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# Measuring E-learning Readiness of the Students in Tishk International University

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## Abstract

With the advancement of technology, almost every aspect of our life is started to have an electronic version, the availability of such technologies used to be the challenge but more recently, the readiness of the user is growing bigger. E-learning and the students' readiness to use such a tool in Tishk International University is the topic of this study. The study used a questionnaire, which is consisted of 31 items with demographic data as well to collect the required data. Results showed that the students are at the expected level of E-learning readiness. Although some improvements are needed to meet the minimum requirements to perform e-learning. The study selected three factors, the availability of needed technology for e-learning, the student's technical skills to use e-learning, the acceptance of students to use E-learning to conduct the study.

**Keywords:** E-learning, Electronic Learning, Readiness, Students Readiness.

## الملخص

مع التقدم التكنولوجي ، بدأ كل جانب من جوانب حياتنا تقريباً بالتحول الى استخدام النسخ إلكترونية، وإن توفر مثل هذه التقنيات يمثل تحدي. ولكن في الآونة الأخيرة أصبحت جاهزية المستخدمين للتعامل مع هذه التقنيات أكبر. يعد التعليم الإلكتروني وإستعداد الطلاب لإستخدام هذه الأداة في جامعة تشك الدولية موضوع هذه الدراسة. إستخدمت الدراسة إستبياناً يتكون من 31 بنداً مع البيانات الديموغرافية لجمع البيانات المطلوبة. أظهرت النتائج أن الطلبة في المستوى المطلوب من الجاهزية لإستخدام التعلم الإلكتروني. على الرغم من بعض التحسينات اللازمة لتلبية الحد



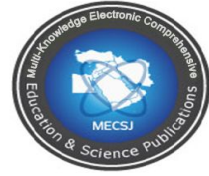
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الأدنى من المتطلبات لأداء التعلم الإلكتروني لبعض العوامل. إختارت الدراسة ثلاثة عوامل ، وهي توفر التكنولوجيا اللازمة للتعليم الإلكتروني، المهارات التقنية للطلاب لإستخدام التعلم الإلكتروني، وقبول الطلاب لإستخدام التعلم الإلكتروني لإجراء الدراسة.

**الكلمات المفتاحية:** التعليم الإلكتروني، الإستعداد للتعليم الإلكتروني، جاهزية الطلبة.

## 1. Introduction

E-learning carries all the learning material through the internet. It can be used anytime, anywhere (Ardito, et al., 2006). E-learning delivers a learning experience by using information technology. The E-learning market increased by 120% in 2002 and Asia, it has increased by 25% in 2005. The reason behind the large increase in the E-learning market is due to the high cost of conventional training. There are many companies like IBM which saved money on training by using E-learning (Aydin & Tasci, 2005). E-learning is a good solution for organizations that deal with fast-changing knowledge. Also, it reduces the cost of training (Schreurs, Ehlers, & Sammour, 2008). E-learning improves the quality of education that is provided for students and it has many advantages such as: in e-learning, the students have access to the information from any device and this can happen any time anywhere. It offers easy communication between lecturer and student and the registration became easier with e-learning. E-learning will save money because the students do not need to copy notes and buy books they can download from the internet. On the contrary, there are some weaknesses of e-learning like the cost of internet usage, and slow speed of internet, there are not enough computers for all students, and some people do not have good skills to use computer, and internet (Kihara & Gichoya, 2014), and the student who will use the E-learning system has to have good skills of using technology (Alhussen & Subhi, 2010). E-learning is expensive, and it is costly to implement. As a result, it is very important to check the environment and e-ready before starting with it (Schreurs, Ehlers, & Sammour, 2008) (Parkes, Stein, & Reading, 2014). To apply E-learning successfully the study of its environment cannot be ignored. These days the E-learning system is not used only in an educational institution; it grows, and it is used in different organizations. Therefore, it is important to measure the readiness of implementing the E-learning system not only for the user but also, for other factors that can affect the readiness directly or indirectly. To develop the E-learning system, the study of the environment is very important (Hashim & Tasir, 2014). Before the implementation of e-learning, it is important to study the factors that lead to the failure of the E-learning system and to design a successful E-learning system, it is important to understand the need and the major players in an E-learning environment

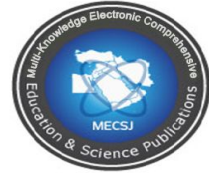


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(Mercado, 2008). The factors that can affect learning were studied by many researchers (Mohammadi, 2015) (Tarhini, Hone, & Liu, 2013). Students are one of the important factors that affect E-learning readiness. Measuring the level of student's readiness for E-learning is essential to construct an effective and solid E-learning system (Ünal, Alır, & Soydal, 2014). This paper will study the readiness of students of Tishk International University for using E-learning and check if the students can meet minimum requirements that E-learning requires. The goal of this study is to check if the students of Tishk International University are ready to use e-learning as a learning environment before using it.

## **2. Literature Review**

(Elsayed & Ali, 2010) chose a sample of students of Egyptian faculty of tourism and hotel to study the readiness assessment of the students in a facility. The results showed that many dimensions affect the level of readiness such as skills of learning and technology in addition to management behavior. The study showed that the level of student readiness for E-learning is not enough. Hence, the student has to improve their skills to be able to deal with e-learning. (Fageeh, 2011) sample of undergraduate students have been chosen from the ELT department from king Abdullah University for this study, these students are asked if they want to use the E-learning as a learning platform? and for their acceptance to use this platform and E-learning environment to perform the learning activities. The data of this research have been collected by using a questionnaire and interview-based on four different variables, online communication, self-efficacy, motivation for learning perceived facilitators, an inhibitor of computer- assessed language learning (CALL), language skills. After the analysis of the attributes and factors, the author concluded that the students are prepared well to use a new learning environment which is e-learning. The survey study of (Nilsook, 2013) was carried out using a sample of Ph.D. students of universities of Thailand. This survey uses a questionnaire based on six dimensions: online skills, online audio, and video, technology access, relationship motivation, the importance of success and internet discussion. The survey showed that Ph.D. students have a good level of E-learning readiness, especially for their technology access. On the other hand, the level of motivation was lower. This study was the start point to enhance the student level for E-learning readiness by the implementation of E-learning for innovator and discussion skills of the internet. (Akaslan & Law, 2011) sample of 417 students in the department of HELS was chosen for this survey. The questionnaire used to collect the data has been used in previous studies. It based on six factors: technology, training, content, institution and people skills. After analyzing the data, the result showed that students of this department need more training to use



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e-learning. (Ünal, Alır, & Soydal, 2014) measured the students' readiness for the information management department of Hacı University. Questionnaires of 39 items utilized in previous studies have been used to collect the data. The author's based their study on five factors: availability of technology, use of technology, self-confidence, acceptance, and meaning. The result showed that the availability of technology is not ready and it needs some work. The other factors need improvement and in general, the students are ready, but they need some of the improvement. (Alabi & Alabi, 2010) A sample of five facilities of Lagos University in Nigeria was chosen for this study. 1,450 students were chosen as a sample for this study. The results showed that many contracts face the student: poor economics make the technology not available or hard to get like expensive laptops, the rooms of lectures and the classroom are not ready to be used for e-learning, indicate internet access, power usage, ITC development in low level. The author gave many recommendations to pass these constructs. (Afolabi, 2015) This study is based on three questions. The first is about the availability of tools that use e-learning. Second is about the readiness of lecturers to use e-learning. and the third is about the readiness of students to use e-learning. A sample of students from five facilities was chosen which includes 20 students from each faculty. Two questionnaires were used in this study; one for students and another for lecturers. The questionnaire asked about the availability of internet, Information, and Communication Technology (ICT) skills and people's readiness for using E-learning. The result showed the tools are available for E-learning and both student and lecturer are ready to use E-learning, and both meet the required skills to perform it.

### **3. Model Of E-learning Readiness**

(Akaslan & Law, 2011) engaged in very detailed research about the readiness of E-learning of university students in Turkey, the study selected students from electronic related studies. They have used a model they used in a previous study (Akaslan & Law, 2011), the model was used to assess the readiness of the teachers' side in different universities in Turkey working in electronic related studies as well. A model that uses to measure teachers' E-learning readiness has been developed by Akaslan and Law (Akaslan & Law, 2011) is suitable to measure students' E-learning readiness, because the core factors and sub-factors remain relevant. In comparing both models, we can find that the model that new factors have been added to check the traditional skills of students (e.g. time management, self- responsibility, self- motivation). In Figure (1), the teachers' model and people are one of the main factors. This factor subsumes three attributes, experience, attitude and confidence. The experience of Students and the confidence in using various ICT moreover, the attitudes towards E-learning are considered as an

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important success factor for e-learning. Nevertheless, the ‘People’ factor can be refined by measuring students’ traditional skills (e.g. time management, self-responsibility, self-motivation) (Ünal, Alır, & Soydal, 2014).

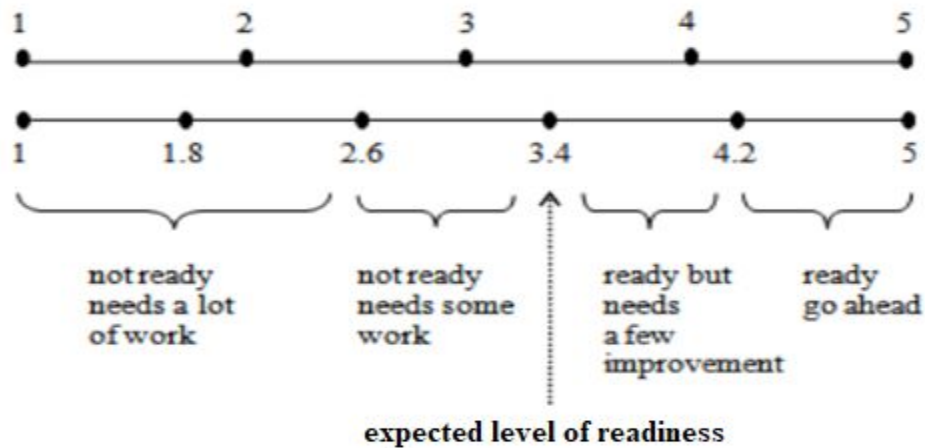


**Figure (1): Akaslan and Law’s model for measuring students’ readiness for E-learning (Akaslan & Law, 2011).**

#### 4. Methodology

The development of technology is lead to push the university to use the new technology of learning. Going through this technology transfer to this technology is not that easy. It needs to understand the system and know each actor in this system and if they are ready to play their role in this environment. To know that checking if each actor meeting his minimum requirements to use the system discovered that is very important to perform a successful E-learning system. The student is one of the important actors in this system, to measure the readiness level of the student. The questionnaire of 31 items gave to 114 students from different colleges of the university. This survey depends on three phases that affect the E-learning availability of technology, Acceptance, and skills of using technology. Participants are asked to put their level value for each item. Table (1) shows that all the items of the survey that was used to collect data. Participants reported their perceptions on these items with five points started from 1 which represents "strongly disagree" till 5 which represents "strongly agree". (Aydin & Tasci, 2005) “expected readiness” level and which is less than, not ready, and need more work, which is ready to use. Figure (2) show the level classification and the score for each class. This model used

by many research that studied E-learning readiness for different students from different universities.



**Figure (2): E-learning readiness assessment model (Aydin & Tasci, 2005)**

As mentioned earlier the universe of our study was defined as the students of Tishk International university (N= 114). The students were visited in person and data were obtained from 114 (5%) students from 6 different departments of Tishk International university. 53% (61) of the respondents were female and 47% (53) were male. 56% (35) of the respondents were younger than 22 years, 22% (34) were between 20-22 years, 18% (45) were between 18-19 years.

## 5. Results

The E-learning readiness survey has five main components that aim to reveal the “availability of technology” facilities, “use of technology”, “self-confidence”, “acceptance” levels and “training” needs of the respondents. In this study, three-component have been taken they reveal “availability of technology” facilities, “use of technology”, “self-confidence” and “acceptance” levels. The mean scores for E-learning related 31 items of the survey were displayed in Table (1). According to our assessment model, the scores for item 1 (I can access internet any time any place 2.9), 2 (The internet that I use has enough speed to download the multimedia file 3), 5 (I can get any software that I need easily 3.1), 6 I have different image software to open different image format 3), 7 (I have different text software to open different text format 3.2), 8 (I have different audio software to open different audio format 3), 9 (I have different video





software to open different video format 3.2) and 26 (I use some software for homework (AutoCAD, SPSS, MATLAB ..) (2.6 – 3.4: “Not ready needs some work”). The items 1 and 2 refer to that internet technology and its availability are not ready or not sufficient to perform e-learning. The items 5,6,7,8 and 9 refer to that the students don’t have all the software that need by E-learning and getting this software is not easy. On the other hand the mean scores for the item from 10 to 25 and items from 26 to 31 (3.4 – 4.2: “Ready but needs few improvements”). The items from 10 to 25 are belonging to determine the skills of using technology. The items from 27 to 31 referred to the student’s acceptance to use E-learning as a new learning environment. The items 3 (My device can be used to open different file types (image, audio, text and video 3.4) and 4 (My device is connected to the internet easily 3.4) (3.4 “expected level of readiness”).

**Table (1): Mean scores for the E-learning readiness survey**

Factor	Items	Mean	Standard deviation	
<b>Availability of Technology</b>	1. I can access the internet any time any place	2.9	1.4	Not ready needs some work
	2. The internet that I use has enough speed to download the multimedia file	3	1.3	Not ready needs some work
	3. My device can be used to open different file type (image, audio, text, and video)	3.4	1.2	the expected level of readiness
	4. My device is connected to the internet easily	3.4	1.3	the expected level of readiness
	5. I can get any software that I need easily	3.1	1.2	Not ready needs some work
	6. I have different image software to open different image format	3	1.1	Not ready needs some work
	7. I have different text software to open different text format	3.2	1	Not ready needs some work



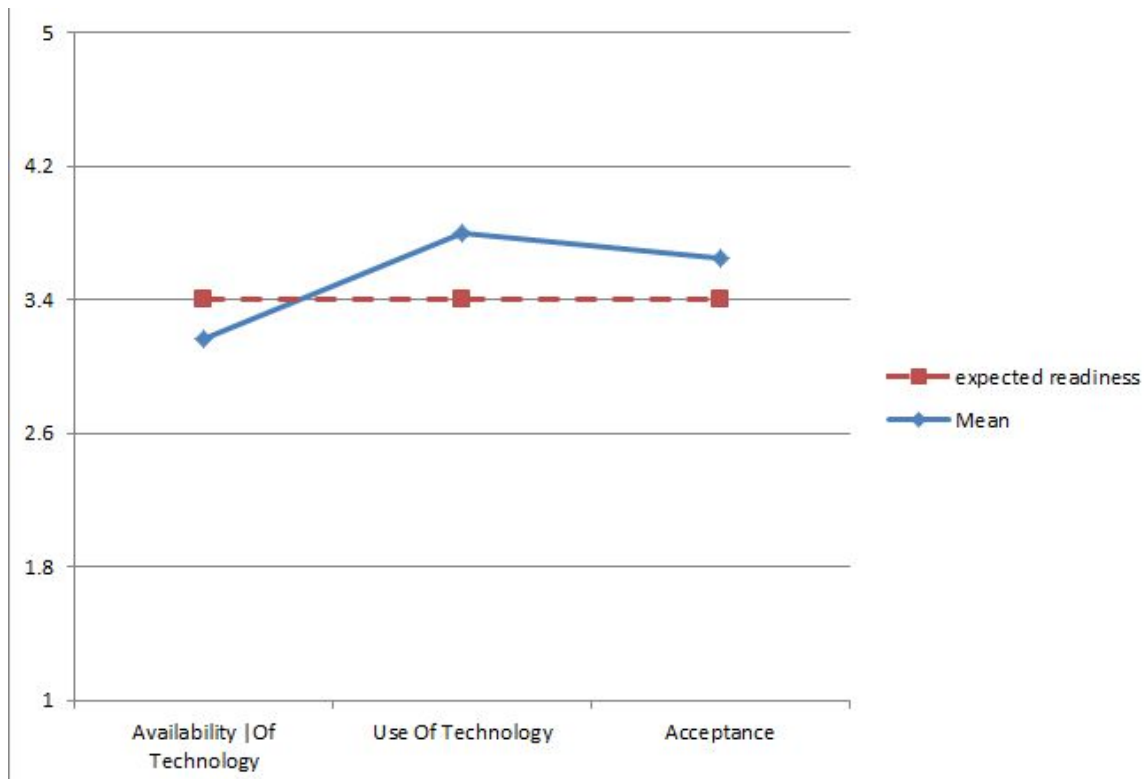
	8. I have different audio software to open different audio format	3	1	Not ready needs some work
	9. I have different video software to open different video format	3.2	1.1	Not ready needs some work
<b>Average (Availability of Technology)</b>		<b>3.17</b>	<b>0.18</b>	<b>Not ready needs some work</b>
<b>Factor</b>	<b>Items</b>	<b>Mean</b>	<b>Standard deviation</b>	
<b>Usage of Technology</b>	1. I know how to connect my device to the internet	3.9	1.2	Ready but needs few improvements
	2. I have good skills in using file management(rename, delete, and create)	3.8	1.1	Ready but needs few improvements
	3. I have good skills in using a search engine (Google, or yahoo,)	4	1	Ready but needs few improvements
	4. I know how to use e-mail	3.9	1.2	Ready but needs few improvements
	5. I know how to install any software on my device	3.7	1.1	Ready but needs few improvements
	6. I know how to download software from the internet	3.8	1.1	Ready but needs few improvements
	7. I know how to download a text file from the internet	3.9	1	Ready but needs few improvements
	8. I know how to download an audio file from my e-mail	3.6	1.2	Ready but needs few improvements
	9. I know how to download the Image file from the internet	4	1.2	Ready but needs few improvements
	10. I know how to download an audio file from the internet	3.8	1	Ready but needs few improvements
	11. I know how to download a video file from the internet	4	1.1	Ready but needs few improvements
	12. I have good skills in using MS-Office (Word, and PowerPoint)	3.7	1.2	Ready but needs few improvements
	13. I can do my homework by using MS-Word, MS-NotePad, and MS-WordPad	3.6	1.2	Ready but needs few improvements
	14. I know which software I have to choose for each file type	3.7	1.1	Ready but needs few improvements
	15. I know how to upload file to the internet	3.8	1	Ready but needs few improvements
	16. I have good skills in social media usage	3.7	1.2	Ready but needs few improvements





	17. I use some software for homework (AutoCAD, SPSS, Matlab ..)	3.3	1.25	Not ready needs some work
<b>Average (Usage of Technology)</b>		<b>3.8</b>	<b>0.17</b>	<b>Ready but needs few improvements</b>
<b>Factors</b>	<b>Items</b>	<b>Mean</b>	<b>Standard deviation</b>	
<b>Acceptance of E-Learning</b>	1. The freedom to get the course information at any time of the day will help me to have more time for creative thinking and leisure.	3.5	1	Ready but needs few improvements
	2. Using free resources such as a web-based learning system and e-libraries helped me to save money and effort.	3.6	1	Ready but needs few improvements
	3. Using the Web-based learning system provides more opportunities to participate in the class.	3.6	1	Ready but needs few improvements
	4. Using emails to communicate with other student groups help me to save my expense and effort.	3.7	1.1	Ready but needs few improvements
	5. Overall, using Web-based learning help improving my quality of working life.	3.8	1	Ready but needs few improvements
<b>Average (Acceptance of E-Learning)</b>		<b>3.65</b>	<b>0.11</b>	<b>Ready but needs few improvements</b>

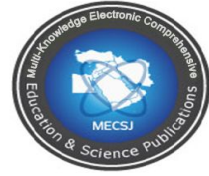
Figure (3) includes two areas of the area above the dashed line. Factor in this area refers to “Ready for E-learning”. The second area is under the dashed line which refers to the factor that is “Not Ready for E-learning”.



**Figure (3): The readiness for E-Learning.**

## 6. Conclusions

In this study, the E-learning readiness of Tishk International University students was tested with a paper-and-pen survey with 31 items that measure the perceptions of the participants in terms of Readiness, Acceptance. The result showed that the student has good skills to perform E-learning and the level of acceptance to use this learning environment was at a good level. In general, the availability of technology needs more work to be ready to cover the requirement of E-learning in Tishk International University. The skills of the student for using the technology is ready but needs little improvement. The students have good skills in using the internet and software and cover the requirement that requires performing e-learning. The student can improve their self by tacking some course about using technology. After doing the few improvements in (the availability of technology, the usage of technology, and the acceptance of e-learning), the authors recommend using the full e-learning facilities in this university as the

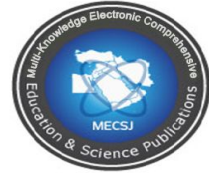


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environment is ready and the students are also ready to perform their duty in this environment.

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