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STUDENTS' PERCEPTIONS TOWARDS THE EFFECTIVE USE OF WEB-BASED LEARNING PLATFORM (WBLP) ON THEIR LEARNING OUTCOMES

ÖĞRENCİLERİN WEB TABANLI ÖĞRENME PLATFORMUNUN (WBLP) ÖĞRENME ÇIKTILARINDA ETKİLİ KULLANILMASINA YÖNELİK ALGILARI

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ABSTRACT

Nowadays, computers are the potential deliverers of the educational system, since they can be used for personalizing learning, to design learning according to the learners' knowledge and needs. Educators' attention has overtime been attracted by the development of the internet and internet-based computerized learning (i.e., e-learning). Academic studies in this area have shown that the process of obtaining web technology for the purpose of learning and teaching is quickly becoming an important tool in these fields. In accordance with the latest requirements, many institutions and individuals prefer to provide education/training via the Internet and that has sparked a remarkable rate of increase in web-based education institutions. And therefore, there has been a rise in the usage of personal/informal as well as institutional/formal web-based learning platforms. Therefore, the web, with its wide range of functions, has become such a highly invaluable source and the tool to acquire learning, research development that in all honesty without its learning process. Owing to this, the major purpose of this study is to analyze the perceptions of Eastern Mediterranean University (EMU) students, through a web-based learning platform. This research is a case study and as a methodology mixed approach is used (both quantitative and qualitative). The findings revealed that Web-based learning potentially has many advantages, however lack of experience, computer literacy and infrastructure problems, while using such a system could build a barrier in the way students learn.

Keywords: Educational System, E-Learning Applications, Multimedia Technologies, Research, Teaching Tool.

ÖZET

Günümüzde bilgisayarlar, öğrenmeyi kişiselleştirmek, öğrenmeyi öğrencilerin bilgi ve ihtiyaçlarına göre tasarlamak için kullanılabildiğinden, eğitim sisteminin potansiyel sağlayıcılarıdır. İnternetin ve internet tabanlı bilgisayarlı öğrenmenin (yani e-öğrenme) gelişmesi, eğitimcilerin dikkatini fazla mesaiye çekmiştir. Bu alandaki akademik çalışmalar, öğrenme ve öğretme amacıyla web teknolojisinin elde edilmesi sürecinin hızla bu alanlarda önemli bir araç haline geldiğini ortaya koymuştur. Gelişen gereksinimler doğrultusunda birçok kurum ve kişinin eğitim/öğretimi internet üzerinden yapmayı tercih etmesi, web tabanlı eğitim kurumlarında dikkat çekici bir artışa neden olmuştur. Bu nedenle kişisel/gayri resmi ve kurumsal/örgün web tabanlı öğrenme platformlarının kullanımında artış olmuştur. Bu nedenle, web, geniş işlev yelpazesiyle, dürüst olmak gerekirse, öğrenme süreci olmadan, öğrenmeyi, araştırma geliştirmeyi elde etmek için çok değerli bir kaynak ve araç haline geldi. Bu nedenle bu çalışmanın temel amacı, Doğu Akdeniz Üniversitesi (DAÜ) öğrencilerinin algılarını web tabanlı bir öğrenme platformu aracılığıyla analiz etmektir. Bu araştırma bir durum çalışmasıdır ve metodoloji olarak karma yaklaşım (hem niceliksel hem de niteliksel) kullanılmıştır. Bulgular, Web tabanlı öğrenmenin potansiyel olarak pek çok avantaja sahip olduğunu, ancak deneyim eksikliği, bilgisayar okuryazarlığı ve altyapı sorunlarının olduğunu ve böyle bir sistemi kullanmanın öğrencilerin öğrenme biçiminde bir engel oluşturabileceğini ortaya koydu.

Anahtar Kelimeler: Eğitim Sistemi, E-Öğrenme Uygulamaları, Multimedya Teknolojileri, Araştırma, Öğretim Aracı.

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INTRODUCTION

For teaching purposes, the utilization of technologies available in information communication technology (ICT) advancement has generated interest among many educators (Sivapalan, & Wan Fatimah, 2010)

Information and technological tools and resources that are used in communication, creation, dissemination, and storage of information. This includes (not limited to) computer facilities, World Wide Web (WWW) and Communication Technologies (ICTs) mean the management of information through broadcaster technologies such as television, telephony, and radio (Hendriks, 1999). Recently, among the above-mentioned technologies, there has been a rise in attention to computers and WWW to be utilized efficiently and effectively in all levels of education. However, ICT is not only limited to such technologies but also it covers the older requirements (e.g., television, radio, and telephone) despite their fading out usage. Before the invention of the internet, television and the radio have been used in the last four decades in delivering distance and open education (Tinio, 2003).

In developing countries, due to insufficient infrastructure, using the internet and computers is at its early stages. A couple of systems use a combination of technologies rather than using only one. In some countries, the use of radio broadcasting, computers, and the internet simultaneously provide adequate access to communities living both in urban and rural regions. It is still using pressed materials as well as television and radio broadcasting; online technologies are provided recently though. Moreover "Indira Gandhi National Open University" utilizes print, audio/video, tele-broadcasting, and audio-conferencing equipment altogether (Tinio, 2003). The ICT, in all aspects, is now an important and inevitable part of the education process. It is proven that integrating ICT with the pedagogical system can significantly increase not only students' and educators' technological skills, but also social and cognitive ones which are necessary to respond, a critical and creative manner, the requirements of the society. (Anastasiades & Zaranis, 2016).

Have a closer look at ICT; the most important role in the integration of ICT belongs to educators, despite the existence of a variety of policies and frameworks. The attitude of educators to technologies such as computers and web should be studied and developed to succeed in integrating ICT into the pedagogical system. It is experienced that training educators is not an easy process and needs constant effort over a long period of time. It is, therefore, desirable to mention that to consider this fact does not mean that students do not have any role, but the role of educators is much more important (Anastasiades &Zaranis, 2016).

Moreover, modern educational methods try to provide equal quality of service for all the students including ones who need special attention and ones with a different degree of disabilities. This principle is also true for the application of ICT in education despite its fast-changing and development. There are creative approaches and tools to support both groups in the education environment such as classrooms and laboratories and the aim is to preserve the equal quality of learning as well as student participation no matter of their abilities (Anastasiades & Zaranis, 2016). The gap is between the skills and knowledge learned in the schools and the emerging demands on society which is now a big challenge for educators. In other words, traditional skills to solve problems are just part of the overall skills set that students should learn. Knowing how to do communication, share, and solve problems in groups are other abilities that students should learn. The challenge is migrating from the teaching and learning methods that were designed in the 20th century to the ones which are suitable for the students of the 21st century. This migration includes applying innovative approaches to concentrate on focus and creative problem solutions.

The objectives of the study are as follows:

1. Effect of WBLP (Web-Based Learning Platform) on the students' learning outcome regarding their grades.

2. The students' perceptions of WBLP on their learning outcomes hinge on its; learning interface, teaching material, learning tool, and instructional strategy.

3. The students' perceptions of WBLP on their learning outcomes regarding their age.

4. The students' perceptions of WBLP on their learning outcomes considering their experience.

5. The students' perceptions on WBLP on their learning outcomes regarding their computer literacy.

The present study contributes to the literature by providing further evidence about the Web-Based Learning platform in the context of E-learning setting with data from undergraduates enrolled in

Department of Information and Communication Technologies in Education, Eastern Mediterranean University, North Cyprus. The paper is structured as follows. First, we provide a review of the literature on the WBLP. Then, the research methodology. Thereafter, the results and findings of the collected data. Finally, the conclusion along with the acknowledgement is presented.

1. Learning

In this regard, the process of learning cannot be considered anymore as just some instructional formula but should be studied and researched constantly and combines both practical and theoretical aspects of solving problems. "Electronic learning" (so-called E-Learning) is defined by Paulsen as "the provision of automatic feedback to the student's learning activities in which the learning content is available and accessible online" (Paulsen, 2004). Although e-Learning has common features with Computer-Based Training (CBT) and Computer-Aided Teaching (CAT), the major difference in using the internet as the main medium is to provide materials and supervise student's activities. Moreover, in e-Learning, communications between educator and students are also done via the internet; however, it is considered as a side activity and the main concentration is on the organization and providing proper access.

One should keep in mind that "learning" is not the same as "education", but only one component of it. Hence, Web-Based Education (WBE) is much more comprehensive than e-Learning due to providing more types of services. While e-Learning providers mostly concentrate on the content and form of learning materials and content, the companies and institutions delivering WBE try to offer a wider variety of "support and educational services". However, in the literature it may be found that WBE and e-Learning are mistakenly used interchangeably as written in (Kaplan-Leiserson, 2000): "E-learning consists of a broader number of processes and applications including and not limited to digital collaborations, virtual classrooms, computer-based learning, and web-based learning". It covers the facilitation in the delivery of information via the internet, intranet/extranet (LAN/WAN), audio and videotape, satellite broadcast, interactive TV, and CD-ROM.

One of the significant and critical challenges in web classrooms is to know the real evaluation of the learning environment and the students' activities. To overcome this issue, it is suggested to periodically ask students to fill out evaluation forms and get a clear insight into the changes that happened to their attitudes toward the program during the time. Moreover, there can be some monitoring systems which provide complementary feedback showing the acceptance rate of the web classroom. For instance, the system can track the number of online students, several logins and logouts, time of being online for each student, amount of contribution of students and so on. All these factors can be used to discover the degree of students' eagerness and the strong and weak points of the system. By using such systems in the long run, the comparison between the different runs of the same programs is possible. For example, teachers can compare the exam grades and submitted assignments to find out which runs have been more successful than the others, helping to improve the quality of education service (Devedžic, 2006). Distance education that can be set up on "point-to-point" or "point-to-multipoint" basis is a kind of planned educational experience to participate in learners who can be distributed all around the world. Distance education can be delivered in the form of individual participation, teleseminars, teleconferences, web conferences, electronic classrooms, and so on (Devedžic, 2006).

2. Web-based Learning

Based on various research and development, academia, industry as well as technology have adopted the Web-Based E-learning (WEL) after it has extended its capabilities and flexibility in both training and education.

Walk through a typical learning environment on the web which uses some or all the following properties of learning, learning material presentation, learner assessment, internet recourse, instructional support, and technical support. Nonetheless, limited study conducts, and research has developed standard based research criteria and tools of measurement and was also involved in the evaluation of components of web-based learning platforms (Ateş, 2013; Hsu, et al., 2009).

Hsu et al. (2009) proposed a learning platform on the web with an evaluating scale for the determination of web-based learning platforms and design criteria consisting of learning facets that include instructional design, learning theories, interface design, and learning tools.

Recently, the benefits of WWW and the internet have gained a lot of attention to education. These technological tools let students and instructors cooperate and communicate much more effectively

than before. Not only they are efficiently applicable in individual practices, but also, they inherently support "collaboration, communication, interaction, exchange and reflection". Although many educational systems have adopted these technologies, still there are needs to discover the complete potential in utilizing them and how to reach this aim.

3. Advantages and Disadvantages of WBLP

To provide a contextualized situation, this research needs to consider several advantages and disadvantages of using the web as a learning environment. An example of a Web-based learning environment advantage to be considered is the increase in accessibility and the promotion of location independence. This, however, is of no use in a case where a learner has not any access to the internet. The way the system is used also determines the advantages and disadvantages of WBLP. When the existing distance learning materials are replaced and learners have internet access, web-based learning becomes an advantage. If there's an intention to continue using the traditional face-to-face classroom-based learning model, while the web-based learning environment is developed for a particular group of learners then this means the time and effort that is incorporated in the development of the web-based environment may no longer be advantageous. Learning can be instantly delivered to almost anywhere connecting to the internet or network, updating and upgrading are simply done and instantly reachable, the whole internet can be used as the companion material for the lectures, Students' activities and progresses feedback can be monitored and delivered to the educators to analyze them and communication between formal and informal groups can be established and used. (Jolliffe, et al., 2012).

Technical limitations that are associated with computers and the internet itself pose as disadvantages of using web-based learning. Internet and computers pose a technical limitation associated with web-based learning and its disadvantages, since materials are static and interactivity is controlled by the forward arrow, many learning environments reflect the early days of computer-based learning and this is fueled by technical limitations, In order to design an effective environment for learning, the materials designer needs to possess knowledge about computer-based learning, Since bandwidth is limited, it creates problems when graphic intense materials are downloaded and Both learners and facilitators need to be provided with training. (Jolliffe, et al., 2012).

4. The Relationship Between E-learning and Web-based Learning Systems

Today, web-based learning systems are the undetachable elements of e-learning frameworks. Recently, much higher education institutions have adopted the latest web-based learning system for their online and e-learning programs (Ngai, et al., 2007). These systems which are delivered by the Internet include Smile (System for Multimedia Integrated Learning), WebCT (Web Course Tools (WebCT), BLS (Blackboard Learning System), and WebCT (Web Course Tools). The new definition of E-Learning emphasizes the role of the Internet and Web-based technologies that can overcome space and time obstacles (Ngai, et al., 2007). These technologies consist of the ones who facilitate communications, conveying knowledge and multimedia, providing virtual collaborative environments and training tools to keep the learning process active and effective. To continuously engage learners in the learning process, active learning is one of the pillars of the new E-Learning definition. To do so, the student should be asked to do aimful learning tasks frequently. VLE (Virtual Learning Environment) or WBLS (Web-Based Learning System) is the platform designed for providing a web-based communicative environment which does not put any restriction over the time and location of learners. The platform provides facilities for easy access to the course curriculum, contents, multimedia sharing, discussion rooms, resources, and effective instructor's help (Raaij &Schepers, 2008).

5. Instructors' Adoption of Web-based Learning Systems

Users' contributions, satisfaction, and attitudes play a major role in an information system's success (Wang & Wang, 2009). Designing, implementing, and maintaining an information system is expensive and is sometimes unsuccessful; however, they are vital for contemporary enterprises (Yuanquan, Jiayin, & Huaying, 2008). As the investment is increasing in e-learning technologies and management systems, user satisfaction becomes a much more important issue. The majority of e-learning technologies' users are students who have the determinants for the success of a specific technology used in e-learning (Teo, Lee, Chai, & Wong, 2009); hence, as it is also shown by studies, those e-learning technologies have been successful who have been accepted and embraced by large group of students (Sanchez-Franco,

2009; Yuen & Ma, 2008). Therefore, institutes who are planning to use effective e-learning technologies in their programs should track the students' satisfaction from the online learning technologies (Wang & Wang, 2009).

There are some research works on the instructors' acceptance of online and web-based learning technologies (Hu, et al., 2003; Ma, et al., 2005; Pynoo et al., 2011; Sanchez-Franco, 2009; Wang & Wang, 2009; Yuen & Ma, 2008). The research was done by Ma et al.'s (2005) showed that "perceived ease of use" and "perceived usefulness" are the two most effective factors in adopting computer technologies. In the study conducted by Yuen and Ma (2008), subjective norm, perceived usefulness and computer self-efficacy was not effective on the motivation for reusing of e-learning technology. However, perceived ease of use was highly positively correlated with that motivation. In another study (Likewise, Wang and Wang, 2009), subjective norm and perceived usefulness were found as an effective factor in instructors' intentions to apply online learning technologies. Wang & Wang (2009) found that despite existing studies considering the instructors' adoption of e-learning systems, few studies have monitored the instructors' attitude in using of online e-learning technologies from the viewpoint of user willingness and successfulness of the system used. The studies on technology embracement evaluate the user happiness by the attitudes and intention to apply (Pynoo et al., 2011).

Research Design

The research design, participant's instrument, data collection tools and techniques, validity, and reliability. For the sole purpose of making decisions that affect the business, this process is used to collect information and data. The methodologies could incorporate publication research, interviews, surveys, and other research methods, and could also incorporate both present and past information. While quantitative methodologies are excellent in stressing neutral extents and the statistical, mathematical, or numerical evaluation of data collection through questionnaires, qualitative method, or more specifically interviews are a great method to gather deep understanding and asking the exact questions needed for such matters. Therefore, researchers had chosen to implement a mixed method to carry out this research. The complex nature of computer-based application most of the time makes it significantly difficult to answer a research question from all perspectives. A researcher with a mixture of questionnaire and interview provides a way to investigate the WBLP from all the aspects and with a smarter insight. Hence the mixed research method is used for collecting the data so to analyze the students' perceptions towards the effects of a web-based learning platform (WBLP) on their learning outcomes through an evaluation scale proposed by Hu .et. al (2009). The main motive of this research was to evaluate a comprehensive overview of Web-Based Learning Platform (WBLP) in the context of their experience at the Department of Information and Communication Technologies in Education. This research would introduce several critical questions in WBLP, and final output of this research would be the answers which can be a practical guide for other researchers in this area and field.

METHODS

According to the literature, mixed method approach (questionnaire and interview) provides a way to investigate the WBLP from all the aspects and with a smarter insight. As it also emphasized by Johnson et al. (2007), "Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches for the broad purposes of breadth and depth of understanding and collaboration. To analyze the students' perceptions towards the effects of a web-based learning platform (WBLP) on their learning outcomes a scale proposed by Hu .et. al (2009) was used. The questionnaire was distributed to all the 2nd, 3rd and 4th-year undergraduate students at EMU who were registered to the Department of Information and Communication Technologies in Education, Eastern Mediterranean University, North Cyprus and have at least completed one WBLP course. The data was collected using 40 survey questions for the quantitative part; and five open-ended semi-structured interview questions. For the analysis of qualitative part of the research SPSS 24 was used and significant point rate and average mean was taken as 0.05 level value spot. For qualitative, content analysis is used as it is a qualitative research tool which is widely used to analyze content and its features.

Population

The sample consisted of 300 participants who participated in the survey from the Department of Information and Communication Technologies in Education, Eastern Mediterranean University, North Cyprus (Male, n=170 Female n=130). Additionally, five semi-structured interview questions were used with randomly selected 20 volunteered students. The age of the students is normally distributed, with the median age being between 18 and 39 years. The questionnaires were handed out in the class and were completed voluntarily. All 300 questionnaires were retrieved.

Data Collection

In this research, a mixture of qualitative and quantitative methods have been chosen to gather primary data. Data was collected using 40 survey questions for the quantitative part; and five open-ended semi-structured interview questions for the qualitative part of the research.

Data Analysis

The questionnaire had been distributed to the students at EMU who were registered for at least one WBLP course which was offered by the Department of Information and Communication Technologies in Education through a web-based learning platform to analyze the effectiveness of that platform in terms of interaction, communication, and ease of access to information, learning and connectivity of students. After the data has been collected, it was analyzed by using SPSS version 24. Additionally, the significant point rate and average mean level value spot was considered as 0.05. The ANOVA test was used for demographic data variables (such as age and gender) and variables which were related to data changes (such as computer literacy and previous experience with system). Regarding semi-structured interview questions, content analysis was adapted. Based on the research questions codes were deducted. Then themes were deduced from the participants' replies which were then matched with the codes to form the categories.

RESULTS

Descriptive Statistics

Table 1,2,3 below demonstrate descriptive statistics for students' perceptions on WBLS. For the assessment of validity of the scale proposed by Hu .et. al (2009) piloting of the instrument was used and to determine the inter-rater reliability an independent coder was trained to use the coding systems, and comparisons were made between coding of the survey responses made by the independent coder and the author. The inter-reliability for the coding scheme was found to be about 90%.

Students' perceptions on WBLP assessment

This part of the questionnaire focused on student's grade for a "specific" course which was taught by WBLP in Eastern Mediterranean University. According to Table 1, 32.6 percent of students have got A or A- grade for their WBLP course. 36.8 percent of students got B, B- or B+ in their course and 28.4 percent of students got C, C+ or C. From another hand only 2.1 percent of participant had unsatisfactory D, D- or D+ in their courses. None of the students failed or got an F in this course.

Table 1. Students course grade

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D +D D-	4	2.1	2.1	2.1
	C+ C C-	54	28.4	28.4	30.5
	B +B B -	70	36.8	36.8	67.4
	A A -	62	32.6	32.6	100.0
	Total	190	100.0	100.0	

Source: From PhD research data

The Students' Perceptions Towards WBLP

According to the statistical analysis, regarding the usefulness of WBLP from the students' perceptions show that; "Q6. It applies various learning facilitation medias" had the maximum mean of (M=4.14, SD=3.102). Moreover "Q33. The teaching material paragraph is clear", "Q8. The presented content is correct in its instructional goal", "Q18. The provides quick error instruction", "Q19. The provides the

mechanism to ask for systematic manager help", "Q30. The interface design is creative", "Q31. The teaching material is accurate", "Q34. The teaching material induces learning motivation", "Q3. It assigns evaluation practice for the class", "Q2. It indicates knowledge and techniques to be learned", "Q16. The category is appropriate", "Q40.The interface design is creative" with (M=4.11, SD=1.046), (M=4.11, SD=0.968), (M=4.08, SD=1.035), (M=4.04, SD=1.09), (M=4.04, SD=1.049), (M=4.04, SD=1.049), (M=4.04, SD=1.076), (M=4.04, SD=1.095), (M=4.03, SD=1.105), (M=4.02, SD=1.084) , (M=4.02, SD=1.031) , (M=4.01, SD=1.057) orderly respected all had a mean more than an average mean (M=3.952). On the other hand, participants were not satisfied with the learning tools since "Q11. it provides practical learning tools (e.g., online notebook) got the lowest mean of (M=3.77, SD=1.077). But overall, they reflected their satisfaction on the usefulness of WBLP.

Participants' Perceptions of WBLP Effects on Students' Learning Outcomes Regarding Their Age

The results revealed that, the age range of (18-23) with number of (N-98), and (24-29) age range with (N=88) shown the most interest about WBLP, this can be linked to the fact that students in these age range are already born as digital natives and are grown up to be familiar with computerized online systems. On the contrary student in the age range of (35-39) with an insignificant amount of (N=3) and age range of (30-34) with near to nothing amount of (N=1) have lowest interest to the WBLP and online courses which can be linked to their interest and bond with traditional classroom learning ways. The age range of (45+) and (40-45) did not appear in the analysis table since there were no students in these age ranges. Since our sample was chosen from bachelor's degree students, the absence of these age ranges is not un-expectable. This result can be proven by a closer look at the average mean and standard deviation of this table. Considering average mean (M=3.0686, SD=0.9721) the age group (18-23) in all the questions had higher amount of mean than other age groups. Moreover age group of (18-23) in question Q3, Q30, Q31, Q32, Q33 and Q34 with (M=4.30, SD=0.911), (M=4.30, SD=0.948), (M=4.31, SD=0.978), (M=4.31, SD=0.957), (M=4.34, SD=0.908), (M=4.31, SD=0.935) were all had significantly higher mean than an average mean (M=3.0686) in the table.

Since from the 40 items in the list almost all of them showed a p-value bellow the $P<0.05$; It indicate that there is dramatically considerable difference between perception of participants toward WBLP based on their age. However almost all other questions used for measurement of students learning outcomes, had significant values below the p value point ($p<0.05$). This result indicates that age difference has a significant effect on the student's perception of WBLP and clearly not all the age group levels have the same attitude towards WBLP functionality and design for improving their learning experience.

Participants' Perceptions of WBLP Effects on Students' Learning Outcomes Regarding Their Experience

According to the results, the number of students who had used WBLP courses before (N=103) was more than those students who did not have a WBLP course before (N=83). This result can be proven by a closer look at the average mean and standard deviation. Considering average mean (M=3.913, SD=1.016) the participants who had previous experience using WBLP had higher mean compared to the ones who did not use WBLP before. Moreover, question Q18, Q19, Q31, Q34 and Q35 with (M=4.46, SD=0.751), (M=4.48, SD=0.765), (M=4.61, SD=0.598), (M=4.51, SD=0.698), (M=4.48, SD=0.726) had significantly higher mean than an average mean (M=3.913) in the table.

Table 2. Students' Experience with WBLP.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	103	54.2	54.2	54.2
	No	87	45.8	45.8	100.0
	Total	190	100.0	100.0	

Source: From PhD research data

Participants' Perceptions on WBLP Effects on Students' Learning Outcomes Regarding Their Computer Literacy

The findings illustrate that students who are more computer literate are more satisfied with WBLP and tend to have better results using it. This result can be proven by a closer look at the average mean and standard deviation. Considering average mean (M=3.878, SD=1.0781) the participants with whom considered themselves computer literate had higher mean than other the ones who were not computer

literate. Moreover question Q6, Q18, Q26, Q31, Q34, Q38 and Q40 with (M=4.54, SD=3.869), (M=4.34, SD=0.902), (M=4.30, SD=0.925), (M=4.35, SD=0.935), (M=4.42, SD=0.821), (M=4.33, SD=0.829) and (M=4.55, SD=0.598) were all had significantly higher mean than an average mean (M=3.878).

Accordingly, all of questions used for measurement of students learning outcomes, had significant values below the p value point ($p<0.05$). This result indicates that computer literacy has a significant effect on the student's perception of WBLP and students who were more computer literate were more interested and had positive attitude toward web-based learning system.

Table 3. Do you consider yourself computer literate?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	113	59.5	59.5	59.5
	No	77	40.5	40.5	100.0
	Total	190	100.0	100.0	

Source: From PhD research data

Based on Table 3, around 59.5 percent of participants considered themselves computer literate, while 40.5 percent believed that they are not computer literate.

Participants' Perceptions on Semi-structured Interviews

It is worth stating at this point that almost all the students were aware of the advantages of the WBLP and new computerized technologies in their learning process, nevertheless most of the students were complaining about the way that this system has been implemented in the university and the resources and infrastructure which is needed for operational and useful web-based learning platforms. From students' perceptions, using WBLP at the Eastern Mediterranean University has many advantages and few structural disadvantages. There were some limitations such as lack of training, technological infrastructure which had caused the use of this system difficult for the students. Fortunately, none of these problems seems unsolvable and with correct management, students could benefit the most from WBLP. One of the interviewees said that S5: *"New technologies and new systems are usually not welcome at first. WBLP is a very good system. You have your lecture materials wherever you go, you can edit and create your course notes. However, it is important to teach this new technology to all the students and instructors and make sure university internet lines have a suitable speed for students to use this system comfortably. Also, computer labs need a serious upgrade".*

Another held a similar view stating S3: "*WBLP is a very easy to use system, at least for me! However, I see many of my classmates, especially the freshman students have a problem in using it, mostly because they don't know how to use it and we don't have a very good tutorial or course to teach them from the first how to use it. I see many of my friends do not even know how to use a computer and this could be a real problem and barrier when they want to use WBLP. This problem can be solved easily if the department creates an extra course to teach basic computer literacy and WBLP usage to the students who are not very familiar with it*".

CONCLUSION

Nowadays, the benefits of the Internet and online learning have gained a lot of attention to education. These technological tools let students and instructors cooperate and communicate much more effectively than before. Not only they are efficiently applicable in individual practices, but also, they inherently support "collaboration, communication, interaction, exchange, and reflection". Although many educational systems have adopted these technologies, there are still issues in utilizing them.

Recently, the quantity of Web-Based Learning Platform (WBLP) has reached its peak point and therefore various institutions and individuals have a preference in the provision of education/training via using the latest technology.

According to the findings, it can be deduced that; many students in their semi-structured interviews mentioned that although they like WBLP and they would enjoy working with them, however, it is possible to say that infrastructure problems sometimes restrain students to benefit from all the possibilities of this system. In another words, most students were aware of the advantages of WBLP and usage of new technologies in the classrooms. However, they were concerned about the infrastructure

and utilities needed for such changes. According to students' perceptions, when web-based learning platform is implemented inappropriately, then it can scale down many problems such as time-limitation, constant physical attendance requirement in the classrooms, internet cut off and dependency on the teacher. On the other hand, if it is used appropriately, this system is eco-friendly and cheaper than traditional classroom-based learning. Web-based learning potentially has many advantages, however lack of experience while using such a system and shortfall of computer literacy could build a barrier in the way students learn.

Authors Contributions

Researchers in this research had examined the perceptions of students in the eastern Mediterranean university toward the effectiveness of a Web-Based Learning Platform (WBLP) on their learning outcomes. Accordingly based on the findings it is possible to conclude that; Web-based learning platform when it is implemented correctly can scale down many problems such as time-limitation, constant physical attendance requirement in the classrooms and dependence on the teacher. Moreover, this system could be considered more eco-friendly and cheaper than traditional classroom-based learning. It's important to note that the effectiveness of a WBLP may vary depending on the subject matter, the target audience, and the specific implementation. Therefore, research and assessment should be ongoing to continually refine and improve the platform to optimize student learning outcomes. The researchers can suggest that universities anticipate the lack of student's computer literacy and offer basic computer literacy classes before ahead. Also, explanatory classes needed to be given to students about the advantages and many ways that they can use such systems for their own benefits. A WBLP that adapts to individual learner needs can be more effective. The reason is, adaptive learning systems use data analytics to personalize the learning experience, providing content and assessments tailored to each student's progress. In short, high levels of student engagement with the platform are often associated with better learning outcomes. Monitoring user activity, time spent on tasks, and participation in discussions can provide insights into engagement levels.

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