Perceptions of Students and Instructor about the Use of Moodle/Office365 Portal in Educational Activities: A Case Study at EMU

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In this study, the perceptions of students and faculty members regarding the use of Moodle / Office365 system in educational activities were examined. Perceptions have been examined from three different perspectives: These are the effect, usefulness and ease of use of the technology used on students' motivation in learning activities. Students enrolled in Computer for Law (ITEC190) and Introduction to Computers (ITEC115) courses using the Moodle / Office365 system and the instructor of the course participated in the study in the spring semester of 2019-2020. This study was conducted within the framework of using qualitative and quantitative research methods. The research group consists of 106 students enrolled in the courses in the Faculty of Education and other faculties and the lecturers of the courses. As a result of this study, it was understood that the participants believed that the Moodle / Office365 system was a useful and easy to use technology. It has been observed that students and faculty member find it useful to use this new system in learning environments. In addition, it is thought that the use of this new system by students and faculty has a positive effect on students' motivation in learning activities.

Introduction

Technology defined as the implementation of information and research findings to practical areas; it has become an integral part of human life especially in industrial societies by using in the fields of business, education, communication, entertainment and health (Özaygen, 2000). The role of technology, which has such a place in work and social life, in education and training is very important.

Presenting the course materials to the students by creating a web site of the course with the help of internet technologies is a method that can significantly increase the effectiveness and permanence of the course (Bates, 1995). Internet technologies also improve accessibility and quality of educational experience. While internet technology to be used may be applications such as blog, wiki, educators prefer podcast, web quest learning management systems (LMS) developed for education.

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The reason for this is that LMS contains more elements that provide learner-learner, instructor-learner and learner-environment interaction and is designed according to constructivist theory. LMSs are also preferred in different degrees depending on the differentiation of their characteristics (Recesso, 2001).

A technological tool such as the Internet can be connected to millions of computers, phones and tablets through a single network. This internet network is adapted to education and used in two ways: web-based education and web supported education. Web-supported education is used in conjunction with face-to-face training, while the web-based education is carried out only over the internet, while it is complementary and increasing interest in education (Serhan, 2019).

The key to understanding the difference between LMSs and other computer-assisted education systems is to understand the systemic nature of LMSs. A LMS; is an infrastructure system that provides and manages instructional content, identifies and evaluates individual and organizational learning or learning objectives, monitors and stores progress towards achieving these objectives, and provides information to control the learning process of the target audience as a whole (Klonoski, 2005).

LMSs are frequently used especially in university level educational institutions. The widespread use of LMS was made possible by the support of multimedia and web technologies. However, it is also possible for LMS to reach a more advanced structure than the present one. For this reason, it is important to know the opinions and experiences of the individuals benefiting from LMS. Moodle is a free, open source LMS which is called "Flexible Object-Oriented Dynamic Learning Environment for educators to develop dynamic learning environments (Chourishi, 2012). Moodle's expansion can be translated as a Flexible Object-Oriented Dynamic Learning Environment.

The new generation of students who tend to prefer computer environment over rigid and traditional learning environments. They are used to watch videos, animations and communicate through chat rooms, wikis and forums. In addition to their habits, online learning systems provide environments where students can prepare for classes whenever and wherever they want and make learning more student-centered than traditional teacher-centered methods. In addition to the improvements in audio/video and communication facilities that enhance collaboration; online learning systems are linked to information resources and always make these resources available to students.

Blended learning is the effective implementation of a variety of learning techniques, technologies and forms of information transfer to meet specific communication, information sharing and information needs (Rao, 2019). (Sarıtepeci & Çakır, 2015), described blended learning as a blend of face-to-face learning and computer-based education, as well as combining event-based activities such as face-to-face lessons, e-learning and self-learning. The most emphasized topic in the field literature on blended education is combining e-learning with face-to-face education. Blended learning is the result of a combination of face-to-face and technology-based learning (Ginns & Ellis, 2007).

In order to assess the educational value of such a system, Moodle's LMS features with Skype for Business' audio/video interaction capabilities were integrated (Özden, 2002). This integrated system gives single sign on (SSO) usage which makes system remarkably simple to

use. This system, implemented during 2019-2020 academic year, in ITEC115 and ITEC190 courses (Introduction to Computers), Eastern Mediterranean University.

In this study, the perceptions of students and faculty member regarding the use of Moodle / Office365 system in educational activities were examined. These perceptions; perceiving the usage of this technology on the motivation of students, the usefulness and easy to use of this technology. In addition, the impact of the use of this technology has been studied on the perceptions of together students and instructor. Finally, the benefits, drawbacks, and suggestions for using this technology from the instructor's perspective.

The aim of this research is to examine the perceptions of Eastern Mediterranean University students and course instructor regarding the use EMU-VLE (Eastern Mediterranean University – Virtual Learning Environment) (Moodle / Office365) system in educational activities.

In order to achieve the purpose of the study, two main research questions with sub-questions were asked. Questions are given below.
1. How do students perceive the use of Moodle / Office365 technology in educational activities?

   1.1 How do students perceive Moodle / Office365 technology in terms of perceived effects on their motivation for educational activities?

   1.2 How do students perceive the usefulness of Moodle / Office 365 technology?

   1.3 How do students perceive the ease of use of Moodle / Office365 technology?

2. How do Eastern Mediterranean University instructor perceive the use of Moodle / Office365 technology in educational activities?

   2.1 How do course instructor perceive Moodle / Office 365 technology in terms of its effects on students' perceived motivation for educational activities?

   2.2 How do course instructor at Eastern Mediterranean University perceive the usefulness of Moodle / Office 365 portal technology?

   2.3 How do course instructor at Eastern Mediterranean University perceive the ease of use of Moodle / Office 365 technology?

   2.4 What are the advantages and disadvantages of using Moodle / Office365 technology from the perspective of course instructor in educational activities?

   2.5 What are the course instructor's suggestions regarding the use of this technology?

Method

Research Design

A research design based on case study together mix method with quantitative and qualitative data collection methodologies were used to describe the perceptions of students and course instructor about the use of single sign on system (EMU-Virtual Learning Environment (EMU-VLE)) in educational activities. The purpose of the research based on case study is important

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that you plan and design how you will handle the work and ensure that all data collected is relevant and accurate. In this study, components of case study are used (Burns, 2019).

Context and Participants

EMU Institute of Distance Education has played an important role in the development of this infrastructure. In order to achieve the purpose of this research, 106 students and the course instructor of their lessons actively used the EMU-VLE system contributed to the collection of the data in this study during the 2019-2020 academic year. Participants were freshman of the Eastern Mediterranean University and the instructor has been working at this university for 5 years. There were 150 students enrolled in the classes, but 106 expressed their perceptions and gave proper answers to the questionnaires.

Data Collection and Analysis

Two different data collection tools with minor modification were used throughout the research. *Students' Perceptions about Moodle / Office365 Questionnaire (SPAMO-Q)* survey was used to obtain the perceptions of students' towards Moodle / Office365 portal. The Instructor *Perception about Moodle / Office365 System Interview (TIPMOS-I)* was used to collect course instructor's perception towards Moodle / Office365 system (Turşak, 2007; Işık, 2009). Data collection questions related to research questions are given in Table 1.

Table 1. Research Questions and Data Collection Tools

Research Problems	Data Collection Tools
1. How do students perceive the use of Moodle / Office365 technology in educational activities?	Students' Perceptions about Moodle / Office365 Questionnaire (SPAMO-Q)
1.1. How do students perceive Moodle / Office365 technology in terms of perceived effects on their motivation for educational activities?	Students' Perceptions about Moodle / Office365 Questionnaire (SPAMO-Q)
1.2. How do students perceive the usefulness of Moodle / Office 365 technology?	Students' Perceptions about Moodle / Office365 Questionnaire (SPAMO-Q)
1.3. How do students perceive the ease of use of Moodle / Office365 technology?	Students' Perceptions about Moodle / Office365 Questionnaire (SPAMO-Q)
2. How do Eastern Mediterranean University instructor perceive the use of Moodle / Office365 technology in educational activities?	The Instructor Perception about Moodle / Office365 System Interview (TIPMOS-I)
2.1. How do course instructor perceive Moodle / Office 365 technology in terms of its effects on students' perceived motivation for educational?	The Instructor Perception about Moodle / Office365 System Interview (TIPMOS-I)
2.2. How do course instructor at Eastern Mediterranean University perceive the usefulness of Moodle / Office 365 portal technology?	The Instructor Perception about Moodle / Office365 System Interview (TIPMOS-I)
2.3. How do course instructor at Eastern Mediterranean University perceive the ease of use of Moodle / Office 365 technology?	The Instructor Perception about Moodle / Office365 System Interview (TIPMOS-I)

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2.4. What are the advantages and disadvantages of using Moodle / Office365 technology from the perspective of course instructor's in educational activities?	The Instructor Perception about Moodle / Office365 System Interview (TIPMOS-I)
2.5. What are the course instructor's suggestions regarding the use of this technology?	The Instructor Perception about Moodle / Office365 System Interview

The students' perceptions survey questions consist of 5 main topics and there are 6 sub-criteria. These are as follows; Self-Reported Computer Proficiency Levels, Self-Assessment E-Learning Experience, Sub-Features of Perceived Motivational Feature, Sub-Features of Perceived Usefulness Feature, and Sub-Features of Perceived Ease of Use.

Table 2: Number of the Questions on Sections

Sub-Criteria	Sections	Questions
Self-Reported Computer Proficiency Levels	1	7
Self-Assessment E-Learning Knowledge	2	4
Sub-Features of Perceived Motivational Feature	3	9
Sub-Features of Perceived Usefulness Feature	3	10
Sub-Features of Perceived Ease of Use	4	8
General		41

As seen in Table 2, there were 7 questions in section 1, which evaluate students' computer proficiency levels. These questions consist of 4 kinds of options to answer/choose. The options of these questions were as follows; Not used, Beginner, Intermediate and Expert. Section 2 contains information about the online and web-supported education system. Students could choose 2 answer options, these were; Yes or No. In the section 3, the perception of motivation in education was measured while using Moodle / Office365 system. There were 9 questions in total in this section. Their options were as follows; Strongly, Disagree, Disagree, Neutral, Agree, and Strongly Agree. The other part of the third section was the perceptions of the students to usefulness of the system. There were 10 questions in this part. These questions included the same answers as the other section 3. Section 4 contained questions about the ease of use of the Moodle / Office 365 system. In this section, students could answer questions such as Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree. There were 3 questions in the last part. These questions were asked to calculate the duration of using the system. There were 5 different options in the first question of this section (Never – One in a week – Three times in a week – Everyday - More than one in a day). The other two questions were asked to enter an information from the student and A total of 12 open-ended questions consisting of 4 parts were asked to the instructor who participated in the interview.

Survey questions were conducted online using MS Office 365 Forms. After the data were collected and analyzed, the reliability coefficient alpha value was equaled to 0.90. As Cramer and Bryman (1997) states, 0.75 alpha is considered to be superior prevalent.

Results

The results of the research are presented in three sections, which are respectively linked to one of the research questions.

Students' Perceptions

The general question is students' perception of the use of Moodle / Office365 technology in educational activities. Table 3 shows the data in the 3 subheadings of this general research question. Other questions are sub-questions of the general question. In order to achieve the purpose of the study, two main research questions with sub-questions were asked. Questions are given below. The first research question analyzes the perceptions of the Moodle / Office 365 system's effects on motivation. The second research question analyzes the usefulness perceptions of the Moodle / Office 365 system. The last research question examines perception of ease of use of the Moodle / Office 365 system. In the following sections, the data of these sub-questions and the sub-factors of these sub-questions are given.

Table 3: Descriptive Data of Perception Structures

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
Perceived Effects on Motivation	14.1	13.2	32.2	30.4	29.4	27.8	25.4	24.0	4.9	4.6	2.76	1.07
Perceived Usefulness	9.6	9.1	24.5	23.1	31.9	30.1	33.8	31.9	6.2	5.8	3.02	1.05
Perceived Ease of Use	1.1	1.1	18.6	17.6	39.3	37.0	43.9	41.4	3.1	3.0	3.28	0.80
Overall	8.3	7.8	25.1	23.7	33.5	31.6	34.4	32.4	4.7	4.5	3.02	0.97

SD: Strongly Disagree D: Disagree N: Neutral A: Agree SA: Strongly Agree

As seen in Table 3, students were positive for *Ease of Use*. In addition, 37% were neutral for *Ease of Use*. Other perception is the *Motivation* of using Moodle / Office365. Moreover, 37.7% of the participants submitted affirmative perception about *Usefulness* while only 10.8% of them recorded negative notion. As a conclusion, the average of the survey data was 3.02 and the standard deviation was 0.97. In additionally, 36.9% of students reported positive perception while only 31.5% of students reported the negative perception of the Moodle / Office365 system. In addition, students expressing negative perception and neutral perception had similar ratio (31.6%).

RQ1: Students Perceive Moodle / Office365 Technology in Terms of Perceived Effects on Their Motivation for Educational Activities

Students' perceptions of the results of Moodle / Office365 Portal regarding their motivation towards course academic activities were listed according to 4 factors. 9 questions were asked for these factors and the results were obtained. These factors were *Interest / Pleasant, Perceived Competence, Willingness and Participation.*

Table 4: Descriptive Data of the Sub-Features of Perceived Motivational Feature

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
Participation	10	9.4	31	29.2	29.5	27.8	31	29.2	4.5	4.2	2.90	1.06
Willingness	19	17.9	31	29.2	32	30.2	22	20.8	4	3.8	2.59	1.07
Perceived Competence	18	17.0	34	32.1	28	26.4	22	20.8	4	3.8	2.62	1.11
Interest / Enjoyment	17	16.0	35	33.0	26.5	25.0	25.5	24.1	2	1.9	2.63	1.07
Overall	16	15.1	32.8	30.9	29.0	27.4	25.1	23.7	3.1	3.0	2.69	1.08

33.4% of the respondents stated that the *Participation* questions were positive perception, 27.8% were undecided and 38.9% were negative which can be seen in Table 4. In addition, 47.1% of the participants expressed their negative perceptions about the *Willingness* questions, while the majority expressed their positive perceptions with 24.6%.

Similarly, 49.1% of students reported negative perception, 24.6% reported positive and 26.4% were neutral perception for *Perceived Competence* questions. Finally, 49% of respondents reported negative perception, while only 26% reported positive perception and 25% were neutral for the *Interest / Enjoyment* factor.

As seen in Table 4, 49% of students perceived Moodle / Office365 technology on their motivations for educational activities were reported negative perception. In addition, 27.4% of students were neutral to this perception and 30.7% reported the effect of motivation on the educational activities of this system positively (M = 2.69 and Std Dev = 1.08).

RQ2: Students' perceived the usefulness of Moodle / Office 365 technology

Students' perceptions concerning the usefulness of the Moodle / Office365 System utilized in this research were examined with 6 questions. Descriptive data for the factors achieved from the SPAMO-Q results were stated in Table 5. In the table, most of the students had negative and neutral perceptions about the *Benefits* of Moodle / Office365 system. However, positive 35.1% and negative 35.5% perceptions were very close to each other.

Table 5: Descriptive Data of the Sub-Features of Perceived Usefulness

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
Useful	6.7	6.3	23.7	22.3	34.3	32.4	35.7	33.6	5.7	5.3	3.09	1.00
Make job easier	18	17.0	30	28.3	32	30.2	22	20.8	4	3.8	2.66	1.10
Effectiveness	10	9.4	38	35.8	28	26.4	28	26.4	2	1.9	2.76	1.01
Raise practicality	15	14.2	30	28.3	29	27.4	28	26.4	4	3.8	2.77	1.11
Job performance	9.5	9	22.5	21.2	29.0	27.4	36.5	34.4	8.5	8.0	3.11	1.09
Work more quickly	7	6.6	15.5	14.6	34.5	32.6	40	37.8	9	8.5	3.27	1.03
Overall	11	10.4	26.6	25.1	31.1	29.4	31.7	29.9	5.5	5.2	2.94	1.06

The most positive perception (46.3%) of the participants reported is *Work More Quickly* factor and followed by *Job Performance* factor with 42.5%. The *Useful* section has the lowest percentage in the positive perceptions of the participants with 39.0%. Most of the participants have been found to have neutral perceptions in *Useful* factor by 32.4% and *Work More Quickly* factor by 32.6%.

Considering the negative perceptions of the participants; negative perceptions were reported with 45.3% in the *Make Job Easier* factor and the *Effectiveness* section with 45.2% which had similar ratios. Finally, the negative perceptions in *Raise Practicality* factor were reported by 42.5% and the lowest negative perception of the participants was the factor that *Work More Quickly* with 21.2% (M = 2.94 and Std Dev = 1.06).

RQ3: Students Perceive the Ease of Use of Moodle / Office 365 Technology

The perceptions of the participants about the ease of use of the Moodle / Office365 System were examined by 4 features. Descriptive Data for the factors obtained from the SPAMO-Q results were reported in Table 6.

Table 6: Descriptive Data for Sub-Features of Perceived Ease of Use

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
Easy to become skillful	2	1.9	26	24.5	38	35.8	36	34.0	4	3.8	3.13	0.90
Easy to learn	2	1.9	17	16.0	21	19.8	61	57.5	5	4.7	3.47	0.89
Clear & Understandable	1	0.9	18.4	18.9	44	41.9	39.6	37.4	2.6	2.5	3.23	0.77
Easy to use	0	0.0	14	13.2	33	31.1	56	52.8	3	2.8	3.45	0.76
Overall easy to use	1.3	1.2	18.9	18.1	34.1	32.1	48.2	45.4	3.7	3.4	3.32	0.83

As presented in Table 6, many students (48.8%) stated a positive perception of the ease of use of the Moodle / Office365 System. *"Easy to learn"* and *"Easy to use"* factors were the most positive sections which can be seen in Table 6. Most neutral answers were observed in *"Clear & Understandable"* factor with 41.9%. In the *"Easy to use"* factor, 0% of the participants certainly did not have difficulty in this regard. It reported that 62.2% of the participants had positive perception of *"Easy to learn"* the Moodle / Office 365 portal. Moreover, 39.9% of the participants easily used and understood the Moodle / Office365 user graphic interface *(Clear & Understandable)*. Additionally, few of the participants 19.3% had negative perceptions of *"Overall easy to use"* (M = 3.32 and Std Dev = 0.83).

Instructor's Perceptions

Instructor's perceptions of using Moodle / Office365 Portal were examined using interviews. Only one instructor using the system from EMU participated in the Moodle / Office365 Portal interview.

Perceived Motivation for Educational Activities

To examine the effects of using this Moodle / Office365 System on students' perceived motivation for educational activities. First, the question: "How did the use of this technology affect students' motivation for educational activities? Is it positive, negative, or unaffected?" was asked to the course instructor. The answer of the instructor who participated in the interview was positive. In order to obtain a detailed indicator of his observation and to support his positive views, the researcher asked to explain the indicator which interviewer observed. Interviewer added the following observations as indicators:

> *Course Instructor:*
> "Attending to the morning classes has been increased using mobile phones. Students could watch the recorded videos anytime and anywhere. Technology plays a big role in increasing personalization of learning models. Each student's learning method is different, and so technology helps instructor with personalized training. Adaptive learning software quickly takes over the place of textbooks in classrooms and students

are trained with the help of computer programs tailored to their needs. The goal is not for a child to look at the screen for six hours a day. The future of education will take shape according to the ability of instructors to structure and run their classes."

Perception about Effectiveness of Moodle / Office365

In order to investigate the instructor's perceptions about the usefulness of the Moodle / Office365 Portal, the researcher asked the following question to the interviewee:

"What do you think about the effectiveness of this technology in educational activities? Was it useful or not?" The instructor's answer was positive:

> *Course Instructor:*
> "According to the research conducted in 2018, the report shows that there are 400 million active MS Outlook users in the world. This shows us that, students in current generation will use Office365 system soon or later in their professional lives. Moodle system seems very helpful for an instructor especially when your course is project-based. All the projects and assignments are given to the students for a specific period and collected easily by the help of Moodle system. There can be hundreds of benefits but these are the main advantages which we have faced."

Perception about Ease of Use of Moodle / Office365

To analyze the instructor's perceptions of the easy availability of the Moodle / Office365 Portal, the researcher asked the next question to the interviewee: "Was the use of this technology useful overall? "The instructor response was positive:

> *Course Instructor:*
> "Yes, it was. The only problem that we faced during the class hours was network issue. If the network quality of your place is good, then there is no problem at all. With the progress of technology, its place in our lives has increased significantly in recent years. The technology has made our lives considerably easier in all the areas. Technology that changes and develops according to the needs of people has also reached an important place in our education system. In education systems, it has begun to take advantage of all the possibilities of technology. Teleconferencing method is to send video, audio and video between two or more individuals and groups at the same time. The system enables communication between people or groups in different positions with the help of technological tools. People participating in the training by teleconferencing can communicate with trainers at different locations. Phone or computer can provide this communication."

Conclusion

Answers and comments on the research questions after data analysis are as follows:

For the first research question of "How do students perceive Moodle / Office365 technology in terms of perceived effects on their motivation for educational activities?" SPAMO-Q showed that:

- The use of Moodle / Office365 provided highly positive effect on students' participation in course activities.

- The use of Moodle / Office365 mostly positively affected students' willingness to course activities.

- The use of Moodle / Office365 was sufficient for students' perceived competence in course activities.

- Students were interested and pleased with the Moodle / Office365 system.

For the second research question of "How do students perceive the usefulness of Moodle / Office 365 technology?" SPAMO-Q showed that:
- Students were not sure that the Moodle / Office365 system was useful.

- Students did not think the Moodle / Office365 system made their job easier.

- Students did not find the Moodle / Office365 system effective.

- Students did not think that Moodle / Office365 system raised their practicality.

- Students were neutral in Moodle / Office 365 system perception of job performance.

- Students were positive for work more quickly with the Moodle / Office 365 system.

For the last research question of "How do students perceive the ease of use of Moodle / Office 365 technology?" SPAMO-Q showed that:
- Students were not sure about the ease of skillful using the Moodle / Office365 system.

- Students found it easy to learn the Moodle / Office 365 system.

- Students were neutral of the Moodle / Office365 system clear & understandable.

- Students found the Moodle / Office365 system easy to use.

- Students were neutral about the ease of using Moodle / Office365 system in general.

As seen above, some results were observed to be negative. This questionnaire was previously used in Işık's (2009) study "Perceptions of Students and Teachers about the Use of E - Learning / Sharing Portal in Educational Activities". The Technology used in this study and the technology in Işık's study are similar. However, all results were positive in Işık's research in contrast to this study.
- The reason why some of the results in this study were negative; the survey was conducted at the time of the curfew in the Covid-19 pandemic. The rapidly changing education system (distance education) in this period was not surpassed for most students. For this reason, the students reflected their negative perceptions on the survey. The factors that have a negative effect on the distance education process are as follows;
    - the concentration of the courses in one day
    - the increasing homework load
    - the insufficient explanation of the instructional tasks

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- o the excessive exposure to technology
- o the problems caused by the pandemic
- o the problems caused by the internet
- o the systemic-technological problems,
- o the uniformity in the methods and techniques, and
- o the excess of the class sizes

The fact that the students were asked to suddenly find themselves in the online environment and they get used to it by force caused them to view this system negatively.

Discussion

The results of the perceived motivation section of this research are mentioned in "Motivation in Online Education" written by Hartnett (2016). The relevant part is discussed under the subheading "The Importance of Motivation in Online Learning" and corresponds to the results of this study. The obtained literature research findings show that the possibility of using computers, motivation and perception of distance education have primary importance in success in distance education. If these are not provided, in terms of education, distance education cannot produce successful results. However, since they have a certain level of knowledge and experience, a great responsibility falls on the instructor of the course. This responsibility; the management of the site, the suitability of the applications and the consistency of the content with the course (Hartnett, 2016).

Based on acceptable dimensions, statistical analysis of the results of the implementation of a LMS should be done regularly and improvements should be made to realize whether the results are satisfactory or whether any development is compulsory. Many factors need to be considered when deciding on the implementation of an LMS and measuring its effectiveness and usefulness. By paying attention to these factors, the usefulness of the system is increased and a useful e-learning environment is created (Aristovnik, Keržič, Tomaževič, & Umek, 2016).

Results of this study Liu and Kuo (2010), in similar with this study, investigators supported an important positive connection between perceived usefulness, perceived easy to use and purpose to adopt online education performs.

The results of this research and previous research described in the literature, it can be said that the Moodle / Office365 system is putative by pupils and instructor in the e-learning environment. In addition, many neutral participants can be minimalized by providing longer use time in upcoming research.

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