

## UNIVERSITY STUDENTS' READINESS FOR E-LEARNING

### LA PREPARACIÓN DE LOS ESTUDIANTES UNIVERSITARIOS PARA EL APRENDIZAJE EN LÍNEA

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#### **Abstract:**

The general purpose of this study is to determine the readiness of university students for e-learning. Quantitative methodology is employed in the study. The study was carried out during the spring term of 2016-2017. The study group consisted of students studying at University of Kyrenia. A total of 160 students participated in the study. "The Scale of University Students' Readiness for E-Learning" was employed to collect the data. The data was collected through online and printed surveys. The collected data was analyzed with SPSS program. To analyze the data collected through "The Scale of University Students' Readiness for E-Learning"; frequency, percentage, mean, standard deviation, minimum and maximum values are used. The results of the study reveal that the readiness state of university students for e-learning is positive.

**Keywords:** University Students, E-Learning, Readiness

#### **Resumen:**

El propósito general de este estudio es determinar la preparación de los estudiantes universitarios para el aprendizaje electrónico. Para ello, se utiliza la metodología cuantitativa en el estudio. El estudio se llevó a cabo durante el trimestre de primavera de 2016-2017. El grupo de estudio consistió en estudiantes que estudiaban en la Universidad de Kyrenia. Un total de 160 estudiantes participaron en el estudio. Para el análisis y recogida de datos se empleó "La escala de la preparación de los estudiantes universitarios para el aprendizaje por ordenador". La información fue recolectada a través de encuestas en línea e impresas. Los datos recopilados se analizaron con el programa SPSS. Al analizar los datos recopilados a través de "La escala de preparación de los estudiantes universitarios para el aprendizaje electrónico"; se utilizan valores de frecuencia, porcentaje, media, desviación estándar, mínimo y máximo. Los resultados del estudio revelan que el estado de preparación de los estudiantes universitarios para el aprendizaje electrónico es positivo.

**Palabras clave:** estudiantes universitarios; E-Learning; preparación

## 1. Introduction

The concept of technology and its use have been prominent in all fields from past to present as well as in education (Bicen & Tezer, 2008). While computers, tablets, mobile phones are primarily preferred effectively among all technological devices; with an increase in the use of internet in education computers and internet have become indispensable in education thus leading to the emergence of concepts of electronic education (Dinçer, Yeşilpınar & Uyar, 2016; Uzunboylu & Tugun, 2016) and testing (García Laborda & Navarro Laboulais, 2008; Garcia Laborda, Gimenez Lopez & Magal Royo, 2011; García Laborda, Magal Royo, & Bakieva, 2016). Some of these concepts are e-education, e-learning and mobile learning (Demir & Akpınar, 2016). Formed after the emergence of technological concepts, e-learning management systems have also begun to take their place in education. However, it is observed that the advanced system has also problems regarding the students. The systems used in e-education, the students' readiness and whether the students can receive this education with rich content form the basis of our research topic (Akhondi, Yarmohammadian & Haghani, 2015; Gülbahar, 2005; Arnavut & Ozdamli, 2016; Rozano & Romero, 2016).

In the process of e-learning, it is necessary to state that the students reach the content related with their learning objectives and the materials, elements that will assist students to learn during this learning process should to be presented to them through instructional methodology (Clark & Mayer, 2016). When the literature is analyzed, Kayriye & Gökdaş (2005) considered e-learning as a web-based education-instruction system that can reach all distant students through local communication areas or local mobile networks. Taking these into consideration, it is necessary not to limit e-learning only with computers and internet and that this education-instruction process includes web and internet based applications, brings in electronic technologies of video and conference and their related features (Yılmaz & Horzum, 2005; Prevalla, 2016; Babori, Fassi, Hariri & Bideq, 2016; Kanbul & Uzunboylu, 2017).

In this context a platform should be ready for students to obtain any information they want anytime and anywhere (Bicen & Çalışkan, 2016). Education that encompasses technology more every day has become a system with the widespread use of internet and the leadership of technology and e-learning model has emphasized its place and importance in our lives as an awareness that allows students to reach e-education and e-learning anywhere and anytime from the phones and computers of students (Önal & İbili, 2016; Uzunboylu & Kocakoyun, 2016; Birkollu, Yucesoy, Baglama & Kanbul, 2017). In the educational and instructional environment whether the substantiality of education is supported with technology or not; the most important points to consider for any instructional environment is the "efficiency, adequacy and substantiality of the instructional content". Based on this, the instructors who will use learning management systems need to include various visual effects, forums, chat rooms, surveys and not only the course content and writing; and based upon these educational needs should be analyzed.

## 1. 2. Education and Technology

In order to effectively use information technologies in instruction it is necessary to know the concept of educational technology. The concept of educational technology is quite widespread in today's world (Gülcü, Solak, Aydın & Koçak, 2013; Caliskan & Ozcan, 2017). Educational technologies which have many instructional strategies compared to traditional classroom instruction provide students with learning that is more efficient and easier to understand. Through this method it is possible to include opportunities as acquiring the student with content

and providing positive feedback (Simpson & Richards, 2015; Ozcan & Genc, 2016). When implementing technology in education as also practiced in other education and instruction models; the education levels, age criteria and readiness of the students on which the education and instruction will be delivered to should be taken into account (Garcia Laborda, Bejarano & Simons, 2012; Sever, 2014; Bagriyanik & Karahoca, 2016).

## 1.2. E-Education

With education delivered through internet, e-education has attained its place in today's world; this concept is also referred to as e-learning.

E-learning is defined as the education delivered through internet technologies without the necessity of teacher and student being present at the same place at the same time (Clark & Mayer, 2016). While students study through e-learning they can access the course content anytime they want and use the resources as desired. This method used in education, combined with cost advantages allows an ideal model (Garcia Laborda, 2007; Clift, Liptak & Rosen, 2016). E-learning environments facilitate many practices in the field of education. To allow for better learning and learning opportunities; e-learning materials should comprise of components such as text, sound, simple graphical presentations, video presentations, animations, simulations, games, testing systems, interactions supported with feedback (Bicen & Uzunboylu, 2013; Dinçer, Yeşilpınar & Uyar, 2016; Yangoz, Okten & Ozer, 2017).

## 2. The Purpose of the Study

The general purpose of this study is to determine the university students' readiness for e-learning.

To reach this aim, answers to the following questions have been sought for:

1. Is there a significant difference in students' daily use of computer between their departments?

## 3. Methodology

This section presents findings related to purposes, results linked with findings and discussion regarding the determination of university students' readiness for e-learning.

The study is conducted with a quantitative methodology and designed to determine the analysis of university students' views on readiness for e-learning.

### 3.1. Instruments

1. Personal Information Form (Demographic Data): Personal Information Form consists of questions to collect data for; sex, university, department, age, the daily use of computer, daily use of internet and daily duration of social media use.

2. The Scale of University Students' Readiness for E-Learning: A 5 item Likert type scale is used to collect views of students on their readiness for e-learning. The scale consists of thirty three items on e-learning. All of the thirty-three items of the scale are positive statements. Among the items 1 point states "I strongly disagree" while 5 points state "I Strongly Agree".

### 3.2. Participants

A total of 160 volunteer students studying at University of Kyrenia participated in the study. The study is conducted during the spring term of 2016-2017.

3.2.1. Sex: The distribution of students by sex is presented in Table 1.

| Sex          | f          | %            |
|--------------|------------|--------------|
| Male         | 101        | 63.1         |
| Female       | 59         | 36.9         |
| <b>Total</b> | <b>160</b> | <b>100.0</b> |

Table 1. The Distribution of Students by Sex

As seen in Table 1., 63.1% (101 people) of the students in the study group are male and 36.9% (59 people) are female. The findings in the sex group reflect the real distribution of sexes.

3.2.2. Age: The distribution of students by age is presented in Table 2.

| Age          | f          | %            |
|--------------|------------|--------------|
| 18-24        | 149        | 93.1         |
| 24-32        | 11         | 6.9          |
| <b>Total</b> | <b>160</b> | <b>100,0</b> |

Table 2. The Distribution of Students by Age

The distribution of age groups of students who participated in the study is presented in Table 2. According to this distribution 93.1% (149 people) of the students are between 18-24 and 6.9% (11 people) are between 25-32.

3.2.3. Daily Use of Computer: The distribution of students by their daily use of computer is presented in Table 3.

| Daily Use of Computer | f          | %            |
|-----------------------|------------|--------------|
| 1-3 Hours             | 116        | 72.5         |
| 3-5 Hours             | 25         | 15.6         |
| 5-7 Hours             | 15         | 9.4          |
| 7 and More            | 4          | 2.5          |
| <b>Total</b>          | <b>160</b> | <b>100,0</b> |

Table 3. The Distribution of Students by Their Daily Use of Computer

Table 3. reveals the information regarding the daily use of computer of the students participating in the study. According to this distribution, 72.5% (116 people) use the computer for 1-3 hours, 15.6% (25 people) use the computer for 3-5 hours, 9.4% (15 people) use the computer for 5-7 hours and 2.5% (4 people) use the computer for 7 hours and more daily.

3.2.4. Daily Use of Internet: The distribution of students by their daily use of internet is presented in Table 4.

| Daily Use of Internet | f  | %    |
|-----------------------|----|------|
| 1-3 Hours             | 38 | 23.8 |
| 3-5 Hours             | 54 | 33.8 |

|               |            |              |
|---------------|------------|--------------|
| 5-7 Hours     | 32         | 20.1         |
| 7 and<br>More | 36         | 22.5         |
| <b>Total</b>  | <b>160</b> | <b>100,0</b> |

Table 4. The Distribution of Students by Their Daily Use of Internet

Table 4. reveals the information regarding the daily use of internet of the students participating in the study. According to this distribution, 23.8% (38 people) use the internet for 1-3 hours, 33.8% (54 people) use the internet for 3-5 hours, 20.1% (32 people) use the internet for 5-7 hours and 22.5% (36 people) use the internet for 7 hours and more daily.

3.2.5. Daily Use of Social Media: The distribution of students by their daily use of social media is presented in Table 5.

| <b>Daily Use of<br/>Social Media</b> | <b>f</b>   | <b>%</b>     |
|--------------------------------------|------------|--------------|
| 1-3 Hours                            | 47         | 29.4         |
| 3-5 Hours                            | 50         | 31.3         |
| 5-7 Hours                            | 35         | 21.9         |
| 7 and<br>More                        | 28         | 17.5         |
| <b>Total</b>                         | <b>160</b> | <b>100,0</b> |

Table 5. The Distribution of Students by Their Daily Use of Social Media

Table 5. reveals the information regarding the daily use of social media of the students participating in the study. According to this distribution, 29.4% (47 people) use the social media for 1-3 hours, 31.3% (50 people) use the social media for 3-5 hours, 21.9% (35 people) use the social media for 5-7 hours and 17.5% (28 people) use the social media for 7 hours and more daily.

### 3.3. Data Analysis

The data collected through the survey were analyzed with SPSS IBM 24.0 program. The results of the analysis were presented with percentages, frequency and descriptive analyses.

## 4. Results & Discussion

In this section, the results and discussion related to the findings of the aim to determine university students' readiness for e-learning are presented.

### 4.1. Determination of University Students' Readiness for E-Learning

The descriptive statistics regarding the determination of university students' readiness for e-learning are presented in Table 6.

| No  | Items   | $\bar{x}$ | SD   |
|---|---|-----------|------|
| <b>Computer Self-Efficacy</b>             |   |           |      |
| 1)  | I can easily use Windows operating systems.   | 3.5       | 1.35 |
|   |   | 1         | 9    |
| 2)  | I can view the contents of an electronic file (sound, music, text, etc.) on the computer.                       | 3.8       | 1.33 |
|   |   | 3         | 1    |
| 3)  | I can solve the problems I encountered when using a computer.   | 3.1       | 1.21 |
|   |   | 6         | 7    |
| 4)  | I can easily use the Office programs (Word, Excel, PowerPoint, Outlook, etc.).                                  | 3.4       | 1.31 |
|   |   | 5         | 2    |
| 5)  | I can easily use the application softwares I need (editor, design, etc.).                                       | 3.3       | 1.30 |
|   |   | 0         | 7    |
| <b>Internet Self-Efficacy</b>             |   |           |      |
| 6)  | I can easily use the Web browsers (Internet Explorer, Google Chrome, etc.).                                     | 4.3       | 1.12 |
|   |   | 0         | 6    |
| 7)  | I can easily use search engines (Google, Yandex, etc.).   | 4.4       | 1.03 |
|   |   | 2         | 7    |
| 8)  | I can download a file on the internet to my computer.   | 4.1       | 1.14 |
|   |   | 9         | 6    |
| 9)  | I can easily access the information I seek on the internet.   | 4.2       | 1.05 |
|   |   | 8         | 4    |
| <b>Online Communication Self-Efficacy</b> |   |           |      |
| 10)                                       | I can use Internet tools (e-mail, discussion forums, Skype etc.) to communicate effectively with people.        | 4.0       | 1.24 |
|   |   | 9         | 2    |
| 11)                                       | I can easily ask questions in the internet forum discussions.   | 3.8       | 1.19 |
|   |   | 1         | 8    |
| 12)                                       | I can express myself easily in written communication (emotions, humor etc.).                                    | 4.1       | 1.10 |
|   |   | 5         | 5    |
| 13)                                       | I can ask for help using internet tools (forum discussion sites, social networks, e-mail etc.) to seek answers. | 4.0       | 1.21 |
|   |   | 1         | 5    |
| 14)                                       | I can communicate easily with voice or video on the internet (Skype, Google Hangout, Google Talk etc.).         | 4.1       | 1.17 |
|   |   | 6         | 2    |
| <b>Self Learning</b>                      |   |           |      |
| 15)                                       | I determine my learning needs.  | 3.8       | 1.06 |
|   |   | 8         | 9    |
| 16)                                       | I set my learning objectives myself.  | 3.9       | 1.08 |
|   |   | 8         | 7    |
| 17)                                       | I make my study plan myself when learning.  | 4.0       | 1.06 |
|   |   | 7         | 1    |
| 18)                                       | I am fully committed to my own study plan when learning.  | 3.7       | 1.02 |
|   |   | 3         | 0    |
| 19)                                       | I organize my current study plan according to new conditions.   | 3.9       | 1.04 |
|   |   | 1         | 5    |
| 20)                                       | I identify appropriate sources and tools in the learning process.   | 3.9       | 0.99 |
|   |   | 6         | 6    |
| 21)                                       | I believe that I am responsible for my own learning.  | 4.0       | 1.07 |
|   |   | 4         | 1    |
| 22)                                       | I keep my learning desire high until learning is realized.  | 3.9       | 1.08 |
|   |   | 6         | 9    |

| Learner Control  |     |      |
|--|-----|------|
| 23) I direct my learning process when learning an online subject.                        | 3.8 | 1.13 |
|  | 4   | 0    |
| 24) I decide how intensely I will concentrate on the learning materials on the internet. | 3.8 | 1.17 |
|  | 5   | 0    |
| 25) I decide when to study online learning materials.                                    | 3.8 | 1.07 |
|  | 9   | 3    |
| 26) I decide for myself which order to work with online learning materials.              | 3.9 | 1.09 |
|  | 0   | 7    |
| Motivation for E-Learning  |     |      |
| 27) I am eager to learn lessons on the internet.   | 3.3 | 1.36 |
|  | 6   | 2    |
| 28) I am interested in learning lessons on the internet.                                 | 3.2 | 1.37 |
|  | 8   | 8    |
| 29) Learning the lessons on the internet is an effective way to learn.                   | 3.3 | 1.37 |
|  | 3   | 2    |
| 30) I think it is be fun learning lessons on the internet.                               | 3.2 | 1.40 |
|  | 6   | 8    |
| 31) I am self-confident in learning lessons on the internet.                             | 3.2 | 1.33 |
|  | 9   | 9    |
| 32) I like to share my opinions with others when learning on the internet.               | 3.4 | 1.27 |
|  | 0   | 9    |
| 33) I learn from my mistakes learning on the internet.                                   | 3.4 | 1.33 |
|  | 7   | 6    |
| <b>Total</b>   | 3.7 | 0.81 |
|  | 9   | 2    |

Table 6. Descriptive statistics on the determination of university students' readiness for e-learning

The results on the determination of university students' readiness for e-learning are presented in Table 6. Although there is a significant difference for many of statements, "I can easily use the Web browsers (Internet Explorer, Google Chrome, etc.)." has a mean of = 4.30 among the most notable statements. Likewise one of the most notable statements of university students "I can easily use search engines (Google, Yandex, etc.)." also has a mean of =4.42. Another notable statement of university students, "I can easily access the information I seek on the internet." has a mean of =4.28. Among other statements "I can express myself easily in written communication (emotions, humor etc.)." has a mean of = 4.15. Finally the general total mean of university students' readiness for e-learning is =3.79. In light of the obtained findings it may be inferred that the results for the determination of university students' readiness for e-learning are high.

#### 4.2. The Comparison of University Students' Daily Computer Use and Their Departments

Table 7. presents the results of Kruskal Wallis H-Test results to determine the results of comparison of university students' daily computer use and their departments.

| Department              | N  | Mean Rank | SD   | X <sup>2</sup> | P    |
|-------------------------|----|-----------|------|----------------|------|
| Emergency and First Aid | 19 | 3.89      | .510 | 4.23           | .000 |
| Mouth and Dental Health | 14 | 4.36      | .483 |                |      |
| Physiotherapy           | 23 | 4.12      | .680 |                |      |
| Nursing                 | 41 | 3.77      | .796 |                |      |

|                                 |   |     |      |       |
|---------------------------------|---|-----|------|-------|
| Readiness<br>for E-<br>Learning | Special<br>Education                        | 20  | 3.80 | .785  |
|                                 | Psychological<br>Counseling and<br>Guidance | 18  | 3.08 | 1.077 |
|                                 | Medical Imaging<br>Technology               | 15  | 3.59 | .884  |
|                                 | Social Service                              | 10  | 3.69 | .493  |
|                                 | Total                                       | 160 | 3.79 | .812  |

Table 7. The Comparison Results of University Students' Daily Computer Use and Their Departments

As seen in Table 7., the results of Kruskal Wallis H-Test results to determine the results of comparison of university students' daily computer use and their departments are presented and a significant difference is observed between the departments ( $\chi^2 = 4.23$ ;  $P=.000$ ;  $P<0.05$ ). The findings reveal that the students of "Mouth and Dental Health" department have the highest mean scores compared to the other departments ( $X=4.36$ ). In addition, the findings reveal that the department with second highest mean score ( $X=4.12$ ) is "Physiotherapy" compared to the other departments and the department with lowest mean score according to the daily computer use is "Psychological Counseling and Guidance" ( $X=3.08$ ).

## Conclusion

According to the results of the study, for the daily computer use of university students; 72.5% (116 people) of them use computer for 1-3 hours daily, 15.6% (25 people) of them use computer for 3-5 hours daily, 9.4% (15 people) of them use computer for 5-7 hours daily and 2.5% (4 people) use computer for 7 and more hours daily. In their study titled "E-Learning and Open Source Code Management Systems in Education", Altıparmak, Kurt & Kapıdere (2011) have concluded that the use of computers in education has altered the shape and variety of learning and as a consequence of the developments in educational technology and learning theories, the students need to use computers more during the day. Based on these it may be inferred that the students need the support of technology for their education and daily lives and that such support brings convenience to their learning processes and lives.

The results of the study also reveal the daily internet use of university students. According to this distribution 23.8% (38 people) of them use internet for 1-3 hours daily, 33.8% (54 people) of them use internet for 3-5 hours daily, 20.1% (32 people) of them use internet for 5-7 hours daily and 22.5% (36 people) use internet for 7 and more hours daily. Moreover, according the distribution of daily social media use of students, it was revealed that 29.4% (47 people) use social media for 1-3 hours daily, 31.3% (50 people) of them use social media for 3-5 hours daily, 21.9% (35 people) use social media for 5-7 hours daily and 17.5% (28 people) use social media for 7 and more hours daily.

Finally, according to the descriptive statistics results on determination of university students' readiness for e-learning it is revealed that the readiness of university students for e-learning is high. Moreover, the results on the comparison of university students' departments by their daily use of computer are analyzed and it is revealed that the students of "Mouth and Dental Health" department have the highest mean scores compared to the other departments ( $X=4.36$ ). In their 2013 study titled "An Important Dimension in Distance Education: E-Readiness of Teacher Candidates", Yakın & Tınmaz have concluded that teacher candidates perceive themselves capable in terms of e-learning competence.

The rapid development of technology in the field of education provides new dimensions for education and allows new models of education to emerge. In today's world where technology develops rapidly there is a need for research on e-learning for university students.

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