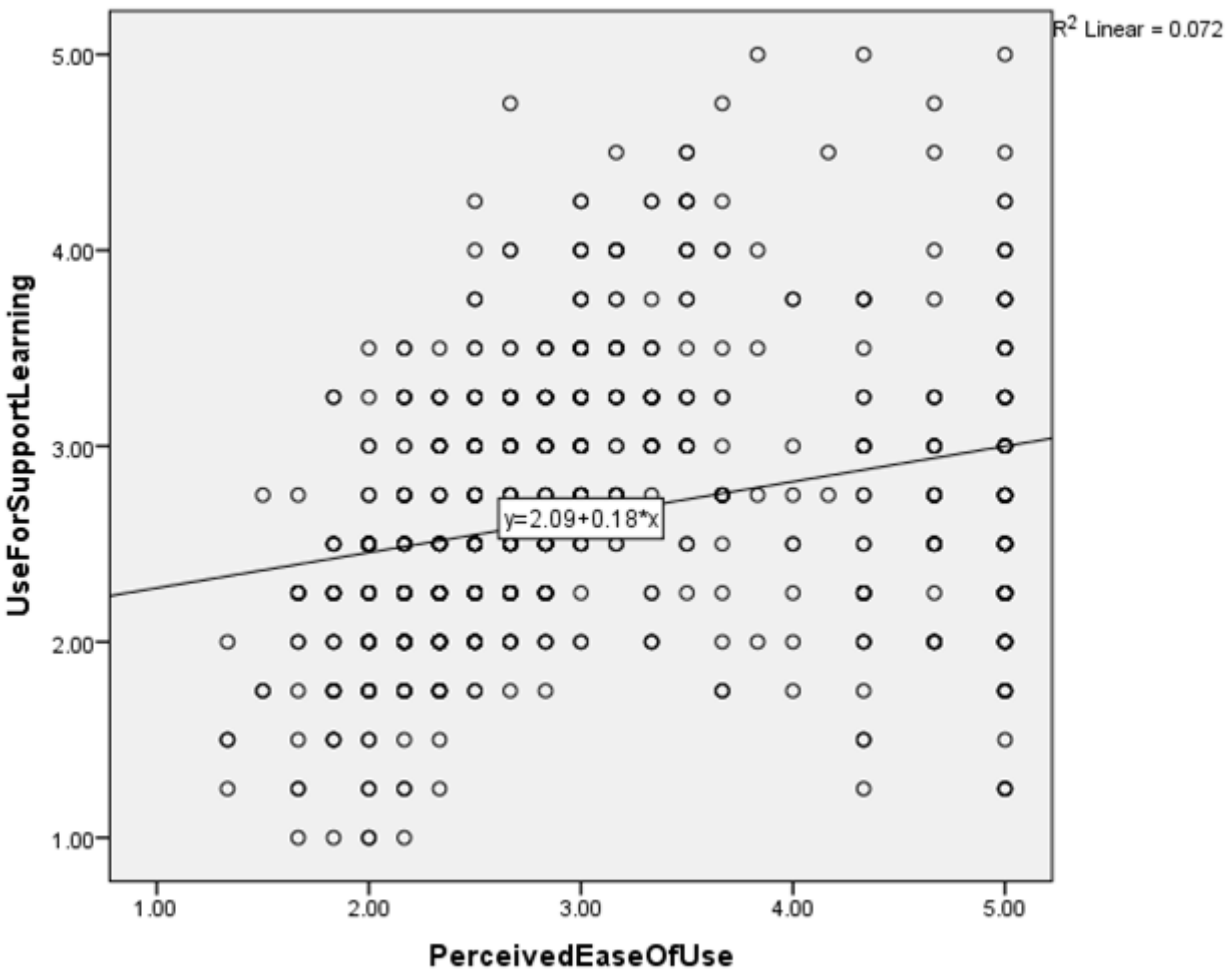

Figure 5.1: Perceived ease of use

5.2 The Relationship between Perceived Usefulness and Use for Support Learning in WBLS

H2: Perceived Usefulness has a positive effect on Use for Support Learning

In pursuance of getting the relationship that exists between perceived usefulness and use for support learning, an analysis of Pearson correlation was conducted, this relationship depicts the H2 hypothesis. The table 5.2, shows the results of findings as regards the second hypothesis, which states that there is a strong positive relationship between Perceived Usefulness and Use for Support Learning in WBLS. The correlation support learning and perceived usefulness showed that there exists a strong relationship between both variables, which was significant at p=0.000 and r=0.302 meaning there a relationship between Perceived Usefulness and Use for Support Learning in WBLS. Apparently the scatter plot in figure 5.1 also showed the strong relationship between both variables. Calisir et al. (2014) and Jung et al. (2008) found a similar result stating that there is a strong positive relationship between perceived usefulness and use for support learning when adopting web based learning systems.

Table 5.2: Perceived usefulness

		Use for Support Learning	**Perceived Usefulness**
Use For Support Learning	Pears. Corr.	1	.302**
	Significant (2-tail)		.000
	N	700	700
Perceived Usefulness	Pears. Corr.	.302**	1
	Significant (2-tail)	.000	
	N	700	700

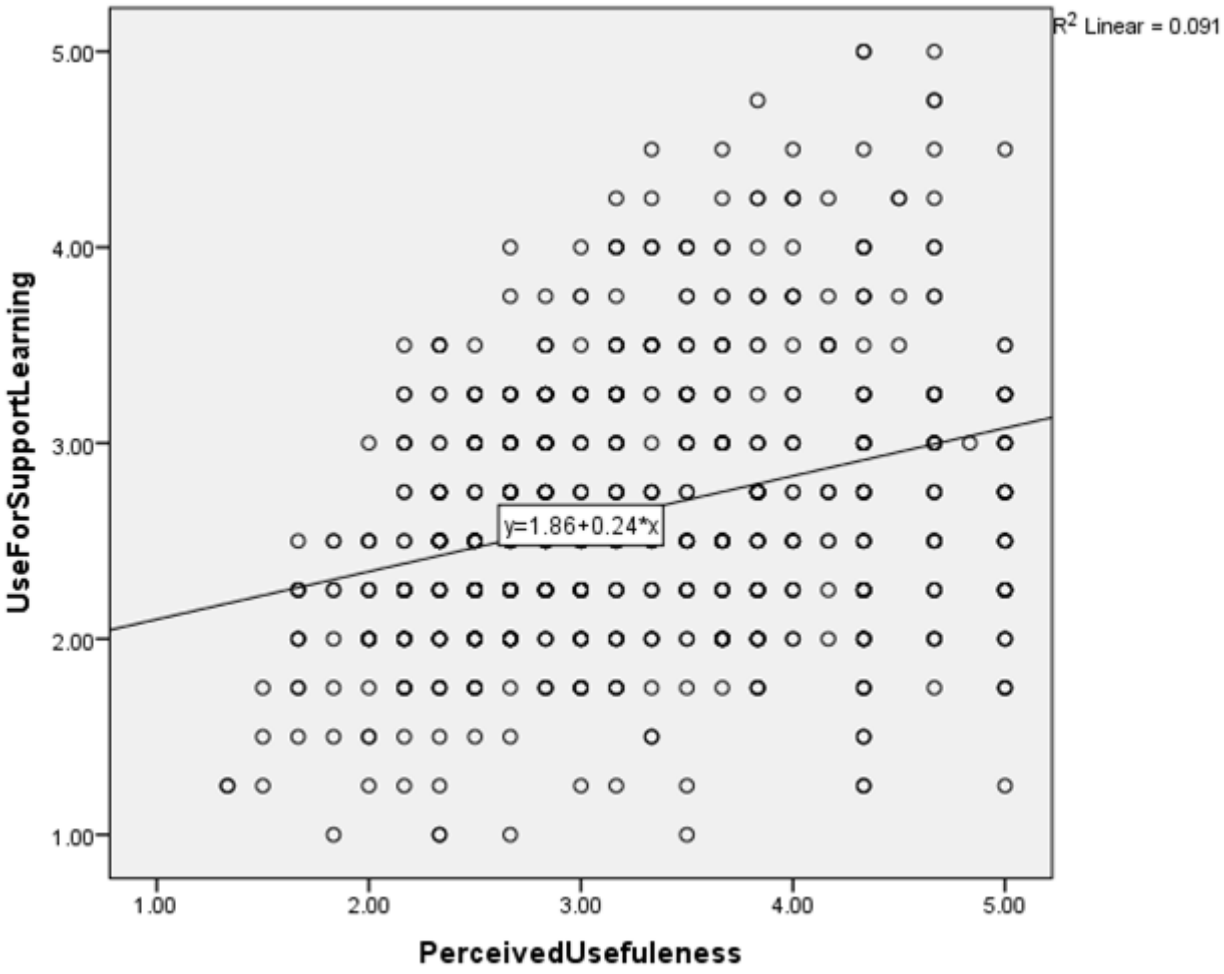

Figure 5.2: Perceived usefulness

5.3 The Relationship between System Interaction and Use for Support Learning in WBLS

H3: System Interaction has a positive effect on Use for Support Learning

In pursuance of getting the relationship that exists between the system interaction and use for support learning, a Pearson correlation analysis was conducted, this relationship depicts the H3 hypothesis. The table 5.3, shows the results of findings as regards the third hypothesis, which states that there exists a relationship between system interaction and Use for Support Learning in WBLS. The correlation support learning and system interaction showed that there is a strong relationship between both variables, which was significant at P=0.036 and r=0.079 meaning that there exists a relationship between System Interaction and Use for Support Learning in WBLS. Apparently the scatter plot in figure 5.3 also showed the correlation result. A similar result was found by Liao et al. (2004) based on a study conducted for investigating student's adoption of web based learning systems. They stated that system interaction is a significant variable that affect the adoption of web based learning system.

Table 5.3: System interaction

		Use for Support Learning	**System Interaction**
Use For Support Learning	Pears. Corr.	1	.079*
	Significant (2-tail)		.036
	N	700	700
System Interaction	Pears. Corr.	.079*	1
	Significant (2-tail)	.036	
	N	700	700

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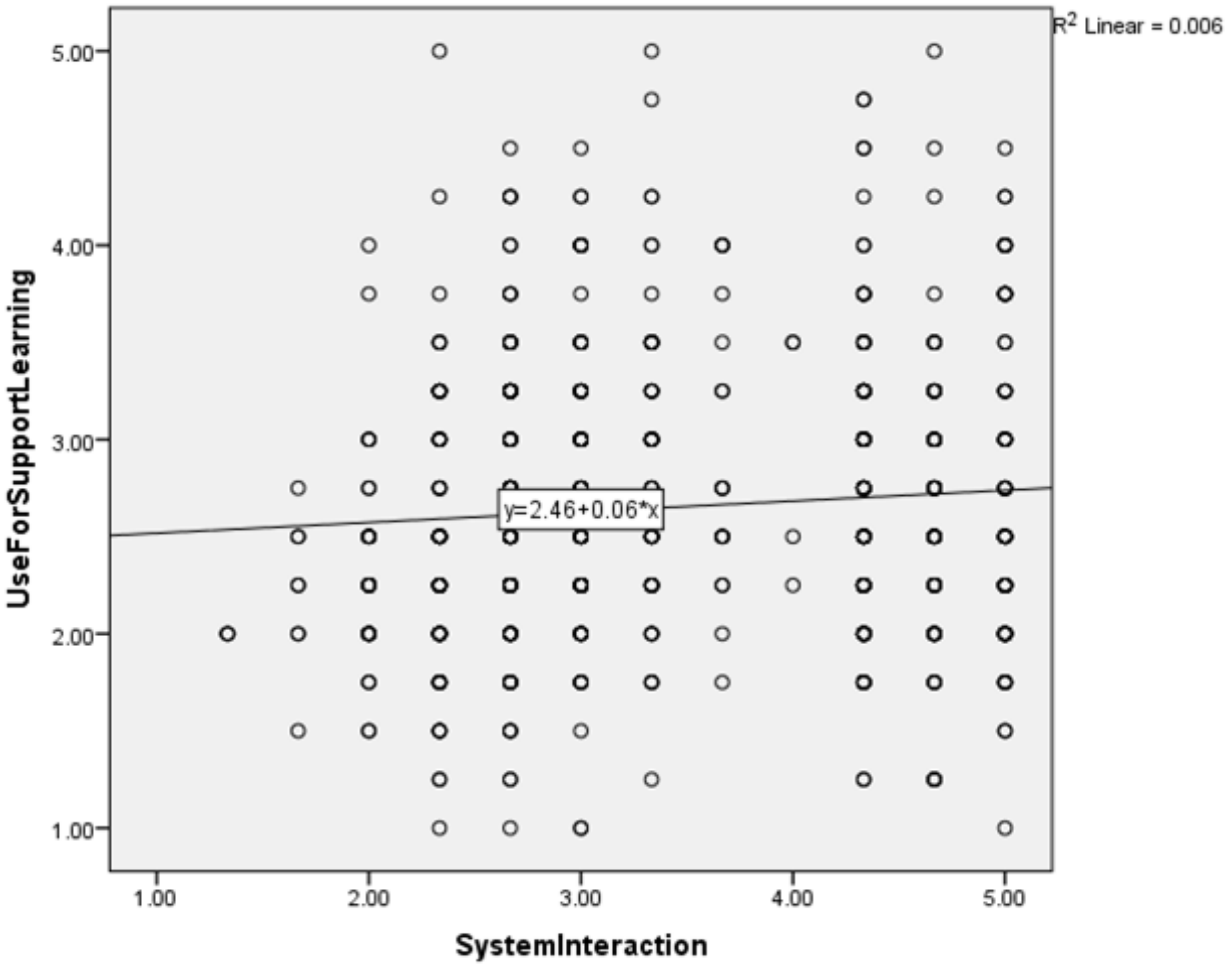

Figure 5.3: System interaction

5.4 The Relationship between Quality of System and Use for Support Learning in WBLS

H4: Quality of System has a positive effect on Use for Support Learning

In pursuance of obtaining the relationship that exists between Quality of System and Use for Support Learning. An analysis of Pearson correlation was conducted as seen in the table 5.4, and the figure 5.4. It can be observed that there exists a strong relationship between both variables, which was significant at p=0.000 and r=0.884. The researcher therefore concludes that a significant increase in system quality would in turn lead to a significant increase in students Use for Support Learning. Similar finding was found by Fathema et al. (2015) and Lwoga (2014) stating the existence of strong relationship in between quality of system and use for support learning in web based learning system while stressing that significant increase in system quality would in turn lead to a significant increase in students Use for Support Learning.

Table 5.4: System quality

		Use for Support Learning	**System Quality**
Use For Support Learning	Pears. Corr.	1	.884**
	Significant (2-tail)		.000
	N	700	700
System Quality	Pears. Corr.	.884**	1
	Significant (2-tail)	.000	
	N	700	700

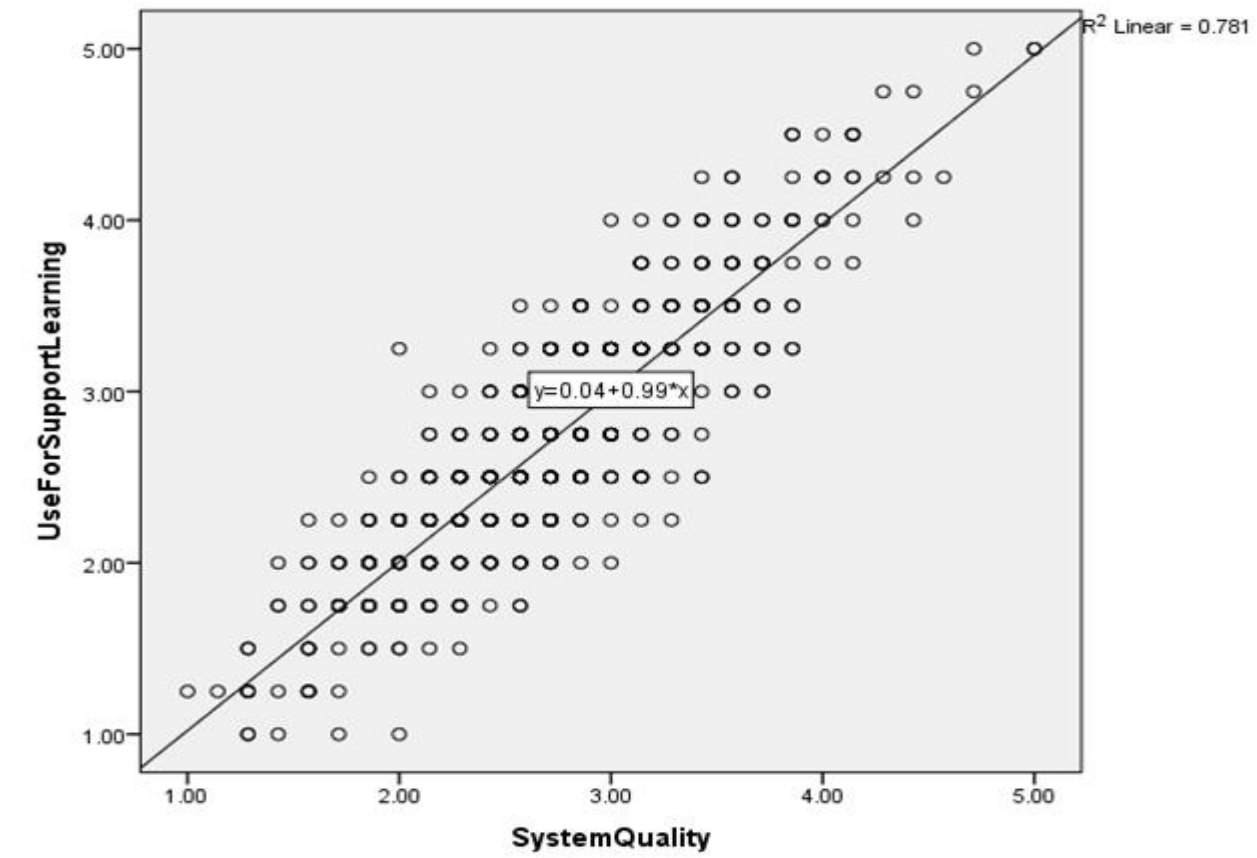

Figure 5.4: System quality

5.5 The relationship between Information Quality and Use for Support Learning in WBLS

H5: Information Quality has a positive effect on Use for Support Learning

In pursuance of obtaining the relationship that exists between Information Quality and Use for Support Learning. An analysis of Pearson correlation was conducted as seen in the table 5.5, and the figure 5.5. It can be observed that there is a strong relationship between both variables, which was significant at p=0.000 and r=0.249. The researcher therefore concludes that a significant increase in information quality would in turn lead to a significant increase in students Use for Support Learning. A study conducted by Al-Adwanet al. (2013) have a similar findings, concluded that a positive relationship exists between information quality and use for support learning when adopting a web based learning system.

Table 5.5: Information quality

		Use For Support Learning	**Information Quality**
Use For Support Learning	Pears. Corr.	1	.249**
	Significant (2-tail)		.000
	N	700	700
Information Quality	Pears. Corr.	.249**	1
	Significant (2-tail)	.000	
	N	700	700

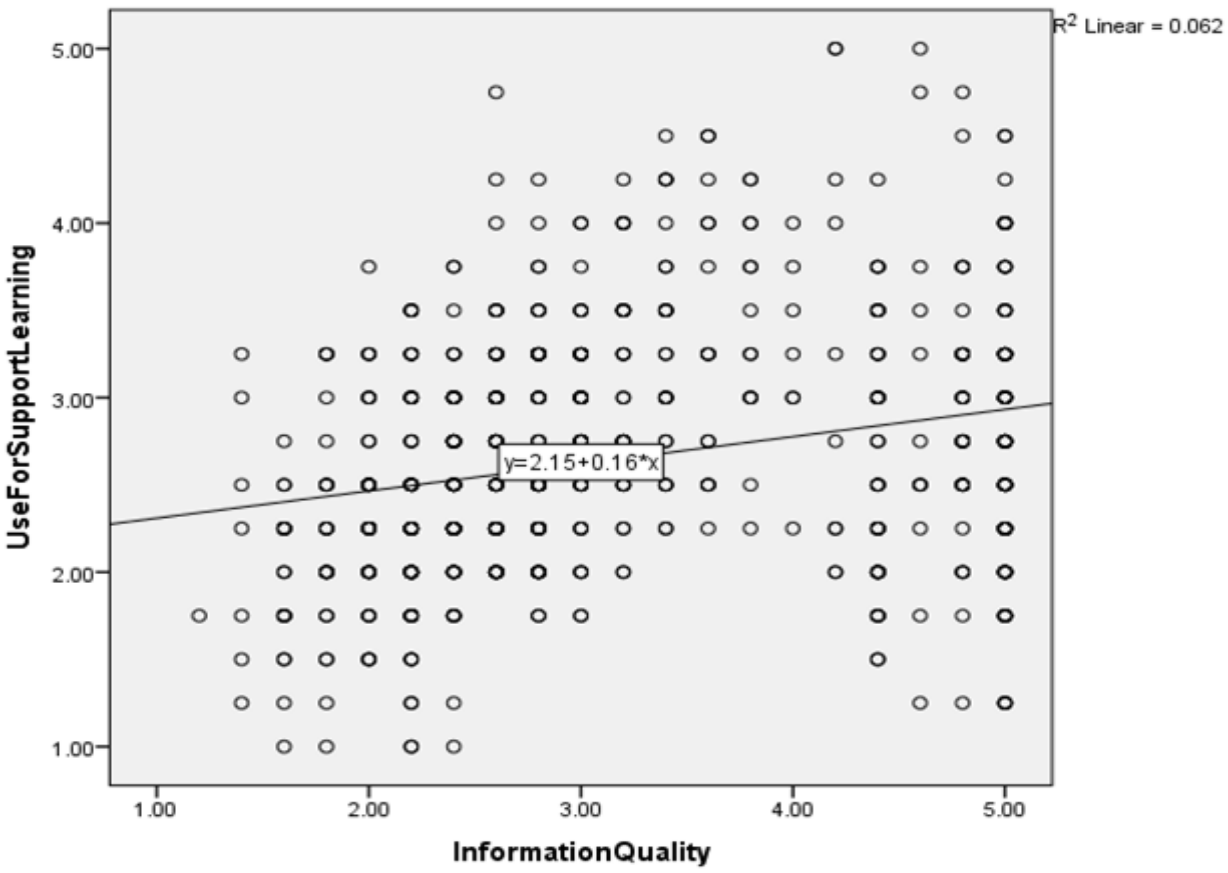

Figure 5.5: Information quality

5.6 The relationship between User Satisfaction and Use for Support Learning in WBLS

H6: User Satisfaction has a negative effect on Use for Support Learning

In pursuance of obtaining the relationship that exists between user satisfaction and Use for Support Learning, and to get the solution to our suggested eight hypothesis, the Pearson correlation analysis was also conducted for both variables. The researchers observation was that there exists a very weak relationship between both variables , this was not significant at p=0.667 and r=0.016 the relation was seen to be a negative relationship as suggested in the scatter plot representation of figure 5.6 This means that user satisfaction does not have a significant effect on the student's acceptance of WBLS. However, an investigation led by Tarhini et al (2013) have a different findings, concluding that a positive relationship exists between user satisfaction and use for support learning when adopting a web based learning system.

Table 5.6: User satisfaction

		Use for Support Learning	**User Satisfaction**
Use For Support Learning	Pears. Corr.	1	.16
	Significant (2-tail)		.667
	N	700	700
User Satisfaction	Pears. Corr.	.16	1
	Significant (2-tail)	.667	
	N	700	700

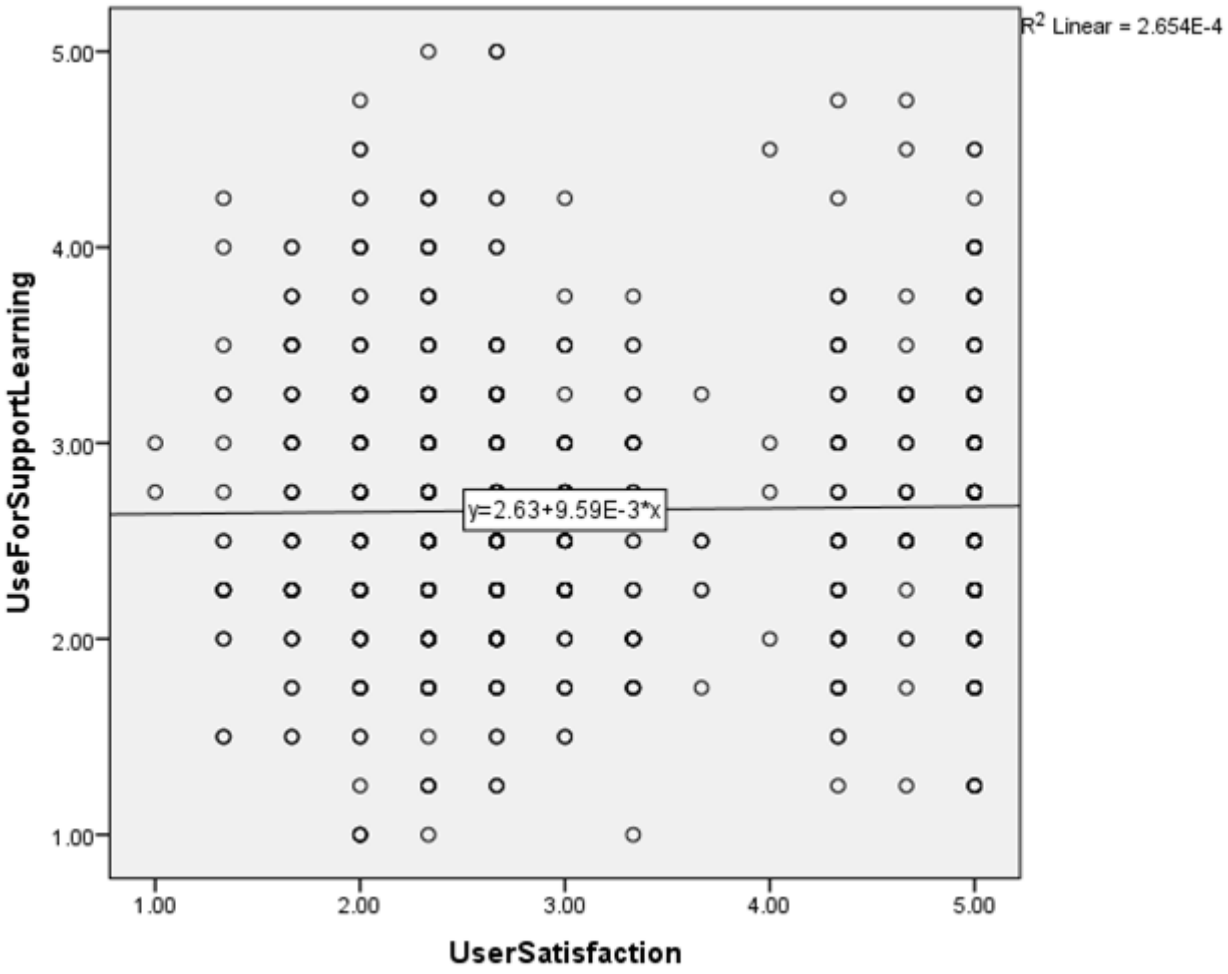

Figure 5.6: User satisfaction

5.7 Summarized Decisions

The following Table 5.7 shows the study findings in a tabular form with different descriptions such as the R value, correlation coefficient and their corresponding interpretations of either supportive or otherwise.

Table 5.7: Summary of results

Hypotheses	IV	DV	Supported	Correlation coefficient (+/-)	R value
H1	PEoU	USL	Yes	Weak +	0.267
H2	PU	USL	Yes	Weak +	0.302
H3	SI	USL	Yes	Weak +	0.079
H4	SQ	USL	Yes	Strong +	0.884
H5	IQ	USL	Yes	Weak +	0.249
H6	US	USL	No	Weak -	0.016

The Table 5.8 below provides an interpretation of the correlation coefficient of r which interprets the direction and strength of any given linear relationship between two constructs on scatterplot. Since the r value is at all times between -1 and +1. The following provides the values of the correlation r.

Table 5.8: Schober P, Boer C, Schwarte LA (2018). Correlation coefficients: Appropriate use and Interpretation. Pearson correlation coefficient Interpretation

R value	Explanation
-1	An ideal downhill [- negative] linear relationship
-.70	An ideal downhill [- negative] linear relationship
-.50	A moderate downhill [- negative] relationship
-.30	A weak downhill [- negative] linear relationship
0	No linear relationship
+.30	A weak uphill [+ positive] linear relationship
+.50	A moderate uphill [+ positive] relationship
+.70	A strong uphill [+ positive] linear relationship
+1	An ideal uphill [+ positive] linear relationship

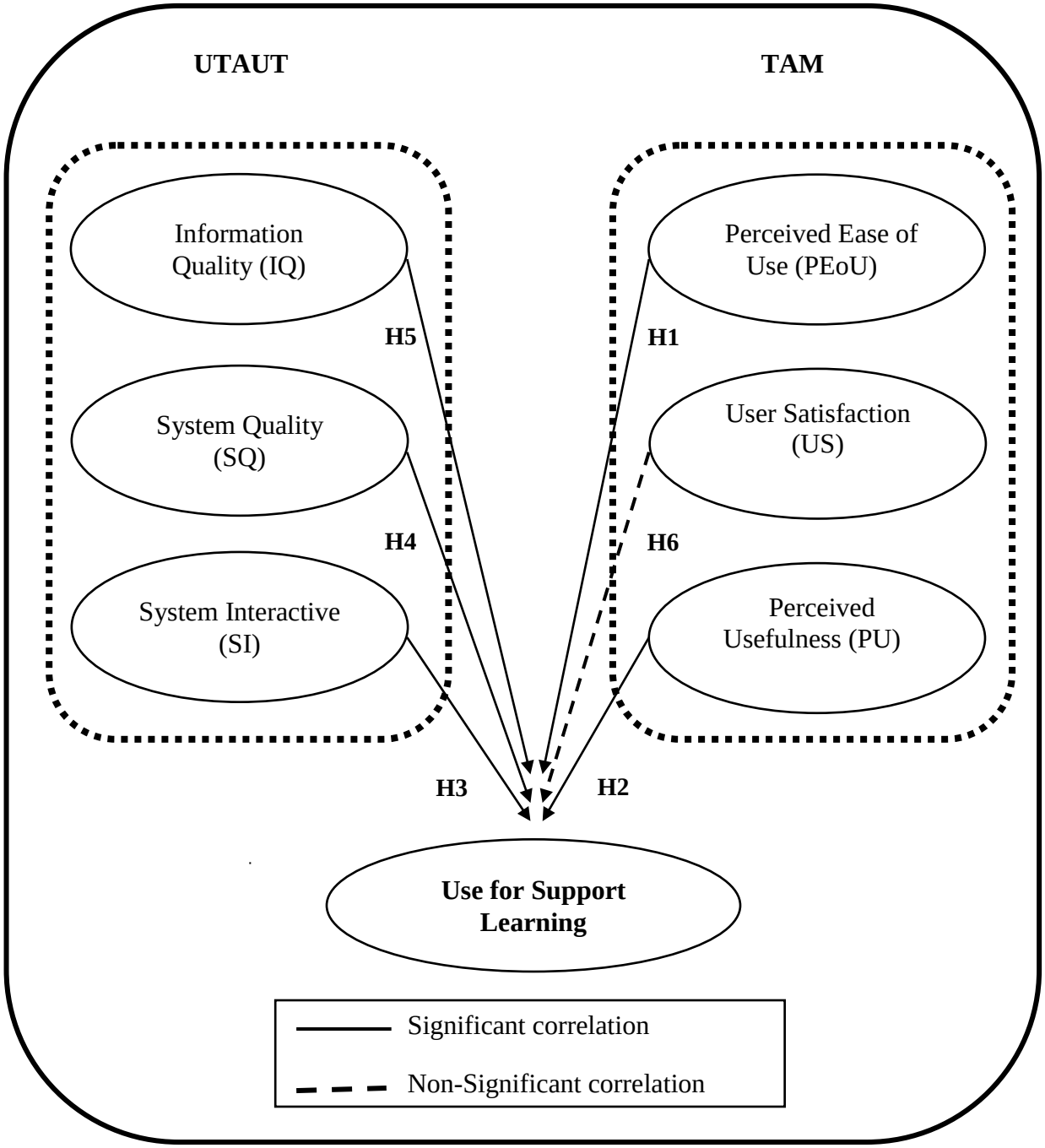

Figure 5.7: Integrated Model with findings and correlations

CHAPTER 6

CONCLUSIONS

For a general conclusion the researcher gives a general overview on the importance of the study judgements, with some recommendations and suggestions to improve on further study.

6.1 Conclusion

The research investigated the acceptance of web-based technological learning system use by university students to support learning in North Cyprus universities, with the help of a survey and the analysis of the survey data the results from the research has been able to prove the following:

- Significant association exists between the Use for Support Learning of the users of web based learning system and the factors which include the perceive ease of use, Use for Support Learning of the users of web based learning system and perceive usefulness, Use for Support Learning of the users of web based learning system and Information Quality, Use for Support Learning of the users of web based learning system and Quality of System, Use for Support Learning of the users of web based learning system and System Interaction of the program which is very important because the present generation of software users are always bent on knowing how easy it will be for them to use the software, while a non-significant association exist between Use for Support Learning of the users of web based learning system and User Satisfaction. Users always do not want to go for software that are not user friendly or are difficult to use. The system Quality, the User satisfaction, information quality, system interaction and perceive Usefulness.
- These factors must be taken into account as the person who is to use the software has to know how much support and knowledge he or she can obtain from the use of the software.
- Acceptance of a software can also be greatly affected by the user satisfaction in a very significant way such that the user already have some expectations as such if these expectations are not met, the acceptance level of the software will be affected.

- The results proved that almost all factors possess strong relationships with the Use for Support Learning of the students, this means that the student's acceptance to the web based technological learning system is greatly affected & influenced by almost all factors.
- The web based technological learning system though being a trending technology is a very important and useful one, as has been identified by the participants of the study, and there is highrate of acceptance of University Students in north Cyprus to its use.
- Individuals such as educators and instructors could benefit from the study findings, or anybody with interest in the subject area of this study. The study findings could also be beneficial to educational designers that are responsible for the adoption and development of web based systems.
- Furthermore we can conclude that the importance of this study has been to ascertain the importance of the variables that contributes to the students acceptance as each student possess different opinion as to the use of the program.

6.2 Recommendation

The purpose of the research is to investigate acceptance of web-based technological learning system use by university students to support learning, the point was to ascertain the significant issues or factors that would impact students acceptance to the WBLS software as such the research investigated the level at which the software is used to support learning and knowledge advancement. This made the researcher not to fully explore the possibilities of other larger communities, as well as go into details as to the kind of solutions that can be applicable to the challenges identified by the students.

With respect to the findings from this research the researcher makes the following recommendations.

- The education designers as well as educators must make considerations for the influencing factors as discussed in this research.
- Students should take advantage of the opportunity of using the WBLS as it will enhance and improve their study.

- Also it could be extended to other institutions as well. This data was collected in a cross sectional manner. Longitudinal studies might provide more clear vision of the overall picture.
- Awareness programs should be implemented at universities where students are taught on the advantages of using WBLS for their studies. This could be through organizing seminars or workshops. In addition, computer lessons should be mandatory for all degrees as these form the basis for mobile learning.
- Acceptance and full deployment of WBLS offers the required platform to obtaining blended learning within the department thus bridging the communication and consultation needs within CIS .
- And finally there is need for future researches in this field to examine students as well as user satisfaction.

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APPENDIX 1

INVESTIGATING UNIVERSITY STUDENTS' ACCEPTANCE OF WEB-BASED LEARNING SYSTEM USE TO SUPPORT LEARNING

Acceptance of Web-based Learning System Use to Support Learning Questionnaire

This questionnaire is a part of an MSc thesis study which the aim of finding out the level of University Students' Acceptance of Web-based Learning System Use to Support Learning. Responses to this questionnaire are voluntary and are to be kept confidential and information will be used for educational purposes only. Please read each question carefully and choose the most convenient for you. Mark X as appropriate in the boxes.

You are required to answer all questions. Your participation is greatly appreciated.

Contact: Emad Ali Ibrahim Aldahmani (eldhmani14@gmail.com)

Cell phone: 05488791355

Thesis Supervisor**:** Assist. Prof. Dr. Seren Başaran (seren.basaran@neu.edu.tr)

Near East University – Department of Computer Information Systems. Nicosia, North Cyprus.

Web Based Learning System (WBLS): is an online system, typically called a learning management system that allows each learner to progress through a series of educational experiences at his or her own speed. It consists of technology that supports traditional classroom training and online learning environments.

Demographic Information

1.	**Gender:** ○ Male ○ Female
2.	**In what age group are you?** ○ 17-22 ○ 23-27 ○ 28 and above
3.	**Level of study:** ○ Undergraduate ○ Master Student ○ PhD
4.	**Department Type** ○ STEM (Science , Technology , Engineering , Mathematics) ○ other
5.	**Have you ever taken a course using web based e-learning system before (i.e. Turkish, English, History etc...)?**
○ I never used WBLS ○ I rarely use WBLS ○ I occasionally WBLS	
○ I frequently use WBLS ○ I always use WBLS	
6.	**Please indicate the extent to which you use the Internet to perform the following tasks:**
○ Gather information ○ Communicate (e.g., email, chat) ○ Download free software ○ Watch video ○ Listen to audio	

SECTION II: Perceived ease of use	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
7. Learning to operate the WBLS is easy for me					
8.I find it easy to get the WBLS to do what I want it to do					
1. My interaction with WBLS is clear and understandable					
10. I find the WBLS to be flexible to interact with					
11. It is easy for me to become skillful at using the Web based learning system					
12. I find the WBLS easy to use					
SECTION III: Perceived usefulness	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
13. Using the WBLS will allow me to accomplish learning tasks more quickly					
14. Using the WBLS will improve my learning performance					
15. Using the WBLS will make it easier to learn course content					
16. Using the WBLS will increase my learning productivity					
17. Using the WBLS will enhance my effectiveness in learning					
18. I find the WBLS useful in my learning					
SECTION IV: Use for supplementary learning	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
19. I will always try to use the WBLS to do a learning task whenever it has a feature to help me perform it					
20. I will always try to use the WBLS in as many cases/occasions as possible					
21. I intend to use the WBLS system in my academic life					
22. I predict I would use the WBLS frequently					

SECTION V: System interactivity	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
23. The WBLS enables interactive communication between instructor and students					
24. The WBLS enables interactive communication among students					
25. The communicational tools in WBLS are effective (Email, Bulletin Board etc)					
SECTION VI: User Satisfaction	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
26. WBLS is effective					
27. WBLS is efficient					
28. Overall, I am satisfied with WBL					
SECTION VII: Information Quality	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
29. WBLS provides information that is exactly what you need (Content Accuracy)					
30. WBLS provides sufficient information for your purposes (Quantity of information)					
31.provides information that is easy to understand (Understand ability)					
32.WBLS provides up-to-date information (Currency)					
33. WBLS provides information that appears readable, clear and well formatted (User interface)					
SECTION VIII: System Quality	**Strongly Disagree**	**disagree**	**Neutral**	**Agree**	**Strongly Agree**
34.WBLS provides for personalized information presentation					
35.WBLSis easy to use					
36.WBLS is user-friendly (Easy to learn)					
37. WBLS provides a high of availability(Access)					
38.WBLS provides an appropriate level of on-line assistance and explanation (User requirements)					
39.WBLS provides satisfactory support to users of the system (Help and training)					
40.WBLS provides high-speed information access (Efficiency)					

Thank you for participating!

APPENDIX 2

ETHICAL APPROVAL LETTER

YAKIN DOĞU ÜNİVERSİTESİ

BİLİMSEL ARAŞTIRMALAR ETİK KURULU

25.12.2017

Sayın Emad Ali Ibrahim Aldahmani

Bilimsel Araştırmalar Etik Kurulu'na yapmış olduğunuz YDÜ/FB/2017/14 proje numaralı ve **"Investigating University Students' Acceptance of Web-based Learning System Use to Support Learning in North Cyprus"** başlıklı proje önerisi kurulumuzca değerlendirilmiş olup, etik olarak uygun bulunmuştur. Bu yazı ile birlikte, başvuru formunuzda belirttiğiniz bilgilerin dışına çıkmamak suretiyle araştırmaya başlayabilirsiniz.

Yardımcı Doçent Doktor Direnç Kanol

Bilimsel Araştırmalar Etik Kurulu Raportörü

Direnc Kanol

Not: Eğer bir kuruma resmi bir kabul yazısı sunmak istiyorsanız, Yakın Doğu Üniversitesi Bilimsel Araştırmalar Etik Kurulu'na bu yazı ile başvurup, kurulun başkanının imzasını taşıyan resmi bir yazı temin edebilirsiniz.

YAKIN DOĞU ÜNİVERSİTESİ

BİLİMSEL ARAŞTIRMALAR ETİK KURULU

25.12.2017

Dear Emad Ali Ibrahim Aldahmani

Your application titled **"Investigating University Students' Acceptance of Web-based Learning System Use to Support Learning in North Cyprus"** with the application number YDÜ/FB/2017/14 has been evaluated by the Scientific Research Ethics Committee and granted approval. You can start your research on the condition that you will abide by the information provided in your application form.

Assist. Prof. Dr. Direnç Kanol

Rapporteur of the Scientific Research Ethics Committee

Direnc Kanol

Note: If you need to provide an official letter to an institution with the signature of the Head of NEU Scientific Research Ethics Committee, please apply to the secretariat of the ethics committee by showing this document.

APPENDIX 3

PLAGIARISM REPORT

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ÖZET

Bilişim ve iletişim teknolojileri dalı son yıllarda gösterdiği dikkate değer gelişim ile, bilginin çeşitli ve zaman açısından etkin yöntemlerle elde edilebilmesini sağlayacak olanaklarda büyük teknolojik gelişim ve değişimlere neden olmuştur. Bu alandaki muazzam büyümeye istinaden, pek çok öğrencinin günümüzde modern teknoloji ve elektronik kaynaklara dayalı eğitime ilgi gösterdiği görülmektedir. Bu çalışma, universities öğrencilerinin web tabanlı teknolojik öğrenim sistemlerini kullanmayı ne derecede kabullendiklerini araştırmaktadır. Sunulan bu çalışma ile öğrencilerin bu sistemleri öğrenme desteği olarak kullanma miktarlarını etkileyen faktörleri göz önüne alarak kabullenme yaygınlığını araştırılması hedeflenmektedir. Bilgi Kalitesi, Sistem Kalitesi, Sistem İnteraktifliği, Kullanıcı Memnuniyeti, Algılanan Yarar ve Algılanan Kullanım Kolaylığı gibi faktörleri içeren teorik bir model tasarlanmıştır. Kullanım kabulü seviyesinin tespiti için yapılan anket sonuçları, web tabanlı öğrenim sistemi kullanımı kabulü için hemen hemen tüm sayılan faktörlerin önemli olduğunu göstermiştir. Kabul ve benimsemeleri, öğrencilerin öğrenme için takip ettikleri yolda daha kontrolü olmalarını sağlar. Ayrıca, eğitimci ve öğretmenlerin öğrencilerin katılım derecelerini ve öğrenim çıktılarını tespitlerinde yardımcı olur.

Anahtar kelimeler: Web tabanlı öğrenme kabulü; teknoloji kabul modeli; teknoloji kabul ve kullanım birleştirilmiş modeli; web tabanlı öğrenim modeli; teknoloji benimsenmesi; üniversite öğrencileri.