The Impact of Factors Influencing Students' Perceptions toward e-Learning Tools System in Libyan Higher Education

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ABSTRACT

Nowadays, computers are considered as the most vital tool in both education and businesses fields. Students are able to collect remarkable knowledge besides expanding their communication abilities and skills in a short time. Online learning systems or e-learning is considered as of the effective educational approach which includes the usage of digital for both teaching and learning. Apart from this, it helps students to exchange various point of views and thus simplifies communication and improves the relationship for sustainable learning. This thesis aims to assess the Nalut university students' perceptions toward e-learning tools. The research method used in this study is a quantitative survey method. The finding data are examined through one way ANOVA, descriptive analysis, frequency, percentage, and independent sample t-test. According to the achieved result, students are able to improve their information in order to comprehend the subject concept better through e-learning. Their awareness of the e-learning tools has been improved while they trying to comprehend their level of e-learning knowledge by responding to the questionnaire. Hence, these lead them to use their knowledge to adopt the method in the learning process with another course. Further, it is fascinating to realize that learners value the e-learning tools, are aware of its existence and use it either for learning or leisure.

Keywords: e-learning tools, learning management system, perceptions of student

ÖZ

Günümüzde, bilgisayarlar eğitim ve iş alanlarının en önemli araçları arasında kabul edilmektedir. Öğrenciler bilgisayarlar sayesinde kısa sürede iletişim yeteneklerini ve becerilerini geliştirmenin yanı sıra olağanüstü bilgiler toplayabilmektedirler. E-öğrenme araçları, öğretme ve öğrenme süreçlerinde sayısal verinin kullanımını sağlayan ve son derece etkili bir öğrenme aracı olarak karşımıza çıkmaktadır. Bunun dışında, bu tür araçlar öğrencilerin çeşitli görüşlerini paylaşmalarına yardımcı olur ve iletişimi kolaylaştırır. Ayrıca, sürdürülebilir öğrenme ortamlarının sağlanması için gereken ortamın hazırlanmasına yardımcı olmaktadırlar. Bu tez çalışmasında, Libya'da yer almakta olan Nalut Üniversitesi'nin öğrencilerinin e-öğrenme araçlarına yönelik algılarını değerlendirmesi amaçlanmaktadır. Çalışma nicel araştırma deseninde tarama yönteminde gerçekleştirilmişti. Bulgular tek yönlü ANOVA, betimsel analiz, frekans, yüzde ve bağımsız örneklem t-testi ile analiz edilerek elde edilmiştir. Çalışma sonucunda öğrencilerin, e-öğrenme yoluyla konu kavramını daha iyi anlayabilmek için bilgilerini geliştirdiklerine inandıkları sonucuna ulaşılmıştır. Ayrıca, öğrencilerin e-öğrenme araçlarına son derece önemli gördükleri, bu araçların farkındalığında olduğu ve bu araçları bir öğrenme aracı olarak kullanmaya çalıştıkları belirlenmiştir.

Anahtar Kelimeler: E-öğrenme araçları, Öğrenme Yönetim Sistemi, Öğrenci Algıları

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INTRODUCTION

1.1 Introduction

Nowadays, computers are considered as the most vital tool in both education and businesses field. Students are able to collect remarkable knowledge besides expanding their communication abilities and skills in a short time. Hence, this provides an important role not only among computers but also provides a base for the World Wide Web (www) to become a second library for students. Moreover, the student has a strong passion for learning and obtaining a certificate/diploma from online educational organizations such as universities online, but they have isolated life without having an appropriate system of communication (Darawsheh et al., 2016; Tarhini, Hone, Liu, & Tarhini, 2016). E-learning motives researchers to better support learning lessons, the main reason is to use less energy and time, which students who live far away from their universities going to be lost (Alenezi, Tarhini & Masa'deh, 2015; Hubackova and Golkova, 2014). The usage of online instructional method is rising internationally.

As Clark and Mayer (2011) stated, e-learning or web-based education is explained as the deliverance of instructional approach in both simple and affordable technique for supporting individual education as well as organizational goals. As a result, it is obvious that universities all over the world are showing strong interest in online learning education to improve and help students in their learning experience but also

to support not only their conventional teaching. Although, the reason for this notion is the fast growth of internet technology, understanding main factors that affect the student's approval and using such a system could be measured as the main achievement of e-learning educational method (Clark and Mayer, 2011).

Additionally, it can be stated that online learning is a vehicle for delivering information and communication technology with the aim of learning where learners, as well as instructors, separated because of time and distance. Moreover, e-learning improves their learning skills (Keller,Hrastinski,&Carlsson,2007; Tarhini, Teo,& Tarhini, 2016). According to Horton (2011), e-learning is what instructors conveyed by the use of all electronic media including, internet, extranet, and intranet. As a result, when the obstacle of time and distance eliminating individuals in order to have a better opportunity for their own permanent learning. Furthermore, e-learning atmosphere lessens the cost and thus boost profits for an educational institution (Almajali,Masa'deh,&Al-Dmour,2016; Ho and Dzeng, 2010). In addition, according to Bassi (2010), e-learning is a tool for saving training costs as well as traveling to the learning center. He believed that it is necessary to improve both instructions and also learning the procedure for creating an appropriate way of communication between instructors as well as students. It is noticeable that for conveying education, including apply merge, online learning as it is beneficial for universities to make a decision during or before the accomplishment. Likewise, e-learning is described as utilization of web-based educational system for providing face-to-face training and learning. Besides, Fredericksen et al., (2000) stated that learning management system defines as web-based or online delivery applications, which are utilized by educational organizations including universities to convey course material, manage the teaching procedures and to offer distance learning.

There are various ways to classify e-learning. In addition, classifications are based on their involvement in education and timing (Algahtani, 2011). He categorized e-leaning into two main types, including computer-based as well as internet based. In computer - learning the usage of both hardware and software, which are accessible for using communication technology and information, are compromises. Apart from this, each element used either in managing computer education or computer-assisted education. In computer-assisted erudition, as an alternative to conventional ways computers are used. They offer interactive software for supporting tool in the classroom or as a self- education tool outside the classroom. On the other hand, in the computer managed learning, technologies are utilized for data gathering and recovering information which the models are Synchronous Asynchronou.

Synchronous training includes the cooperation of contributors with E-mentor through the virtual platform in actual time. In other words, it offers amenities for the contributors to discuss among themselves and with the mentor by using tools including videoconference and chatrooms (Algahtani, 2011).

The asynchronous provides the chance for contributors to discuss among themselves and with the mentor by using the internet and without any live interaction with the tutor. In such an, away learners have opportunities to learn at a suitable time, but instant feedback from tutors is not receivable (Algahtani, 2011).

According to the previous studies, the e-learning methods and tools which implement in advanced instruction has not yet provided a base for both teachings and learning to be efficient and attractive (Mironov and Borzea, 2013). The reason for this matter is that higher education has not yet found the proper media for not only teaching but

also learning rules. Apart from this lack of potential for IT and technologies do not support the latest teaching principles as well (Dewan et al., 2018).

A study was conducted in South Korea, which showed that online learning education had an effect on students' tendency to learn more positively. Further, the authors indicated that by special instructional design, learners have a better opportunity for continuously using e-learning (Yu Li & Lee, 2009).

The main ideas in conclusion of this study are: there was conformity on the assumption of what Technology Acceptance Model (TAM) perceived in that usefulness has a considerable effect on students' tendency for technology utilization. Additionally, the research showed that in order to promote a personal intention for using technology, an optimistic notice of the technology's value is important. However, the study stated that learners approach to using technology is not so important (Masrom, 2007).

Further, research conducted to find perceptions of learners toward the design and the usability of online educational materials. In conclusion, the study mentioned that there was a positive observation in the instructional materials while highlighting its design, usability, as well as content (Essel, Engel, Carus and Ahrens, 2015).

Furthermore, in research at the state university learners preferred different learning methods. The results showed that learners who started the university with a high level of computer knowledge were able to comprehend e-learning. It was also stated that male students were more interested to utilize internet than female students; therefore, male students engage more with e-learning. In conclusion, it was

recognized that learners showed a tendency for that type of e-learning which was web-supplemented courses, therefore, in the near future students thought that mixed mode courses were a more attractive proposition than web dependent online-only courses (Buzzetto-More, 2013).

Therefore, by using e-learning, learners do not need to attend the class and feel uncomfortable while answering their instructors. As a result, in any situation, they can study by using multi-electronic devices such as smartphones, computers, and laptops. Students can also download and read the materials online wherever they desire (Tagoe, 2012).

As it can be seen in the previous studies mentioned above,however, that there is an obvious interest in e-learning and this comes from various directions, there are limited research on using e-learning tools in various educational organization and study levels particularly in Libya regarding usage of e-learning tools, thus it is significant to assess e-learning tools from a students' view, and by doing that, instructors will learn about proper teaching method of instruction.

1.2 Aim of the Study

The main aim of this study is intended to assess the perceptions of students through using e-learning educational tools in Nalut University, Libya.

1.3 Research Questions

For obtaining the stated target of this research, the following research questions are attempted to find the answer for:

1. What are the Nalut University students' perceptions regarding the use of e-learning tools?
2. What are the Nalut University students' perceptions regarding the use of e-learning tools according to gender?
3. What are the Nalut University students' perceptions regarding the use of e-learning tools according to age?
4. What are the Nalut University students' perceptions regarding the use of e-tools in learning according to the field of education?

1.4 Significance of the Study

The proposed study is carried out to assess the perceptions of students' toward e-learning instructional approach and its tools. According to the result of the recent studies, it is revealed that students were defined some problems such as lack of having enough understanding of expectations and learning styles, inadequate e-learning tools, and limited impact throughout learning process. On the other hand, instructors in Libya were tend to use powerpoint slides for such a long time and insist on the same method of teaching. As a result, considering the entire problems made this study to provide learners with e-learning tools which can develop their learning abilities.

1.5 Limitations

The current study is limited to undergraduate students at Nalut University, for spring semester 2017-2018, in Libya.

1.6 Definitions of Key Terms

This part describes numerous terms used in this research:

E-learning: defines as using technologies of the internet to have a wide variety of resolutions that boosts performance and awareness (Rosenberg, 2001).

E-learning tools: are software, which is using for developing content, navigation tools, and structures, interface design as well as multimedia fundamentals, including graphics, audio, text, animation, and video. Blackboard, Learn.com, eCollege, is a good example of e-learning tools (Veeramani, 2010).

Chapter 2

LITERATURE REVIEW

This chapter draw a framework of the research and explain the main related studies.

2.1 E-Learning

According to Veeramani (2010), online learning is defined as an effective instructional tool which is used for knowledge management, sharing information among students. Furthermore, e-learning has the capability to help and improve the education process throughout not only computers but also communication technology. He also stated that e-learning can be presented in various ways such as distributed education, online learning, networked, and virtual learning. It also can be classified as a broad series of procedures, which planned to transport Web or video conferencing and CD-ROM electronically through satellite transmission (Veeramani,2010).

It is clear that there is a strong interest in the idea of e-learning, and various factors such as giving importance to online learning provide a base for the e-learning improvement. Thus, some organizations see learning as a collection of distance learning activities. Some companies believe e-learning is a way for decreasing cost in terms of instruction and training. Residential campus-based educational institutes is another place, where e-learning is a way for developing program accessibility and rising market of the niche (Naidu, 2006).

2.2 Using E-Learning Instructional Approach

Nowadays technology and its improvement have changes the method of our living, working, and learning. It does not only seem like technology but it provides a proper base for everyone to meet others as well as distribute more knowledge and information. In another word, e-learning is not only based on multimedia computer, but it is a computer and world-wide-web which combined to connect both instructors as well as learners worldwide by text, video, graphics, and audio (Fletcher,2005).

Further, some scholars believed that "Positive approach towards ICTs is broadly accepted as an essential condition for the efficient accomplishment". It is significant for both lecturers and learners to have a positive attitude about tools of e-learning as long as they have a tendency to apply it successfully (Fasoli, Scrivens,&Woodrow, 2007).

Moreover, individual inspiration is another basis for achievement or disappointment in both teachings as well as a learning procedure. Anderson and Gronlund (2009) mentioned that extremely encourages learners show better performance in the majority of things on the other hands when students are not motivated they show a strong tendency to left". Moreover, e-learning boosts the learners' suppleness to transfer from the teacher-centered learner that helps them to discover freely.

According to Moore and Owens (2008), hybrid learning methodologies could boost students' satisfaction and fulfillment, while many students believed that website is a beneficial resource (90%) and have influence in future (85%). The results explained that e-learning added extra approach in both teaching and teaching, and amplify the learning experience. In addition, the study claimed that online learning provides a

base for better choices, raises students' fulfillment, had flexibility, broad resources and helps lecturers to use various evaluation methods (Moore and Owens, 2008).

Rogers, (2003) believed that different factors could affect the users' awareness of technologies. There is another notion from Bhattacherjee (2001) which stated that a users' motivation for using technology could be meeting as long as they are capable to fulfill their desires and needs. The word "confirmation" specifies what a user expects from using technology. However, the level of perception is not steady. It is clear that the students' perceptions of technology will increase by gaining more experiences and using proper and correct technologies. On the other hand, poor usage of technology will result in poor experiences. Those students who are willing to use technology in their lives have more tendencies to accept the technology contentedly(Lam, 2015).

Technology-based education provides a base for superior planning, development procedure, as well as delivery procedures. Various tools such as synchronous, CD-ROM, interactive multimedia, Internet improve the instructional capability of both teachers and students learning activity. In addition, these tools are some affirmative implication (Cognitive Design Solutions, Inc, 2005). Some of the positive tools have mentioned below:

- Tutors and program developers can allocate resources simply.
- Multimedia and prolonged resources can improve conventional classroom practice noticeably.
- Online synchronous tools form a novel type of cyber-classroom, which connect many students living in different places and in the engagement of peer-to-peer.

- Online lessons which are self-paced can make learning experiences more tentative, and provide learners with flexible and easy access to instructional materials at any time and any place (Cognitive Design Solutions, Inc, 2005).

2.3 Categories of E-Learning

E-learning types could be categorized in different ways. Algahtari (2011), suggested that e-learning classification is based on its engagement in education. Apart from this, time interaction could prepare a base for some of the mentioned classifications. According to him, e-learning is divided into two categories including computer base as well as internet-based learning. He also believed that computer-based learning consists of using full types of hardware as well as software that are accessible for information and communication technology. In addition, these elements can be utilized in two different approaches comprising: computer-assisted education and computer managed education. In computer-assisted education, they used the computer as interactive software instead of using traditional methods in order to support self-learning both inside and outside the class. On the other hand, in the computer managed education, technologies are utilized for storage and recovery of information to manage the process of education appropriately Algahtari (2011).

Further, Almosa (2002) defined that, Internet-based education is a more advanced type of computer-based education which facilitate online access to the content. It prepares links which are related to the sources such as email service as well as references, which are usable at any time, any place and even with the absence of teachers. Zeiroun (2008) categorized this by additional use of it in education, completely online mode, assistant mood, and blended mood. The assistant mood is a traditional method, the blended instructional approach provides a short-term degree

for a partially traditional approach. And the completely online method could be described as the most complete improvement which comprises the exceptional utilization of the network for the purpose of education (Zeitoun, 2008). Moreover, the completely online instructional approach could be defined as “asynchronous” or “synchronous” using a special application for optional timing and interaction (Algahtani, 2011). Besides, according to the different explanations, synchronous timing could be defined as various online access between instructor and students, or between asynchronous and students which provides a base for everyone to post communications to others online (Algahtani, 2011; Almosa and Almubarak, 2005).

The synchronous method support students to discuss different things with their teachers and peers through using the internet, and tools such as chatrooms. According to Almosa and Almubarak (2005), this method is the benefit of instant feedback. This mode also provides a base for learners to convey different things with both teachers and among themselves at any desired time. The advantageous of this method is learners can learn at any suitable time. However, they cannot receive immediate feedback from teachers and other learners.

2.4 Pros and Cons of E-Learning

It is obvious that digital age is progressing in the modern worlds; as a result, universities are focusing more on the use of technology, for gaining such a purpose they should consider advantages as well as disadvantageous. Even though the usage of technology in education is revolutionizing, it is impossible to rely on it completely. E-learning could be defined as a center of information and training which could be a center of bad knowledge and misinformation. E-learning had several advantages. By receiving an efficient e-learning system, motivated students

can gain enormous success in a short time (Khamparia &Pandey, 2017). Some of the main pros of e-learning educational approach are listed below:

- **Appropriate for students**

E-learning materials are accessed and self-placed, hence learners do not need to participate in the classroom actually. Apart from this, they have online access to the educational materials which can be downloaded and saved to their system (Fasoli et al., 2007).

- **Lower charge**

E-learning is a cost-efficient instructional approach because leaners have chance to select different educational materials according to their needs. Apart from this, it is cost-efficient for many universities since they can utilize online educational platforms for different classes and courses (Veeramani,2010).

- **Latest educational materials**

The study materials can be updated regularly. They can be updated without any changes and materials are accessible for a longer period (Naidu, 2006).

- **A flexible method of study**

E-learning instructional approach is providing learners with as a flexible learning environment and storing information which they can have access anytime they want. Apart from this, students can choose between either a teacher-based or self-based educational system, thus through these systems, learners can skip those materials they know and select whatever they want (Khamparia &Pandey, 2017).

- **International educational society**

E-learning systems construct a global educational society and support anyone to access the educational materials regardless of the location(Veeramani,2010).

- **Accessible e-learning systems**

In the online learning course, the number of students can be very high or low and this will not affect the cost (Khamparia &Pandey, 2017).

- **An advanced degree of choices for students**

E-learning provides a base for those students who have difficulties for learning by repeating until they feel satisfied (Dai et al., 2006).

- **Better preservation**

Both video and audio materials make learning easy and fun. Students can remember everything for a longer period. Apart from this, these materials are available anytime, thus the duplication creates the preservation more convenient. Moreover, e-learning systems have some disadvantages. It is not good to be flexible all the time because it may result in laziness and therefore decrease efficiently (Khamparia &Pandey, 2017). Some of the main disadvantages are:

- **Low inspiration**

Students who have less motivation may not achieve their desired goals all the time since no one is looking over them. Students are individually responsible for their routine, thus this results in laziness and low level of motivation. When there is no proper fixed schedule and deadlines, students will drop out on the course in advance (Alenezi & Shahi, 2015).

- **Technology-dependency**

Some people may face difficulties while using computer applications and to learn how to use them they need to spend more time. Other factors which are time-consuming such as poor internet connection and limited access to technology may make the process of learning harder (Almaqtri, 2014).

- **Compatibility issues**

There are different types of instructional tools and sometimes the educational materials prepared by one system may not compatible with another system. For instance, devices like iPads block the flash video and do not play it in their browsers. Further, some countries have filters on different websites; as a result, learners are unable to use these websites (Alshurideh & Alkurdi, 2012).

- **Reliability of the content**

There are many people, who give wrong information to readers. Thus, accessible information on the internet might be unreliable. Readers must check the reliability and pay enough attention while searching for the information (Beurs et al., 2015).

- **Isolation**

This is about lack of face-to-face interaction with teachers and peers might cause isolation problem for some learners, so they feel isolated since they don’t have an actual interaction with others (Almajali et al., 2016).

- **Management of Expenses**

However, e-learning instructional learning approach is a cheaper alternative method, still, at the initial point, it might cause many expenses for the educational

organizations such as buying equipment including software, projectors, and computing devices which might not be reasonable for the small and new institutions. Besides, the cost of developing new training educational materials is almost high, against traditional educational materials (Alenezi & Shahi, 2015).

- **Disadvantages for learners with disability**

Companies are usually focused on larger groups while evolving new learning materials. They usually think less about disable people (Khamparia &Pandey, 2017).

- **Not effectual in all cases**

Face-to-face interaction for education could be more efficient than e-learning education since e-learning doesn't contain two-way interaction (Alenezi et al., 2015).

Recognizing the advantageous and disadvantageous of both methods provide a base for having better thoughts on proper question type which are used inside the questionnaire. In addition, it gives a better outlook on how to construct the questions (Khamparia &Pandey, 2017).

2.5 Main E-learning Aims

The following Figure 2.1 mention the goals which provide instructors with general support in order to realize kinds of criterion they have to consider while focusing on various instructional methods.

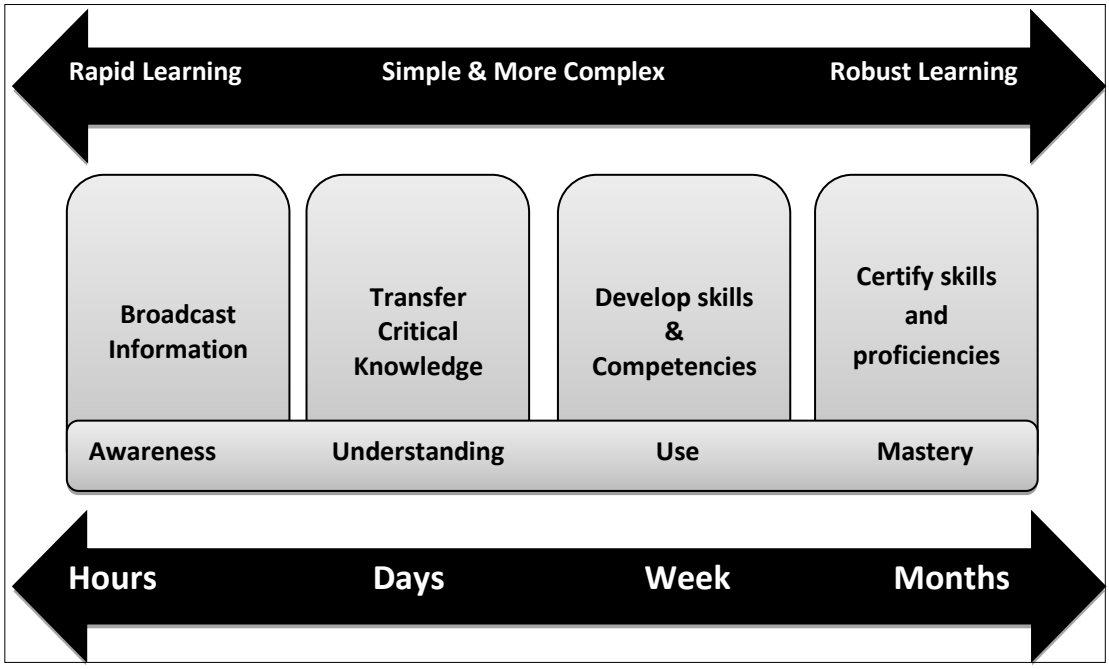

Figure 1: Four aims of using e-learning (Cognitive Design Solutions, Inc.,2005)

As it can be seen in Figure 1, it explained how major e-learning aims to provide a base for instructors to design course materials in a useful way. These goals have been designed based on the following criteria:

- procedure and goals: " information vs. teaching " (broadcasting, developing, transferring, and certifying)
- Content: " range and strength" (consciousness, recognizing, apply)
- Education task " easy vs. difficult" (level of necessary perform an interface)
- Enlargement time: " fast vs. robust (total of time /attempt necessary for improvement

2.6 The Examination of Presented E-Learning Tools

This part focuses on some tools that are using broadly in the educational center. The e-learning tools include forum and evaluation, Java Assisted in SMIL (JAS), Web 2.0 in Blackboard Learn, web learning portal for personal teaching and guidance and Adobe Presenter (Tella, 2012).

2.6.1 Forums and Assessments

A case study of Organero and Kloos (2007) stated that in order to find the efficiency of environments as an inspirational tool in courses delivered with e-learning instructional approach to six public educational centers, in Madrid (Spain). Those students who are participating universities have the opportunity to join the e-learning course. The ADA-Madrid was the program name which presented for 46 topics in various places. Annually up to 60students can be accepted to each topic. Organero and Kloos select an exacting subject named "Internet Security" for the case study with 60 students joined for the subject. The moodle-based e-learning platform is a content management system that has been used for distributing the subject and for the study assessment. The platform included features such as login access, news, Calendar, access to educational materials, forums, and evaluation tools. Moreover, the authors concentrated on the impacts of the forums and assessment as inspiring tools (Organero and Kloos, 2007).

Figure 2: Image of LMS (Organero & Kloos, 2007)

Figure 2 illustrates a screenshot for Spanish learning management system. The center illustrates the course content, and also the left panel demonstrates relevant connections to services of e-learning system which include evaluation tools comprise calendar, login, and news. On the other hand, the right panel demonstrates the professor messages, which posted as homework for students. The sholars also examined three features of inspirational mechanism that reconsider the intellectual marking and post of contributions. The outcome illustrates that these approaches have an optimistic and direct effect on learners' motivation (Organero & Kloos, 2007).

Apart from this, the assessment efficiency of the evaluation features carried out between two groups of learners, named self-evaluation and grade-oriented-evaluation. In Self-evaluation, method students' assessment based on what they know and do not know; on the other hand, in grade-oriented- assessment professors give a score to students' work and assignment. Results gained from the second group have a positive and direct influence on students' motivation.

According to Teo (2014), assessment can affect motivation which depends on the type of students. For instance, learners with high interest in the subject of the study have superior inspirational scale compared to learners who just show interest in passing the test. Based on the finding, both forums and evaluations could efficiently inspire learners in the e-learning procedure.

2.6.2 Blackboard Learn of Web 2.0

The web-based applications exist in various models thus it is hard to discover the suitable one. An organization must combine tools, which have the capability to comprehend with Web 2.0, as long as it decides to integrate with Web 2.0.

According to Ellis (2009), using ordinary search engines such as Google does not give a person precise results relating to Web 2.0 tools. Ellis (2009) suggested these links for searching applications connected to Web 2.0. One of the practical sources is www.gozweb20.net that demonstrates Web 2.0 applications which only one person searches in the search bar. Apart from this Gotoweb20 is another search engine, which offers different results such as student association tools, social networks, and language trainer programs making lecture plans, course authoring tools and many more. Besides mentioned links, there is another practical site called www.widgipedia.com that helps a person to look for applications, which have text widget on the right of the Blackboard course. For instance, there is a language widget of lesson 10, which demonstrate an English word and its Spanish correspondent. Another functional link is WWW.simile-widgets.org, which provides a base for instructors to contain features to their Blackboard page like animations (Galy, Downey, and Johnson, 2011).

The latest Blackboard Learn 9.1 which is combined with Web 2.0 in order to host association tools from other platform comprising blogs, and discussion panels in the course materials. Besides, Blackboard Learn 9.1 contains three advanced functions with the support of the Web 2.0. At the begging, it compresses tool that which allow Bb 9.1 to connect with open source applications, social networking, and open source applications. Another application called BB mobile, which can join with Blackboard Learn 9.1 in order to facilitate students to have connection and interaction with their teachers and their peers anytime and anywhere. Another outstanding feature of Blackboard Learn 9.1 is its capability to cooperate with different applications comprising Slide share, YouTube, and NBC news archives (Ellis, 2010).

2.6.3 Java Assisted SMIL (JAS)

According to Dai, Tabirca, & Lenihan, (2006), Java Assisted SMIL known as JAS is one of the famous tools of e-learning that could be considered an authoring tool and can construct presentation of multimedia with affluent media including audio, animation, video, and graphics. The presentations realized by the JAS framework which is supported by Graphical User Interface (GUI) of Java as well as Java Media Framework (JMF). Afterward, it transferred to the syntax of Synchronized Multimedia Integration Language to integrate all media in one place. Further, JAS consists of three sections: web resources which show video and its contents, as well as a demonstration of the linkage to the online materials which make the browser of Internet Explorer to run. Moreover, the author can align the presentation video with a timeline function. This provides a base for the author to have control over the content. When slides are finished, the next step is to send them into an image file format. This process is done by MS PowerPoint and synchronizing each slide with streaming video by using JAS. Further, using the JAS interface make the author able to revise the time- frame and content of the video before distribution. He/she is not only had the opportunity to add or delete the content but also can edit it without understanding SMIL. JAS tool shows excellent features for learning needs. Some of the main uses are mentioned below (Dai et al., 2006):

- Non-verbal communication queries that provide a base for students to recognize by paying attention to the body language of the presenter over the presentation of the video.
- Simple queries that make the examples and definitions of content ready for learners.
- A query for an extra learning program that comprises a group of associated courses, and it includes offered online resources for learners.

- A query for the full necessary learning program focuses on the selected special high technical learning and education.

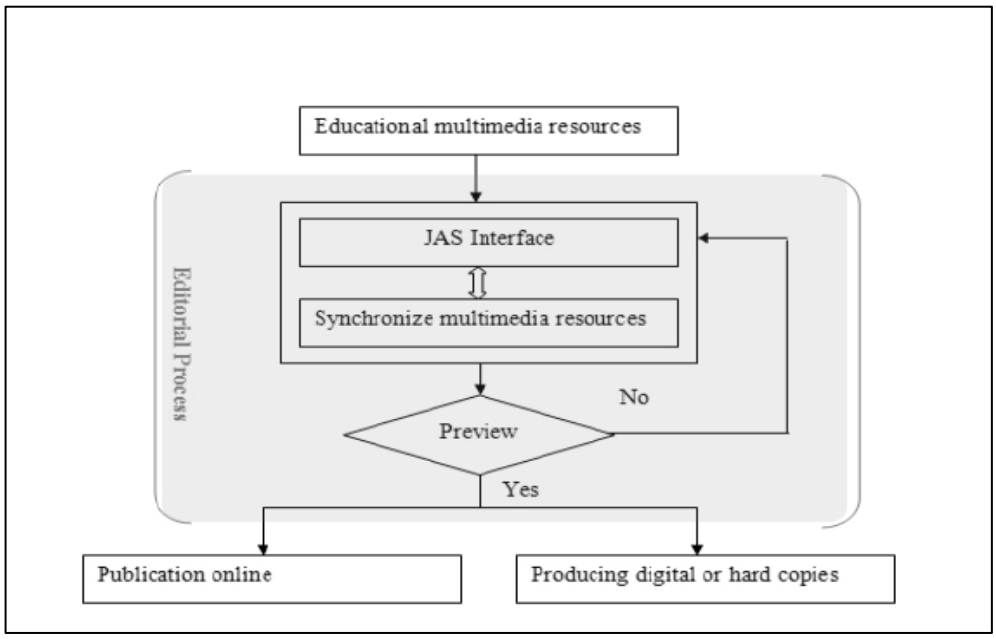

Figure 3: The JAS processes for Education (Dai, Tabirca, & Lenihan, 2006)

Figure 3 illustrates the learning process in the JAS system. The procedures start with the combination of both contents and the multimedia rudiments for creating the presentation slides. Afterward, it published in order to coordinate the slides via SMIL language, it sent to the JAS. At this stage, the author can analyze how perfect it is working by previewing it. Thus, the production will be formed as a digital or online publication if the author is satisfied with the presentation (Dai et al., 2006).

2.6.4 Adobe Presenter Tool of Microsoft PowerPoint

Adobe Presenter is another tool that simply caters for Microsoft PowerPoint application. It was called Macromedia Breeze before titled as Adobe Presenter. Adobe Presenter has the ability to convert a tedious presentation into a great media presentation. Flash movies are a good sample for it. Apart from this, it provides a

base for sharing PDF documents, web pages, and can send everything to the mobile phone, which supports Flash (Digital Inspiration, 2005).

However according to digital inspiration Adobe Presenter application software is accessible for Microsoft PowerPoint, which can be checked from diverse browser applications, and support flash players including UNIX, Linux, and Mac. In addition, Adobe Presenter is produced in Microsoft PowerPoint that can support the Office program. Adobe Presenter provides a base for the alteration of format to 3GB from AVI or MOV and then change to the flash video using On2 FLV encoder. Apart from this, it provides a base for audio edition and adding up narrations into the presentation. Slide manager is another notable function of Adobe Presenter. Slide manager provides a base for the author to modify the slides into several presenters (Digital Inspiration, 2005).

2.6.5 Staff Training through Web Education Portal

Web Education Portal is an e-learning portal for personnel training, which is available at www.eteaching.org. This portal has created by Bertelsmann Foundation and Heinz Nixdorf Foundation to provide educators with their personal development in teaching procedures. According to Gaiser (2004), this leading system has established through an open source Content Management System which is called Plone. In addition, this portal helps instructors to navigate and find their suitable study material and allows them to utilize recommended facilities through the portal. Teachers can work with this portal in order to consult problems and improve their teaching abilities through the usage of advisory services. Moreover, one of the main elements of the portal is adding location. Further, this portal provides a base for instructors to have better access to all desired media, provides tips and examples, and to manage classes with elements of multimedia (Gaiser, 2004).

2.6.6 Blackboard Learning System

According to Iskander (2008), Blackboard defines as one of the most admired web-based learning system tools in the education environment. Nowadays this system provides a framework for delivering course besides making it simple for students to use it. Machado & Tao, (2012) stated blackboard is an inclusive technology platform for content management and allocation, teaching as well as learning, measuring learning results and consistency, competent work and community building. Furthermore, almost 39.000 instructors at nearly in 1350 universities are using this system for delivering 147000 courses in 80 countries to more than 10 million students. Further, it contains communication tools such as chat rooms, emails, and bulletin board. Apart from this, Blackboard course management devices for lecturers for the purpose of grading, monitoring class improvement, student communication and tracking (Tarhini, Hone, Liu, & Tarhini, 2016). According to Iskander (2008), these kinds of attributes can make the interaction between both lecturers and students easier. To have access and for interning the system, they require to have a username and password (Tella, 2012).

In general, e-learning comprises the utilization of technology for education to help learners to study anywhere and anytime. Moreover, it includes training and delivering information to encourage learners to interact with each other. Apart from this, it helps learners to exchange various ideas. Besides, it provides easy communication and thus enhances the relationship for sustainable education. Although there are some challenges, the literature explains the role of e-learning particularly. It also discusses how e leaning made a significant influence on both teaching and learning. Some institutions' have better access for learners and provide a proper base for those learners who are tending to study through online learning

educational approach. The literature finalized by explaining e-learning pros and cons. It also suggests its need for higher education for different usage including faculty, administrators, and students to benefit from its adaptation and implementation (Weyers, Adamson, and Murie, 2004; Ware,2006; Veeramani,2007; Wang,2009; Sabol,2010; Salleh & Iahad, 2012; Moravec, Stepanek, & Valenta,2015).

2.7 Students' Perceptions of e-learning and its Tools

As Clark and Mayer (2011) stated, e-learning or web-based education is explained as the deliverance of instructional approach in both simple and affordable technique for supporting individual education as well as organizational goals. As a result, it is obvious that universities all over the world are showing strong interest in online learning education to improve and help students in their learning experience but also to support not only their conventional teaching. Although, the reason for this notion is the fast growth of internet technology, understanding main factors that affect the student's approval and using such a system could be measured as the main achievement of e-learning educational method (Clark and Mayer, 2011).

According to the previous studies, the e-learning methods and tools which implement in advanced instruction has not yet provided a base for both teachings and learning to be efficient and attractive (Mironov and Borzea, 2013).

A study was conducted in South Korea, which showed that online learning education had an effect on students' tendency to learn more positively. Further, the authors indicated that by special instructional design, learners have a better opportunity for continuously using e-learning (Yu Li & Lee, 2009).

Further, research conducted to find learners' perceptions toward the tools of e-learning instructional approach. In conclusion, the study mentioned that there was a positive observation in the learners perceptions regarding accessibility of materials, online communication services as well as flexibility (Essel, Engel, Carus and Ahrens, 2015).

In addition, a research carried out in higher education which provided learners with different learning methods. The results showed that learners who started the university with a high level of computer knowledge were able to comprehend e-learning tools. It was also stated that male students were more interested to utilize internet ad technology than female students; therefore, male students had more positive perceptions about e-learning tools. In conclusion, it was recognized that learners showed a tendency for services provided through e-learning which was web-supplemented courses, and those students which thought through mixed mode courses are attracted more than web dependent online-only courses (Buzzetto-More, 2013).

Moreover, another study carried out in a higher education in Jordan in order to apply e-learning method (based on the Technology Acceptance Model) and find the students' perceptions about the effects of e-learning tools. The outcome revealed that students were highly qualified and were optimistic and majority of them desired to utilize the e-learning tools in a more complex and advance courses (Almarabe & Mohammad, 2013).

Besides, Popovici and Mironov (2015), run a study to find the learners' perceptions of e-learning technology in different contexts and within non-formal and formal

settings. The result demonstrated that students were deeply knowledgable of advance technologies and their usabilities. Moreover, students were able to comprehend the subject easier thus the method proved as an effective approach. However, the method is mainly handled by instructors through variouse learning activities (Popovici and Mironov, 2015).

Likewise, study by Mahajan and Kalpana (2018), conducted to find the students' perceptions. The result of the study shows that generally 90% of the learners use internet and they use different forms of tools like emails, chat, blogs, video conferencing, WhatsApp to have communications with their teachers and peers. Thus, this method of instruction could fit to their interest and have influence on their performance with better understanding of the subject (Mahajan and Kalpana , 2018).

2.8 Related Research

E-learning does not exist for a long time, however, the field of education has not to pay proper attention to how students motivation influence e-learning. Similar to technology e-learning has progressed. The interesting thing is advancing technology has shown more efforts than trying to realize the needs of individual students for e-learning. According to the research, learners who enrolled in traditional courses showed more interest in e-learning courses (Rogers, 2003). Based on this, the educational system has the capability to adapt to cultural, social, as well as the political environment. The utilization of the internet for the novel educational approaches integrated with technology has made remarkable changes in the process of education (Wang and Baker, 2015).

According to Yang and Arjomand (1999), development in information technology had made better choices in education. Hemsley (2002) suggested that educational institutions realized that e-learning is appropriate for sharing knowledge, skills, as well as performance.

According to the recent studies, it is evident that e-learning educational approach has a significant effect in higher education. According to Dublin (2003), the primary e-learning tools have made enormous changes in educational centers, especially when it focuses on their educational delivery. There are various ways of applying different e-learning techniques in education. Algahtani (2011) suggested that in the assessment of e-learning efficiency, there are different models of using e-learning techniques using in Saudi Arabia which are mentioned below. E-learning tools are used to supporter conventional learning which providing learners with the independence to study the way they desire. Further, he suggested that by using a blended e-learning method the information is shared between both conventional and e-learning method. The third method focused on classroom or traditional participation. In this method, learners have total independence to use the e-learning method. As a result, online learning instructional method is divided into two categories including individual as well as collaborative learning. Apart from this, collaborative learning includes synchronous and asynchronous learning (Algahtani, 2011).

Wlodkowski (2005) stated that students learn better through the utilization of computer-based education rather than a traditional classroom. One of the reasons for this is having more interactivity level of students' participation. This result is in advanced levels of intellectual engagement to finish the task.

In addition, another study showed that the learning achievement through e-learning instructional approach in higher education can only be considered according to the efficiency of information delivery. Thus, e-learning advantages fall considerably on the preparations of staffs that is really the main challenge. It has been declared that many faculty associates disagreed in accepting technology for teaching. However, the lack of educators' knowledge might bring trouble in the procedure of application (Elkhouly, 2010).

Furthermore, in order to achieve success in higher education organizations must identify, implement, and accept technological advancements suggested through e-learning. These new learning approaches are imperative to keep the quality of the course (Holley, 2002).

According to Stoel and Lee, (2003), by special design learners has a better opportunity for continuously using e-learning. The research was carried out in a university in Malaysia to assess the application of online learning of the Technology Acceptance Model (TAM) of (Masrom, 2007). The main idea of this research was: there was conformity on the assumption of what TAM perceived in that usefulness has a significant effect on learners tendency for using technology. In addition, the research showed that in order to encourage the intention of learners for technology utilization, optimistic consciousness of the technology's utility is vital. Further, the research specified that learners' method of technology utilization is not very critical.

Additionally, in research at the state university learners prefers different learning methods. The reports showed that most respondent (51.1%) chosen a hybrid course, 25.9% were neutral rather than traditional classes, while 23% disagreed. The study

also illustrates that learners have a strong tendency for taking online classes in the future 52.3% agree, 22.0% were neutral and 25.7% disagreed (Buzzetto-More, 2008).

Moreover, there was research on how course material and having access to professional development influence the distance learners' perceptions. This research intended to discover perceptions of learners toward the design and usability of the educational materials. In conclusion, the study mentions that there was a positive observation in the study materials while highlighting its design, usability, as well as content (Essel, Engel, Carus and Ahrens, 2015).

Furthermore, the outcome of a study showed that learners who started the university with reasonably better computer knowledge were able to contribute to online learning classes. Besides, it was indicated that male was more interested to utilize internet than female; hence, it can be concluded that they are more engaged with e-learning. Consequently, the study found that male students preferred to study through e-learning instructional approach to web-supplemented courses and accordingly, in the future students may think that combined method of instruction would have a more attractive learning environment than using only web-based courses (Tagoe, 2012).

Moreover, a research is carried out to investigate the engagement and perceptions of students toward e-learning instructional method. The research concluded that there was a considerable relationship between learners' perceptions and engagement (Atan, Hassan, Omar, 2014). According to Yang and Lin (2010), learners who has

more optimistic attitudes about novel technology and internet utilization would have more tendencies to participate in the class.

Besides, another review research reviewed 38 papers and found that there are many benefits of e-learning which positively affect the educational process and achievements of learners in different ways comprising saving time and money, learning process according to individual needs by providing learners with multimedia and visualized information (Mousazadeh, Dehghani, Mozaffari, Ghasemzadeh, Hakimi and Bagherian, 2016).

Additionally, a study is computed about the prediction of students about online education and its influence on their educational procedure and achievements in a course of social science. The outcome of the students' final mark in the exam indicated that the educational approach affected their achievements positively as they were catered with group-based activities and more exercises (Hussain, Zhu, Zhang, and Abidi, 2018).

According to the literature above, there are many applications which could be used in order to provide learners with online educational courses. The current research is aimed to evaluate the perceptions of students' using e-learning tools of blackboard comprising the social network, Microsoft PowerPoint, instant messaging, email, search engines, and, YouTube as these tools are more appropriate for the practice by e-learning. Figure 4 below shows the model of e-learning educational approach.

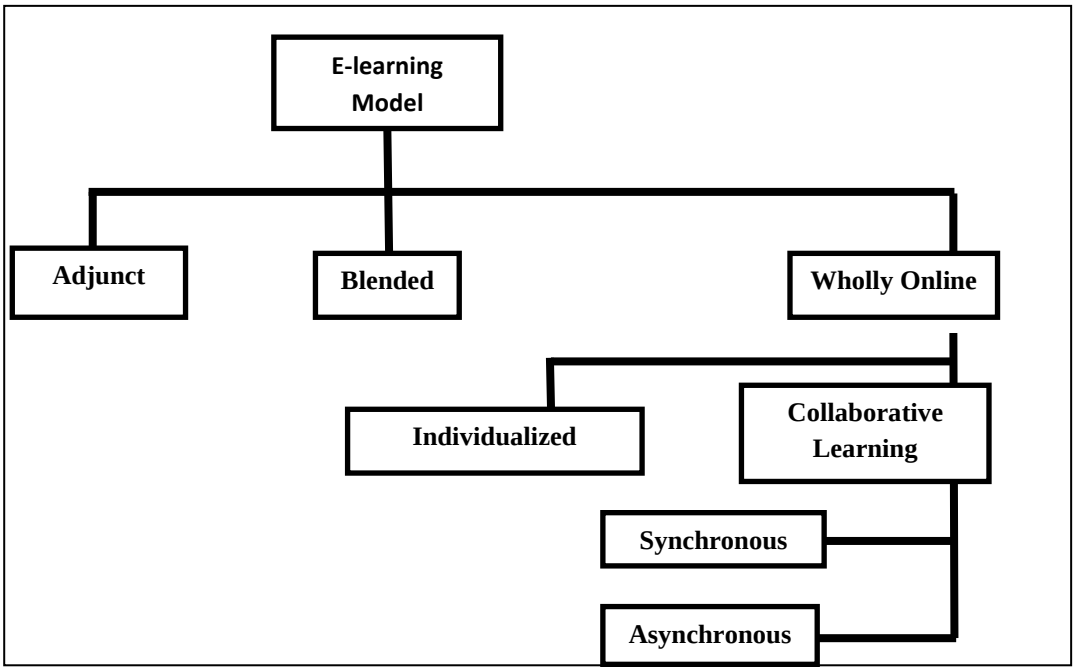

Figure 4: A model for using E-learning in Education (Cognitive Design Solutions, Inc.,2005)

Chapter 3

RESEARCH METHODOLOGY

This chapter includes the research design, participants, survey instrument, data collection procedure, data analysis, and validity and reliability.

3.1 Research Design

The research design defined the decisions of a comprehensive hypothesis in order to detailed methods of data collecting and analysis (Creswell, 2009). The main purpose of this study is to assess the perceptions of students about tools of e-learning. According to Kraemer (1991), the survey study is utilized to describe the particular features of a population quantitatively. Thus, these features comprise examination of the relationship among variables, and also the data in the survey research method are gathered from participants who are subjective. As stated by Creswell (2009), research design approaches contain three method comprising qualitative, quantitative and mixed methods. These methods can be utilized to gather data. This survey study used survey questionnaire which was developed to obtain the goals of the research.

3.2 Participants

The population for this research concludes of diploma as well as undergraduate learners from Nalut University, spring Semester 2017-2018. A total of 164 students from three departments have been taking part in the research. Table 1 below shows the demographic information of students:

Table 1**:** Demographics of students

		Frequency	Percent
Gender	**Male**	65	39.6
	Female	99	60.4
Age	**18-21**	118	72.0
	22-25	36	22.0
	Over 25	10	6.1
Field of study	**Education**	72	43.9
	Law	46	28.0
	Medical and Technology	46	28.0
Total	164	100.0	100.0

According to the Table1, there were 39.6% (65) male and 60.4% (99) female participated in the research. Further, the age range of learners was examined and the obtained result shows that 72% (118) were in the age range of 18-21, 22% (36) were in the age range of 22-25 and 6.1% (10) were in the age range of over 25. Moreover, according to the result of the field of study, 43.9% (72) students were from Education department, 28% (46) were from Law department and 28% (46) were from Medical and Technology department.

3.3 Data Collection Tools

In this research, quantitative method is utilized to gather data. This method provides a base for the scholars to prepare a numerical description of manners, or ideas through learning a sample of that population (Creswell, 2009).

In order to gather data, the proposed study used a questionnaire (Appendix A). The questionnaire was developed by Latt in 2012. There were 34 items in the questionnaire which contains two sections as follows:

- **First section:** The first section of the questionnaire is indicated to gather students' demographic information such as gender, age, and field of education.

- **Second section:** The second section contains 31 items which are used to examine the factors influencing the students' perceptions towards e-learning tools. Furthermore, the participants of the study were required to reply to the items about utilizing a 5-point Likert scale (Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5).

3.4 Analysis of Data

As stated by Sarantakos (2007), the procedure of data analysis is about converting raw data into numbers and based on the aim of the study, data are describing, comparing, summarizing, and hence finding knowledge. In this research, the data was examined through the Statistical Package for the Social Science (SPSS) application software. The analysis approach utilized to assess the data comprise descriptive statistics (frequencies and percentage, standard deviation, and mean) to expound the data based on the group of gender, level of education, and major of education.

Besides, Independent Sample t-test was computed in order to find substantial differences between males and females. Further, One way ANOVA test was computed to investigate if there were any outstanding differences in students' perceptions according to their age and field of education.

3.5 Validity and Reliability

The reliability is a method to discover the possible problems as early as possible according to the aim of the research which makes confidence that Items contains its

reliability requirements.Further, the Cronbach alpha was employed with the expected result of greater than the value of 0.70 in order to measure the internal consistency (Coakes & Ong, 2011).

Table 2: Reliability statistics of this study

Cronbach's Alpha	**N of Items**
.83	31

As it can be seen in Table2, the result of reliability using Cronbach's Alpha is α= .83, ,however, the reliability of original scale was α=.80 for all the factors, therefor with these values, it could be stated that both studies has acceptable internal consistency since the outcome is greater than 0.70 (Gliem & Gliem, 2003).

Chapter 4

FINDINGS AND DISCUSSIONS

This chapter describes the analyzed data in light with the research questions which is put at the starting part of our study. According to the aim of the study, the collected data were examined to find the students' perceptions of online learning instructional approach.

4.1 Perceptions of Students' About the Usage of E-Learning Tools

The following Table3 shows the descriptive analysis of responses in regard to the study's Likert measurements. This section measures the participants' answers about using e-learning tools in education. Further, the measurements consider both positive and negative perceptions in regard to the Items of the study.

Table 3: Descriptive analysis of students' perceptions about the e-learning educational approach

Items	SD		D		**N**		A		SA		Mean	Standard Deviation
	F	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**		
I1	0	0	18	11	6	3.7	136	82.9	4	2.4	3.77	0.67
I2	1	.6	7	4.3	14	8.5	135	82.3	7	4.3	**3.85**	0.57
I3	4	3.0	59	56.1	4	2.4	92	36.0	5	2.4	**2.79**	1.04
I4.	5	3.0	67	40.9	18	11.0	65	39.6	9	5.5	3.04	1.07
I5	18	11.0	119	72.6	9	5.5	16	9.8	2	1.2	3.18	0.79
I6	5	3.0	13	7.9	8	4.9	128	78.0	10	6.1	3.76	0.80

I7	9	5.5	40	24.4	4	2.4	111	67.7	0	0	3.32	1.02
I8.	5	3.0	19	11.6	10	6.1	129	78.7	1	.6	3.62	0.81
I9	4	2.4	42	25.6	11	6.7	102	62.2	5	3.0	3.38	0.98
I10	2	1.2	12	7.3	10	6.1	135	82.3	4	2.4	3.79	0.68
I11	3	1.8	83	50.6	46	28.0	27	16.5	4	2.4	**2.69**	0.89
I12.	9	5.5	41	25.0	9	5.5	103	62.8	2	1.2	3.29	1.03
I13	3	1.8	30	18.3	3	1.8	124	75.6	4	2.4	3.59	0.87
I14	5	3.0	26	15.9	8	49	123	75.0	2	1.2	3.55	0.88
I15	2	1.2	15	9.1	12	7.3	134	81.7	1	.6	3.71	0.69
I16	1	.6	118	72.0	4	2.4	39	23.8	2	1.2	**2.53**	0.90
I17	1	.6	3	1.8	3	1.8	115	70.1	42	25.6	**4.18**	0.60
I18	14	8.5	49	29.9	6	3.7	86	52.4	9	5.5	3.16	1.16
I19	3	1.8	8	4.9	8	4.9	135	82.3	10	6.1	3.86	0.67
I20	2	1.2	31	18.9	10	6.1	115	70.1	6	3.7	3.56	0.88
I21	2	1.2	8	4.9	13	7.9	138	84.1	3	1.8	3.80	0.60
I22	7	4.3	22	13.4	57	34.8	74	45.1	4	2.4	3.28	0.88
I23	1	.6	21	12.8	8	4.9	132	80.5	2	1.2	3.69	0.73
I24	1	.6	2	1.2	0	0	154	93.9	7	4.3	**4.00**	0.38
I25	1	.6	9	5.5	0	0	153	93.3	1	.6	3.88	0.51
I26	1	.6	1	.6	3	1.8	144	87.8	15	9.1	**4.04**	0.43

I27	0	0	1	.6	0	0	160	97.6	3	1.8	**4.01**	0.20
I28	0	0	22	13.4	2	1.2	137	83.5	3	1.8	3.74	0.70
I29	4	2.4	73	44.5	13	7.9	70	42.7	4	2.4	2.98	1.03
I30	2	1.2	50	30.5	91	55.5	18	11.0	3	1.8	2.82	0.71
I31	5	3.0	27	16.5	3	1.8	129	78.7	0	0	3.56	0.87

n=164, **%=100, Rating scale, * SD-Strongly Disagree, *D-Disagree, *N-Neutral, *A-Agree, *SA-Strongly Agree.*

As it can be seen in Table 3, the result of the standard deviation and mean for all Item, great numbers of students are quite agreeing and have positively impressed by e-learning environment and its tools as it makes them become a risk taker and thinker to learn a new concept in a sheltered environment.

Moreover, the result of the mean and standard deviation in Item 1 and 2, 24, 25 (X=3.77,SD=0.670; X=3.85,SD=0.578; X=4, SD=0.384; X=3.88,SD=0.517), determined that students are satisfied with the instructional method since they provided with an access instantly to all the provided materials and also they are capable to interrelate better with others through e-learning tools such as, chat, as well as communal networks. As a result, e-learning, make students sure that they are in synchronization with modern learners, thus, they have instant access to the latest updated content when needed.

Moore and Owens (2008), in a study, found similar result showing that learning methodologies could enhance students' satisfaction as online website provide instant access to beneficial resources (90%) and have the influence to their interaction and

learning skills (85%). In addition, the study claimed that online learning tools provide a base for better choices which increases students' fulfillment, share ideas through interaction service and access to broad resources and so helps teachers to use various evaluation methods.

Moreover, as the outcome of Item 10 shows, (X=3.79, SD=0.687), a great number of students after gaining more experience and using proper and correct technologies in an e-learning environment, found this method effective, hence they agreed that it would be good if this approach could be applied in other courses as well. Additionally, according to a study which conducted by AL-Saif (2014), in King Khalid University in the Kingdom (KKU) of Saudi Arabia, e-learning method of instruction is considered as an effective educational approach from both male and female point of view who had participated in the study.

Apart from positive impacts of e-learning instructional approach on learners' learning skills, it can be seen in the Item17 result, (X=4.18, SD=0.609), that using e-learning tools helped learners to enhance their skills of the computer, thus they were able to seek for information, and upload their homework.

There are related researches which indicate that learning through e-learning approach can help students to study how to utilize technology for education in an effective way, hence it has been proved that using technology or internet to study is valuable (Yu Li and Lee, 2016).

Besides, Item 19 shows that e-learning makes students able to develop their communicative as well as online societal activities. As stated in some studies,

communication is the heart of interaction and it provides a better learning opportunity for students. Students through social activities and communication not only with their peers but also with others around the world can generate better explanations, which cater deeper understanding of the concept, thus better learning (Chi, Jones, Lederer, and Li, 2005; Brown & Charlier, 2013).

Furthermore, according to the outcome of Item 26 and 27,(X=4.04, SD=0.434; X=4.01, SD=0.207), majority of the students indicated that e-learning tools make them able to identify their peers easier if they needed to ask for help and also it provides them with multiple ways of displaying materials electronically. As a result, they can learn the subject quickly as there are various instructional materials and also if they get any problem, they can ask their peers.

In addition, Salleh and Iahad (2012), stated in their research that the tools in e-learning environment make students capable of questioning their problems online if necessary and also they will not be only limited to text-based materials, this approach provides different forms of material such as visuals (animation, picture, video and etc.). Accordingly, learning happens shortly and more effective since materials are compatible with all learning style types (Khamparia &Pandey, 2017).

Consequently, the overall result showed the neutrally positive perceptions of students about e-learning instructional approach. The vast majority of students are actively engaged with the learning environment and they considered it as one the necessary and effective element of the instructional process at the university. However, some of the students think that they have less motivation for studying through e-learning due to lack of control from the lecturer.

4.2 Perceptions of Students' About the Usage of E-Learning Tools According to Gender

This part of the study calculates the Independent sample T-test tool in order to compare the mean score according to gender. In addition, it shows the most substantial result from T-test with a p-value lower than.05, which highlights the use of a same-variance T-test estimate.

Table 4: Gender relationship on the students' perceptions of e-learning tool in education

Item	Gender	N	Mean	Std. Deviation	Df	T-Value	Sig. Diff. / p-value
I1.	**Male**	65	3.72	0.69	162	-.69	0.48
	Female	99	3.80	0.65	130.99		
I2.	**Male**	65	3.94	0.49	162	1.52	0.12
	Female	99	3.80	0.62	155.89		
I3.	**Male**	65	2.89	1.01	162	1.04	0.29
	Female	99	2.72	1.06	141.80		
I4.	**Male**	65	3.08	1.13	162	.38	0.69
	Female	99	3.01	1.03	127.94		
I5.	**Male**	65	2.15	0.85	162	-.29	0.76
	Female	99	2.19	0.76	126.53		
I6.	**Male**	65	3.62	0.89	162	-1.90	0.05
	Female	99	3.86	0.72	117.20		
I7.	**Male**	65	3.38	0.99	162	.62	0.53
	Female	99	3.28	1.04	141.29		
I8.	**Male**	65	3.63	0.85	162	.11	0.91
	Female	99	3.62	0.79	129.15		
I9.	**Male**	65	3.35	0.99	162	-.25	0.79
	Female	99	3.39	0.97	135.70		
I10.	**Male**	65	3.74	0.71	162	-.81	0.41
	Female	99	3.83	0.67	131.04		
I11.	**Male**	65	2.85	0.90	162	1.83	0.06
	Female	99	2.59	0.88	134.36		
I12.	**Male**	**65**	**3.49**	**0.88**	**162**	**2.02**	**0.03**
	Female	**99**	**3.16**	**1.10**	**155.46**		
I13.	**Male**	65	3.69	0.82	162	1.26	0.20
	Female	99	3.52	0.90	145.65		

I14.	**Male**	65	3.69	0.74	162	1.62	0.10
	Female	99	3.46	0.95	156.64		
I15.	**Male**	65	3.78	0.57	162	1.07	0.28
	Female	99	3.67	0.75	158.62		
I16.	**Male**	65	2.49	0.86	162	-.43	0.66
	Female	99	2.56	0.92	143.37		
I17.	**Male**	65	4.22	0.59	162	.55	0.58
	Female	99	4.16	0.61	139.98		
I18.	**Male**	65	3.29	1.10	162	1.13	0.25
	Female	99	3.08	1.20	145.88		
I19.	**Male**	65	3.85	0.66	162	-.20	0.83
	Female	99	3.87	0.68	138.90		
I20.	**Male**	65	3.60	0.82	162	.45	0.64
	Female	99	3.54	0.91	146.91		
I21.	**Male**	65	3.71	0.72	162	-1.67	0.09
	Female	99	3.87	0.50	105.02		
I22.	**Male**	65	3.40	0.72	162	1.40	0.16
	Female	99	3.20	0.96	159.18		
I23.	**Male**	**65**	**3.83**	**0.57**	**162**	**2.03**	**0.03**
	Female	**99**	**3.60**	**0.80**	**160.88**		
I24.	**Male**	65	3.94	0.46	162	-1.67	0.09
	Female	99	4.04	0.31	102.95		
I25.	**Male**	65	3.94	0.34	162	1.21	0.22
	Female	99	3.84	0.60	159.82		
I26.	**Male**	65	4.06	0.30	162	.45	0.65
	Female	99	4.03	0.50	160.64		
I27.	**Male**	65	4.00	0.00	162	-.30	0.76
	Female	99	4.01	0.26	98.00		
I28.	**Male**	65	3.83	0.67	162	1.36	0.17
	Female	99	3.68	0.72	143.95		
I29.	**Male**	65	2.94	1.05	162	-.43	0.66
	Female	99	3.01	1.02	133.89		
I30.	**Male**	65	2.72	0.62	162	-1.37	0.17
	Female	99	2.88	0.76	153.81		
I31.	**Male**	65	3.68	0.77	162	1.38	0.16
	Female	99	3.48	0.93	153.14		

Table 4 shows the students' perceptions of studying through e-learning instructional approach based on their gender. From the result, it is revealed that in most of the items, male and female had the same ideas regarding e-learning tools since the p

values are greater than 0.05. This statistically demonstrates that there are strong relationships between males and females student except for Items 12 and 23.

According to the result of the Item12, t (0.88) = 2.024, p=0.36<0.05, there is an outstanding difference between male (x=3.49), and female students, (x=3.16), regarding e-learning tools provide them with interactivity which they can have with their peers and lecturers.

As recent researches revelaed (Fulford and Zhang, 1993; Chapman, et al., 1999; Fredericksen et al., 2000), interactivity is a fundamental feature for students' satisfaction, a higher level of academic achievement, better engagement level, and so optimistic perceptions toward e-learning education.

Moreover, Mishra and Ramesh, (2005) defined that interactivity is an important characteristic of e-learning since it facilitates a collaborative environment through the learning process. Besides, online learners should be aware of skipping unnecessary contents and emphasized more functional ones.

In addition, Item23 illustrate that there is a considerable difference among student about having time aside for discussion with their friends. The result of the average mean shows that, t (0.88) = 2.031, p=0.31<0.05, male are more interested to have a discussion than female. Therefore, students can use the discussion page in order to talk about their ideas related to the course, start new contribution or thread in order to solve different questions related to the subject course (Guragain, 2016). Adamus et al., 2009, carried out a similar study and found that males are less tend to cooperate

than females. Females prefer studying in a collaborative environment and having a discussion with their peers in order to solve problems.

Consequently, both females and males do not use technology in the same level or way according to their experience and expertise, males are more into technology and likely to use online media, however, females are more interested to express less overall talent to use computers and they are likely to use social media and communicative activities (Dorman, 1998; Kayany and Yelsma, 2010). Moreover, in the current study, there is a strong connections among males and females perceptions are demonstrated, however, males are still more interested to use technology to learn the complex subject in an interactive environment and discuss it with their peers in order to solve their problems than females.

4.3 Perceptions of Students' About the Usage of E-Learning Tools According to Age

This part of the research analyzes data by using ANOVA tool to compare the mean value of different age groups. In addition, it represents the cross tabulation on the foundation of the most significant outcomes from ANOVA with a p-value lower than 0.05, which highlights the use of an equal-variance ANOVA estimation. Table 5 and Table6 below, demonstrate the descriptive statistics and the relationship between and within different age groups of the students respectively. Further, the tables show the significant difference between students' perceptions regarding e-learning tools based on their age.

Table 4: Descriptive statistics of students' perceptions of e-learning depending on age

Item	Age	N	Mean	Std. Deviation
I4.	18-21	118	3.18	1.03
	22-25	36	2.75	1.18
	Over 25	10	2.40	0.69
	Total	164	3.04	1.07
I15.	18-21	118	3.72	0.66
	22-25	36	3.83	0.60
	Over 25	10	3.20	1.03
	Total	164	3.71	0.69
I22.	18-21	118	3.21	0.87
	22-25	36	3.61	0.64
	25	10	2.90	1.37
	Total	164	3.28	0.88
I30.	18-21	118	2.81	0.70
	22-25	36	2.69	0.66
	Over 25	10	3.40	0.69
	Total	164	2.82	0.71

Students' perceptions' towards e-learning instructional environment depending on the age is shown in Table 6 below:

Table 5: Students' perceptions depending on the age

Items		Sum of Squares	df	Mean Square	F	P	Significant Difference
I4.	**Between Groups**	9.36	2	4.68	4.22	0.01	18-21/22-25
	Within Groups	178.41	161	1.10			
	Total	187.78	163				
I15.	**Between Groups**	3.15	2	1.58	3.42	0.03	22-25/over 25
	Within Groups	74.37	161	0.46			
	Total	77.53	163				
I22.	**Between Groups**	5.93	2	2.96	3.94	0.02	18-21/22-25
	Within Groups	121.15	161	0.75			

	Total	127.09	163				
I30.	**Between Groups**	3.95	2	1.97	4.05	0.01	22-25/over 25
	Within Groups	78.55	161	0.48			
	Total	82.51	163				

**p<0.05*

As it can be seen in the result of the given Items in the Tables 5 and 6, out of 31 Items, only Items 4, 15, 22 and 30 have noted worthy results. The p-value in all Items is less than <0.05, which established a significant point for the study.

According to the result of Item 4, (p= 0.01), there is a considerable difference among students' perceptions. Moreover, the result of Post hoc comparisons using the LSD test indicated that the mean score for the age group 18-21, (X=3.18, SD=1.03), was considerably different than the age groups of 22-25 and over 25 with means (x=2.75, SD=1.18 and x=2.40, SD=0.69) respectively. Thus it can be concluded that first age group students are more satisfied with the method since they can have collaboration with their peers and teacher in order to solve problems via video conferencing and chat sessions compare to age groups of 22-25 and over 25. This reveals that young generations are more interested to use technology; therefore, they can simply be adapted to the instructional method due to the utilization of technology. Consequently, the more experience learners have used technology the higher the levels of students' motivation in learning new subjects through technology (Simmers & Anandarajan, 2001; Volery & Lord, 2000).

Furthermore, as the result of Item15 shows, p= 0.03, there is a remarkable difference between the second age group with the other two groups. Besides, the outcome of post hoc comparison and LSD test demonstrates that the age group 22-25 (x= 3.83,

SD=0.60) was significantly different than age group 18-21(x=3.21, SD=0.66) and over 25(x=2.90, SD=1.03). As a result, this group of students is impressed by e-learning collaboration tools as it makes them engage in the educational environment, consequently, improve their studying process. According to Muniz-Solari & Coats (2009), students' engagement has received little attention in online learning, however, learners' engagement has considerable influence on their outcomes, comprising completion of educations with more achievement (Chen, Lambert, and Guidry, 2010).

Moreover, as it can be seen in the result of post hoc comparison and LSD test of Item 22, there is a remarkable difference, (p= 0.02), among students perceptions. The age group 22-25 agreed more, (x=3.61, SD=0.64), compared to other two groups, 18-21 and over 25, (x=3.21, SD=0.87, and x=2.90 SD=1.37), on using e-learning as an educational approach since this method would make them feel of being part of the university community. Further, the outcome of the Item30 demonstrates a significant difference, (p=0.01). Students of age group over 25 (x=3.40, SD=0.69) agreed more on learning better when they have a friend from a different culture and social background compare to the other two groups of 18-21 and over 25 (x=2.81, SD=0.70, and x=2.69, SD=0.69).

As a result, recent researches mentioned that the huge number of online students are now non-traditional learners who are competing commitments of education, life, and work demand and hence elect to online education due to its convenience and having chance to know more learners (Thompson, Miller, & Franz, 2013; Chen, Lambert, & Guidry, 2010).

4.4 Perceptions of Students' About the Usage of E-Learning Tools According to the Major of Education

In this part of the analysis, in order to discover if filed of education has an effect on students' perceptions regarding e-learning instructional approach, a one-way ANOVA is conducted. Table7 below shows the descriptive results and Table8 shows the ANOVA analysis in order to examine the effect of the field of education on students' perceptions regarding e-learning tools.

Table 6: Descriptive statistics of independent analysis on the field of study

		N	Mean	Std. Deviation
I3.	**Faculty of Education**	72	2.49	0.91
	Faculty of law	46	3.80	0.68
	Faculty of Medical Technology	46	2.24	0.82
	Total	164	2.79	1.04
I5.	**Faculty of Education**	72	2.28	0.71
	Faculty of law	46	1.83	0.70
	Faculty of Medical Technology	46	2.37	0.90
	Total	164	2.18	0.79
I6.	**Faculty of Education**	72	3.96	0.42
	Faculty of law	46	3.30	1.15
	Faculty of Medical Technology	46	3.91	0.66
	Total	164	3.76	0.80
I7.	**Faculty of Education**	72	3.79	0.62
	Faculty of law	46	2.15	0.84
	Faculty of Medical Technology	46	3.76	0.70
	Total	164	3.32	1.02
I11.	**Faculty of Education**	72	2.68	0.90
	Faculty of law	46	2.98	0.83
	Faculty of Medical Technology	46	2.41	0.88
	Total	164	2.69	0.89
I17.	**Faculty of Education**	72	4.31	0.54
	Faculty of law	46	3.87	0.58
	Faculty of Medical Technology	46	4.30	0.62
	Total	164	4.18	0.60
I18.	**Faculty of Education**	72	3.63	1.01
	Faculty of law	46	2.00	0.55

	Faculty of Medical Technology	46	3.61	1.04
	Total	164	3.16	1.16
I20.	**Faculty of Education**	72	3.60	0.83
	Faculty of law	46	3.20	1.00
	Faculty of Medical Technology	46	3.87	0.68
	Total	164	3.56	0.88
I28.	**Faculty of Education**	72	3.74	0.69
	Faculty of law	46	3.48	0.96
	Faculty of Medical Technology	46	4.00	0.00
	Total	164	3.74	0.70
I30.	**Faculty of Education**	72	3.08	0.49
	Faculty of law	46	2.41	0.85
	Faculty of Medical Technology	46	2.80	0.65
	Total	164	2.82	0.71

Table 7: Students' perceptions regarding e-learning educational approach depending on the field of study

		Sum of Squares	**Df**	**Mean Square**	**F**	**P**	**Significant Difference**
I3.	**Between Groups**	67.93	2	33.96	49.00	0.00	Law/ Education
	Within Groups	111.59	161	0.69			
	Total	179.53	163				
I5.	**Between Groups**	8.10	2	4.05	6.81	0.00	Law/Medical Technology
	Within Groups	95.77	161	0.59			
	Total	103.87	163				
I6.	**Between Groups**	13.45	2	6.73	11.74	0.00	Education/ Law
	Within Groups	92.26	161	0.57			
	Total	105.72	163				
I7.	**Between Groups**	87.69	2	43.84	85.90	0.00	Education/ Law
	Within Groups	82.17	161	0.51			
	Total	169.87	163				
I11.	**Between Groups**	7.35	2	3.67	4.78	0.01	Law/Medical Technology

	Within Groups	123.78	161	0.76			
	Total	131.14	163				
I17.	**Between Groups**	3.58	2	1.79	3.90	0.02	Education/ Law
	Within Groups	73.94	161	0.45			
	Total	77.53	163				
I18.	**Between Groups**	6.27	2	3.13	9.31	0.00	Education/ Law
	Within Groups	54.23	161	0.33			
	Total	60.51	163				
I20.	**Between Groups**	86.72	2	43.36	51.39	0.00	Law/Medical Technology
	Within Groups	135.83	161	0.84			
	Total	222.55	163				
I28.	**Between Groups**	6.26	2	3.13	6.67	0.00	Law/Medical Technology
	Within Groups	75.46	161	0.46			
	Total	81.72	163				
I30.	**Between Groups**	12.62	2	6.31	14.53	0.00	Education/ Law
	Within Groups	69.89	161	.43			
	Total	82.51	163				

*p<.05

According to the results of Item 11, there are significant effects of field of study as $p<0.05$. This finding can be interpreted that there is a strong relationship between the field of study and students' perceptions.

As the result of the Item3 shows and according to the post hoc comparison along with the LSD test, students agreed that they would be able to understand and learn complicated subjects through e-learning via multimedia elements. Accordingly, there

is a significant difference depending on their fields, as p=0.00. Students in the field of law are more satisfied with the result of (x=3.80, SD=0.68) compare to the fields of Education (x=2.49, SD=0.91) and medical technology (x=2.24, SD=0.82) with the result, x=2.49, and x=2.24 respectively. Moreover, the outcome of Item 5, 6 and 7 illustrate that there is a remarkable difference among students' perceptions as p=0.00 for the entire Items. Further, the result of post hoc comparison and LSD test reveals that students in the field of medical technology are more positive, (x=2.37, SD=0.903) than students in the field of education, (x=2.28, SD=0.71), and Law (x=1.83, SD=0.70) towards e-learning which supports their studying through its useful tools. In addition, students in the field of education, (x=3.96, SD=0.42) are believed more that this method can be integrated to the face-to-face learning environment compared to the other fields in medical technology and Law with the result of (x=3.91, SD=0.66) and (x=3.30, SD=1.15) respectively.

In addition, based on the result of Item 7, students in the field of education (x=3.79, SD=0.62) compare to another field in medical technology, (x=3.76, SD=0.70) and law, (x=2.15, SD=0.84) found e-learning harder since it needs some basic information about the utilization of technology.

Besides, the outcome of the Items11 and 17, (p=0.01; p=0.02) demonstrate that there are outstanding differences on students' perceptions about tools of e-learning which provide students with technical support, email, peer network, chat, instant messaging and etc. Further, this method of instructional can effectively enhance their computer skills since they need to do most of the studying parts online using technology and the internet. Thus Students are highly satisfied that tools are quite useful, it supports

different connection ways with others, and make them deal with technology while learning as well as the technical support if any issue faced in the online system.

The field of law students agreed more, (x=2.98, SD=0.83) compare to the other fields in education and medical technology, (x=2.68, SD=0.90), (x=2.41, SD=0.88) and they are more likely to interpret that these tools are very beneficial for their learning. Moreover, again most of the students in the field of education, x=4.31, are more optimistic that their computer skills are improved through e-learning against another group in the field of law, x=3.87, and medical technology, x=4.30.

The outcome of the post hoc comparison and LSD test in Items 18 and 20 display that there is the considerable difference among students' perceptions according to their field of study, as p=0.00 for the whole Items. This proofs that since students are more into technology thus prefer to use e-learning approach rather than the traditional way of learning. According to the result, students in the field of education, (x=3.63, SD=1.01) agreed more than students in the field of law, (x=2.00, SD=0.55) and medical technology (x=3.61, SD=1.04).

As can be seen in the result of Items 28 and 30, and also the post hoc comparison and LSD test, students perceptions are affected by the field of study. Moreover, according to the p values in both Items which is less than 0.05, this statistically proofs that there is a remarkable difference as regard to their field of study. Students in the field of medical technology more positive, (x=4.00, SD=0.00) than students in the field of education, (x=3.74, SD=0.69) and law, (x=3.48, SD=0.96) in regards with the e-learning method of instruction which cater students with different educational materials such as graphics, text, audio video and animation. Besides,

students in the field of education are more satisfied, (x=3.08, SD=0.49) compare to the other fields of law, (x=2.41, SD=0.85) and medical technology, (x=2.80, SD=0.65) towards learning can be more efficient when they have peers from other countries, culture, and social background.

According to the obtained results of this section, it can be concluded that e-learning contains the usage of digital for both teaching and learning. It caters students with a great opportunity to expand the learning environment for the different population of students from a different location, culture, and race, make them able to have participation regardless of geographical location, independent place and time (Keengwe & Kidd, 2010; Richardson and Swan, 2003). Moreover, e-learning provides students with technological tools in order to support learning and communication as well as more dependent and timely content, and lower study cost. Thus it makes learning the more comfortable particularly complex subject through multimedia educational materials comprises text, video, audio, animation and etc...(Liaw, Huang and Chen, 2007; Rosenberg, 2001). According to Yang and Lin (2010), learners from different fields may perceive the e-learning in a different way thus it may cause an issue in the learners' attitudes in their learning process.

Chapter 5

CONCLUSION

In general, e-learning uses technological tools to help learners to study anywhere and anytime. It includes the training as well as delivering knowledge to encourage learners to interact with each other. This thesis employed e-learning instructional method in order to assess the perceptions of students toward it tools in Nalut University. According to the result of the study, the majority of students quite agreed and had positively impressed by e-learning environment and its tools as it made them become a risk taker and thinker to learn a new concept in a sheltered environment.

There are significant result on students' perceptions of studying through e-learning instructional approach based on their gender. According to the outcome, in most of the items, male and female had the same ideas regarding e-learning tools since the p values are greater than 0.05, however, there are items which shows strong connections among males' and females' perceptions. For instance, males (x=3.49) are still more interested to use technology to learn the complex subject in an interactive environment and discuss it with their peers in order to solve their problems than females (x=3.16). In addition, there is a considerable difference among student about having time aside for discussion with their friends. The result of the average mean shows that, t (0.88) = 2.031, $p=0.31<0.05$, male are more interested to have a discussion than female. Therefore, students can use the

discussion page in order to talk about their ideas related to the course, start new contribution or thread in order to solve different questions related to the subject course.

Besides, there are significant result on students' perceptions of studying through e-learning instructional approach based on their age. According to the result there is a considerable difference among students' perceptions. The first age group, (18-20), students are more satisfied with the method since they can have collaboration with their peers and teacher in order to solve problems via video conferencing and chat sessions compare to age groups of 22-25 and over 25. Furthermore, there is a remarkable difference between the second age group, (22-25), with the other two groups, (18-20),(over 25). As a result, this group of students are impressed by e-learning collaboration tools as it makes them engage in the educational environment, consequently, improve their studying process.

Apart from this, there are significant result on students' perceptions of studying through e-learning instructional approach based on their field of education. The result shows that students in the field of law are more satisfied, ($x=3.80$, $SD=0.68$), compare to the fields of Education ($x=2.49$, $SD=0.91$) and medical technology ($x=2.24$, $SD=0.82$) with the result, $x=2.49$, and $x=2.24$ respectively. In addition, students in the field of education ($x=3.79$, $SD=0.62$) compare to medical technology, ($x=3.76$, $SD=0.70$) and law, ($x=2.15$, $SD=0.84$) found e-learning harder since it needs some basic information about the utilization of technology.

Consequently, the overall result showed the neutrally positive perceptions of students about e-learning instructional approach. The vast majority of students are actively

engaged with the learning environment and they considered it as one the necessary, and effective element of the instructional process at the university. However, some of the students think that they have less motivation for studying through e-learning due to lack of control from the lecturer.

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APPENDICES

Appendix A: Questionnaire

Section 1

Dear student,

Please respond to the following question by selecting the suitable level by ticking (✓) on the following statements.

Section 1: Demographics

Please tick (✓) the proper choices and prepare the needed information below:

Gender: Male ☐ Female ☐

Age: 18 – 21 ☐ 22 – 25 ☐ ☐ Over 25

Field of Study: Faculty of Education ☐

Faculty of Law ☐

Faculty of Medical Technology ☐

Section 2:

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. E-learning helps me access to real-time data, knowledge base, virtual simulations, media clips, web pages and etc.					
2. I am capable to interact in a good way with my friends by using e-learning tools such as immediate messaging, social networks and etc.					
3. I am able to understand					

difficult concepts using e-learning through the use of multimedia elements such as video, audio, graphics, and animation.					
4. E-learning supports teamwork by the usage of computer conferencing, Net Groups, etc.).					
5. My university resources (e.g. Blackboard E-Learn, course and school websites) support my learning.					
6. The online educational experiences are well-integrated with face to face learning.					
7. Find using technology devices (e.g. PDAs, mobile phone, IPad, etc) difficult for my learning.					
8. I can study easier by e-learning					
9. I have fun by studying e-learning					

10. I would feel better if there is much more of e-learning during my courses.					
11. E-learning provides technical support in assessments, email, peer networks, real-time chats, instant messaging, etc.					
12. E-learning prepares interactivity with other people (e.g. two-way communication, individual control as well as making choices while using a system).					
13. I am capable to contact worldwide and share data and information with other people					
14. I feel dedicated to learning by using e-learning.					
15. My online experiences assist me to involve actively in my learning.					
16. E-learning is a vital element of my course.					
17. I am aware that					

using e-learning can improve my computer skills (e.g, browsing the World Wide Web, uploading video and audio, etc.).					
18. I believe e-learning is much beneficial than the traditional one					
19. I am capable to improve my online community activities by using e-learning.					
20. I am capable to discover educational interests with my teachers as well as friends.					
21. I learn to discover notions assertively by the help of other people					
22. I sense that I am part of the university society.					
23. While studying, I usually spend time to discover course material with the help of my friends.					
24. When do not have the chance for					

understanding the material, I prefer to ask others for help by using e-learning tools (e.g, chats, Facebook, Friendster, etc.).					
25. To have online communication for improving my learning.					
26. I have the ability to recognize learners whom I ask for assist whenever I needed (e.g. by using Facebook forums, etc.).					
27. E-learning tools prepare numerous ways of showing resources electronically (e.g. usage of text-based material, video to contain a diverse type of student).					
28. E-learning prepares numerous ways by using text, graphics, video as well as animation for the nonlinear education methods.					

29. I am capable to regain electronic feedback as well as grades from my teachers by using Blackboard e-learn or individual course website.					
30. I study superior by having friends from diverse societies and community backgrounds.					
31. My lecturers put proper evaluation based on our level of the course and learning capability					

Appendix B: Turnitin Originality Report

Turnitin Originality Report

Thesis_V08 by Imad Wr

From imad (SCHOOL OF COMPUTING AND TECHNOLOGY)

- Processed on 20-Jun-2019 08:56 +03
- ID: 1145472295
- Word Count: 14734

Similarity Index
14%
Similarity by Source

Internet Sources:
9%
Publications:
2%
Student Papers:
11%

sources:

1 1% match (Internet from 05-Jan-2019)
http://eprints.utar.edu.my/793/1/GCIS2106-2012-0808079-1.pdf

2 1% match (student papers from 02-Aug-2018)
Submitted to Eastern Mediterranean University on 2018-08-02

3 1% match (Internet from 08-Jan-2018)
https://www.diva-portal.org/smash/get/diva2:925978/FULLTEXT01.pdf

4 1% match (student papers from 30-Aug-2015)
Class: SCHOOL OF COMPUTING AND TECHNOLOGY
Assignment: Fatih_Sapanca
Paper ID: 564772539

5 < 1% match (student papers from 01-Jun-2011)
Submitted to University of Leicester on 2011-06-01

6 < 1% match (Internet from 18-Nov-2017)
http://online-journals.org/index.php/i-jet/article/download/3465/3211

7 < 1% match (student papers from 23-Aug-2007)
Submitted to UNITEC Institute of Technology on 2007-08-23

8 < 1% match (student papers from 16-Jan-2018)
Submitted to Eastern Mediterranean University on 2018-01-16

9 < 1% match (student papers from 04-Sep-2015)
Submitted to Eastern Mediterranean University on 2015-09-04

10 < 1% match (Internet from 01-Nov-2017)
http://docplayer.net/37159961-Instructional-technology.html

11 < 1% match (student papers from 04-Nov-2018)
Submitted to University of South Alabama on 2018-11-04

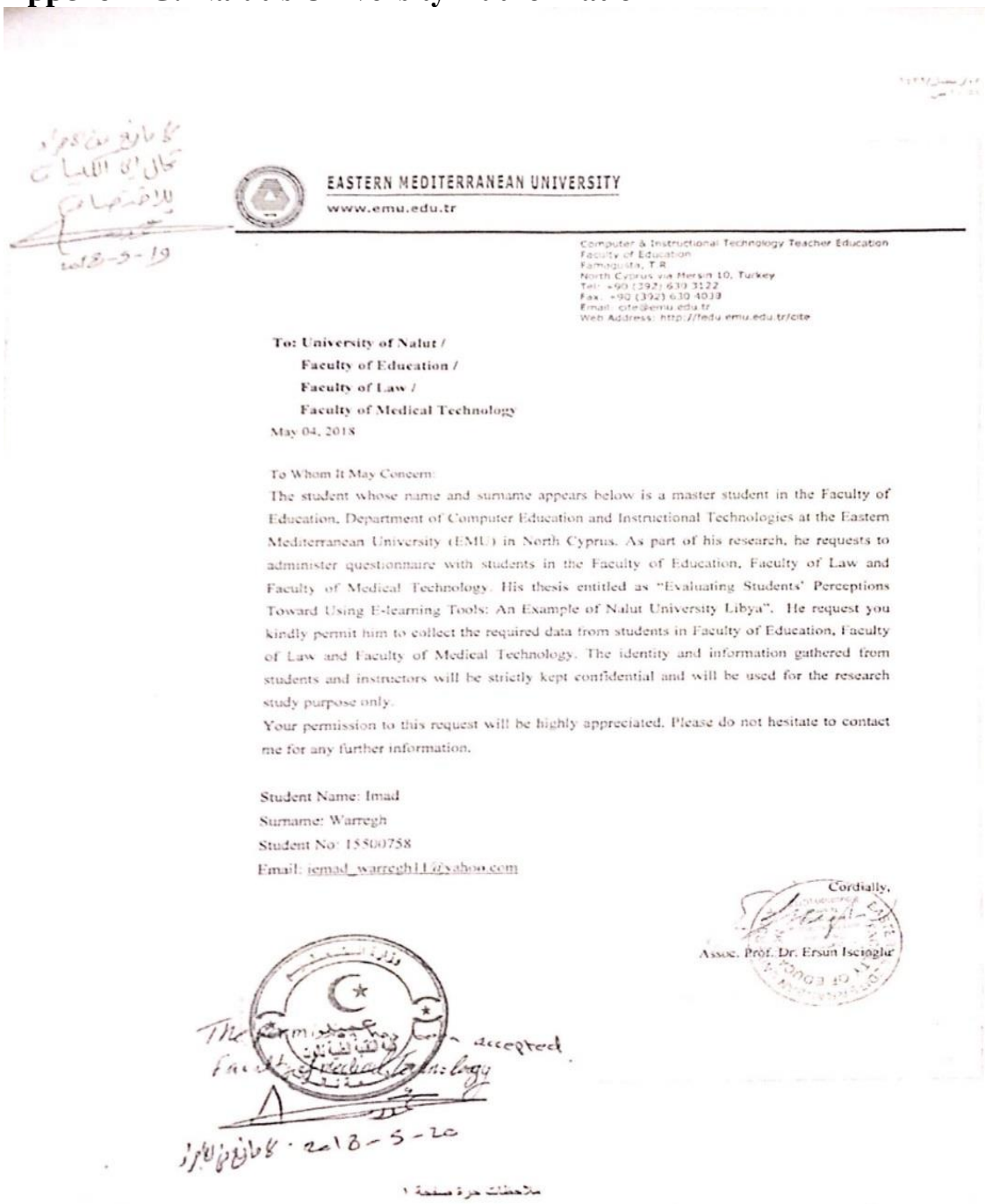
12 < 1% match (student papers from 05-Oct-2016)
Submitted to International University - VNUHCM on 2016-10-05

13 < 1% match (student papers from 12-Jul-2018)
Submitted to Eastern Mediterranean University on 2018-07-12

14 < 1% match (Internet from 09-Jan-2019)
https://docplayer.net/33565390-Build-and-design-four-stroke-engine-simulator-visualization-of-otto-cycle.html

15 < 1% match (Internet from 08-Aug-2018)

Appendix C: Nalut's University Authorization



EASTERN MEDITERRANEAN UNIVERSITY
www.emu.edu.tr

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Faculty of Education
Famagusta, T.R.
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Tel: +90 (392) 630 3122
Fax: +90 (392) 630 4038
Email: cite@emu.edu.tr
Web Address: http://fedu.emu.edu.tr/cite

To: University of Nalut /
Faculty of Education /
Faculty of Law /
Faculty of Medical Technology

May 04, 2018

To Whom It May Concern:

The student whose name and surname appears below is a master student in the Faculty of Education, Department of Computer Education and Instructional Technologies at the Eastern Mediterranean University (EMU) in North Cyprus. As part of his research, he requests to administer questionnaire with students in the Faculty of Education, Faculty of Law and Faculty of Medical Technology. His thesis entitled as "Evaluating Students' Perceptions Toward Using E-learning Tools: An Example of Nalut University Libya". He request you kindly permit him to collect the required data from students in Faculty of Education, Faculty of Law and Faculty of Medical Technology. The identity and information gathered from students and instructors will be strictly kept confidential and will be used for the research study purpose only.

Your permission to this request will be highly appreciated. Please do not hesitate to contact me for any further information.

Student Name: Imad
Surname: Warregh
Student No: 15500758
Email: iemad_warregh11@yahoo.com

Cordially,

Assoc. Prof. Dr. Ersun Iscioglu