

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

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## ABSTRACT

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 ITEC115 - ITEC190 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 together which is mix method. The data was collected through a Microsoft Forms 365 link placed on the Moodle pages of the respective lessons. The research group consists of 106 students enrolled in ITEC115 and ITEC190 courses from the Faculty of Education and other faculties, and the lecturers of the course attended the meeting.

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 members 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.

**Keywords:** Online Education, Moodle / Office365, Motivation in Education, Usefulness and Ease of Using Technology in Education.

## ÖZ

Bu çalışmada Moodle / Office365 sisteminin eğitim faaliyetlerinde kullanımına ilişkin öğrenci ve öğretim elemanlarının algıları incelenmiştir. Algılar üç farklı açıdan incelenmiştir: Bu teknolojinin, öğrencilerin eğitim faaliyetlerindeki motivasyonuna etkisi, yararlılığı ve kullanım kolaylığı üzerindeki kullanımının algılanması. 2019 – 2020 bahar döneminde, Moodle / Office365 sisteminin kullanıldığı ITEC115 - ITEC190 derslerine kaydolmuş öğrenciler ve ders eğitmeni çalışmaya katılmıştır.

Bu çalışma karma nitel ve nicel araştırma yöntemi çerçevesinde yürütülmüştür. Veriler, ilgili derslerin Moodle sayfalarına yerleştirilen bir Microsoft Forms 365 bağlantısı aracılığıyla toplanmıştır. Araştırma grubu, Eğitim Fakültesi ve diğer fakültelerden ITEC115 ve ITEC190 derslerine kayıtlı 106 öğrenciden oluşmakta ve görüşmeye 1 ders eğitmeni katılmıştır.

Bu çalışmanın sonucunda katılımcıların Moodle / Office365 sisteminin kullanışlı ve kullanımı kolay bir teknoloji olduğuna inandıkları anlaşılmıştır. Öğrencilerin ve öğretmenlerin bu yeni sistemi eğitim ortamlarında kullanmanın yararlı buldukları görülmüştür. Ayrıca öğrencilerin ve öğretmenlerin bu yeni sistemi kullanmanın öğrencilerin eğitim faaliyetlerindeki motivasyonlarını pozitif yönde etkilediği düşünülmektedir.

**Anahtar Kelimeler:** Çevrimiçi Eğitim, Moodle / Office365, Eğitimde Motivasyon, Eğitimde Teknoloji Kullanımı ve Kullanışlılığı.

# DEDICATION

To my parents and sister,  
Bahtiyar, Ayten and Emel GÜLER

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# TABLE OF CONTENTS

ABSTRACT .....	iii
ÖZ .....	iv
DEDICATION.....	v
ACKNOWLEDGMENT .....	vi
LIST OF TABLES .....	xi
LIST OF FIGURES .....	xiii
LIST OF ABBREVIATIONS .....	xiv
1 INTRODUCTION .....	1
1.1 Background of Study .....	1
1.2 Aim of the Research .....	5
1.3 Questions of Research .....	6
1.4 Significance of the Study .....	7
1.5 Limitations .....	8
1.6 Key Definition.....	8
2 LITERATURE REVIEW.....	11
2.1 E-Learning .....	11
2.2 Learning Management System (LMS) .....	12
2.2.1 Moodle .....	13
2.3 Technology Acceptance Model.....	14
2.3.1 How the Technology Acceptance Model Works .....	15
3 RESEARCH METHODOLOGY .....	18
3.1 Overall Research Design .....	18
3.2 Problem Statement of the Study.....	19

3.3 Research Methods .....	20
3.3.1 Quantitative Method .....	20
3.3.2 Qualitative Research .....	21
3.4 Participants.....	22
3.4.1 Computer Proficiency Levels of Students.....	23
3.4.2 Instructor Characteristics.....	25
3.5 Context.....	26
3.5.1 Information on Moodle / Office365 (EMU-VLE) System and the Role of the System in Educational Activities .....	26
3.5.2 Information about EMU-VLE (Moodle / Office365) .....	27
3.6 Students' Perceptions about Moodle/Office365 Questionnaire (SPAMO-Q) ...	27
3.7 Validity .....	28
3.8 Reliability.....	28
3.9 Data Collection Tools.....	29
3.9.1 Survey Sub-Scales .....	30
3.10 The Instructors' Perception about Moodle / Office365 System Interview (TIPMOS-I) .....	32
<b>4 RESULTS AND FINDINGS .....</b>	<b>33</b>
4.1 Students' Perceptions about Moodle/Office365 (SPAMO-Q).....	33
4.1.1 Students Perception of the Use of Moodle / Office365 Technology in Educational Activities.....	33
4.1.2 Students' Perceptions Regarding the Consequences of the Utilization of Moodle/Office365 Portal on Their Motivation towards the Tutorial Activities	35
4.1.3 Students' Perceptions about the Usefulness of Moodle / Office365 System.....	42



4.1.4	Students' Perceptions about Ease of Use .....	50
4.1.4.1	Students' Self-Assessment Practice .....	56
4.2	The Instructor's Perception.....	59
4.2.1	Instructor's Perception about the Effects of Using Moodle / Office365 Portal Technology on Students' Perceived Motivation for Educational Activities .....	59
4.2.2	The Instructor's Perception about Effectiveness of Moodle / Office365 .....	60
4.2.3	The Instructor's Perception about Ease of Use of Moodle / Office365 ....	60
4.2.4	Advantages and Disadvantages of Moodle / Office365 Portal for Instructors.....	63
4.2.5	Instructor's Suggestion about the Use of Moodle / Office365 .....	64
5	DISCUSSION AND CONCLUSION.....	65
5.1	Discussion.....	65
5.1.1	Students' Perceptions about Moodle/Office365 (SPAMO-Q).....	65
5.1.1.1	Perceived Effects on Students' Motivation towards Educational Activities.....	65
5.1.1.2	Perceived Usefulness .....	67
5.1.1.3	Perceived Ease of Use .....	68
5.1.1.4	Advantages and Disadvantages of Moodle / Office 365 .....	69
5.2	Conclusion .....	71
	REFERENCES .....	74
	APPENDICES .....	89
	Appendix A: Students' Perceptions about Moodle/Office365 Questionnaire (SPAMO-Q).....	90

Appendix B: The Instructor Perception about Moodle / Office365 System Interview (TIPMOS-I) .....	96
Appendix C: Cronbach Alpha Value .....	101
Appendix D: Ethics Committee Approval .....	102

## LIST OF TABLES

Table 3.1: Distribution of Participants by Gender .....	22
Table 3.2: Students' Self-Reported Computer Proficiency Levels .....	24
Table 3.3: Students' Self-Assessment Knowledges .....	25
Table 3.4: Instructor Characteristics of EMU University .....	25
Table 3.5: Reliability Statistics of Students Perception Survey .....	29
Table 3.6: Research Questions and Data Collection Tools .....	29
Table 3.7: Number of the Questions on Sections .....	31
Table 4.1: Abbreviations Used in Student Perception Questions.....	33
Table 4.2: Descriptive Data of Perception Structures.....	34
Table 4.3: Descriptive Data of the Sub-Features of Perceived Motivational Feature	36
Table 4.4: Descriptive Data of the Participation Sub-Factor of Perceived Motivational Feature.....	38
Table 4.5: Descriptive Data of the Willingness Sub-Factor of Perceived Motivational Feature.....	39
Table 4.6: Descriptive Data of Perceived Competence Sub-Factor of Motivational Feature.....	40
Table 4.7: Descriptive Data of the Interest / Enjoyment Sub-Factor of Perceived Motivational Feature.....	41
Table 4.8: Descriptive Data of the Sub-Features of Perceived Usefulness.....	43
Table 4.9: Descriptive Data of the Useful Sub-Factor of Perceived Usefulness Feature .....	45
Table 4.10: Descriptive Data of the Make Job Easier Sub-Factor of Perceived Usefulness Feature.....	46

Table 4.11: Descriptive Data of the Usefulness Sub-Factor of Perceived Usefulness Feature.....	47
Table 4.12: Descriptive Data of the Raise Practicality Sub-Factor of Perceived Usefulness Feature.....	47
Table 4.13: Descriptive Data of the Job Performance Sub-Factor of Perceived Usefulness Feature.....	48
Table 4.14: Descriptive Data of the Work More Quickly Sub-Factor of Perceived Usefulness Feature.....	49
Table 4.15: Descriptive Data for Sub-Features of Perceived Ease of Use .....	51
Table 4.16: Descriptive Data of the Easy to Use Sub-Factor of Perceived Ease of Use .....	52
Table 4.17: Descriptive Data of the Clear & Understandable Sub-Factor of Perceived Ease of Use .....	53
Table 4.18: Descriptive Data of the Easy to Learn Sub-Factor of Perceived Ease of Use .....	55
Table 4.19: Descriptive Data of the Easy to Become Skillful Sub-Factor of Perceived Ease of Use .....	56
Table 4.20: Approximately, How Frequently Did You Use “Moodle/Office 365” in Your Educational Activities? .....	56
Table 4.21: Approximately, How Many Times Did You Use “Moodle/Office 365” in Your Out-Of-Class Educational Activities?.....	57
Table 4.22: Approximately, How Many Class Hours Did You Use “Moodle/Office 365” In Your In-Class Educational Activities? .....	58

## **LIST OF FIGURES**

Figure 2.1: Technology Acceptance Model .....	15
Figure 4.1: Distribution Table of Sub-Features of Perceived Motivation Features ...	37
Figure 4.2: Moodle / Office 365 Perceived Usefulness Distribution .....	44
Figure 4.3: Moodle / Office 365 Perceived Ease of Use Distribution .....	52
Figure 4.4: Moodle / Office 365 Usage Hours Distribution .....	59

## **LIST OF ABBREVIATIONS**

E-Learning	Electronic Learning
ICT	Information Communication Technology
IT	Information Technology
LMS	Learning Management System
M	Mean
SPAMO – Q	Students’ Perceptions about Moodle / Office365 Questionnaire
Std Dev.	Standard Division
TIPMOS - I	The Instructor Perception about Moodle / Office365 System Interview
VLE	Virtual learning environment

# Chapter 1

## INTRODUCTION

### 1.1 Background of Study

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.

In our age, strong technological tools are needed to increase teaching. The use of computers, which is one of these tools, for educational purposes is much more than before the widespread use of personal computers; it dates back to the 1950s (Fouts, 2000). The use of computers for educational goals in this historical process; internet also included in education. The use of computers for educational goals in this historical process; internet also included in education.

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. 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).

With the implementation of some technological innovations in education (such as computer and internet), a better education environment has been created, computer and internet have been used frequently in educational environments and has become one of the indispensable ones (Tonguç & Özkara, 2020). In parallel with technological developments, distance-learning model has been developed, new methods have been put into practice in education, which continues with computer-aided education and differentiated with web-aided education, and education has become more qualified in time (Raja & Subramani, 2018).

The web pages, which are a tool between the student and the course materials, can contain many objects such as lecture notes, exams, assignments, bulletin boards, discussion forums, announcement pages, educational videos, pictures. These objects increase students' interest in learning (Al-Bataineh, Jennifer L, & Adel, 2016).

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-based training is used in conjunction with face-to-face training, while the web-based training is carried out only over the internet, while it is complementary and increasing interest in education (Serhan, 2019).



The importance of distance education, which offers some solutions to some of the constraints experienced in traditional education, is increasing day by day. In this way, time and space limitations in education are eliminated and it is possible to reach more individuals at the same time. Distance education system is that connects students with educational resources and performs education (David J. Deming, 2015). It defines distance education as the delivery of education to distant students with the help of tools such as satellite, video, audio, graphics, computer and multimedia technology.

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).

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. In this system, where the activities carried out in the courses are shown in weekly modules. Trainers can make exams and take the assignments (Stanković, Milovanović, & Radović, 2017). They have determined on access and delivery dates, share the assessments and corrections with the students, create discussion forums on the topics related to the courses, and ask them to express their opinions on a topic simultaneously with the chat module, students can see reports of activities they have performed when they log in (Costa, 2012).

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.

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). (Saritepeci & 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.

When the researches are examined, the teaching given in the course environments where the Moodle system is used supports the subject. (Aydoğdun, 2016) “Primary Education 7th Grade Students on Lesson of Science and Technology and Implementing Environment Subject “in the thesis of the success of education in this system measured. In this thesis, students were tested. In addition, their opinions about the system were evaluated by taking their opinions.

In general, students (Moodle) saw the advantage of having no time and place limitation in the Web Supported Education, arranging the working environment for them, making them feel more comfortable in the web environment, eliminating the problem of taking notes, being better motivated and the ease of use of Moodle (Al-Ajlan & Zedan, 2008).

On the other hand, they perceive the difficulties of communication with their friends and teachers, not being able to follow the course in the absence of computer and internet, asking questions and not receiving feedback.

As a result of the research of (Soysal, 2015) thesis titled "Use of Information Technologies in Education as a Means of Measurement and Use of "Moodle" as a Model Implementation", teachers preferred distance education instead of face-to-face education. The teachers participating in the research stated that they benefit from e-content in their courses, but that the current curriculum is not compatible with the e-content and that it does not provide opportunities for IT tools. They also state that school administrators are encouraging to use IT tools in the field.

Turkey is also available a lot more theses Moodle instance. As can be seen in the theses given above, the use of Moodle is understandable and easy, and increases the efficiency of the course. However, no such study was found in the TRNC. Moodle system is actively used in Eastern Mediterranean University. There will be a thesis emphasizing the importance of perceptions of students and instructors in ITEC115 course using Office365 / Moodle system. In addition, this study will be the first study on Learning Management Systems in TRNC.

## **1.2 Aim of the Research**

In this study, the perceptions of students and faculty members 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 instructors.

Finally, the benefits, drawbacks, and suggestions for using this technology from the instructor's perspective.

### **1.3 Questions of Research**

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

In order to achieve the purpose of the study, two main research questions with sub-questions were asked in this research. 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 instructors perceive the use of Moodle / Office365 technology in educational activities?
  - 2.1 How do course instructors perceive Moodle / Office 365 technology in terms of its effects on students' perceived motivation for educational activities?
  - 2.2 How do course instructors at Eastern Mediterranean University perceive the usefulness of Moodle / Office 365 portal technology?
  - 2.3 How do course instructors 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 instructors' in educational activities?

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

#### **1.4 Significance of the Study**

Technology has an important role not only with its facilitating effect on daily life activities, but also with its support for the advancement of educational sciences. The use of technology in education not only increases the quality of education, but also contributes to the generation of technology literacy (Özbek, 2016). Computer technologies can be used in order to realize effective and lasting learning in terms of undergraduate and graduate education starting from primary school age. Computer-assisted instruction helps to create learning supportive activities through visualization and helps students learn more easily (Ghavifekr & Wan, 2015).

The teaching in which all kinds of technology are included in the traditional classroom environment is expressed as blended teaching (Pesen & Oral, 2016). In this definition, technology means tape, overhead projector, projection device; Internet technologies such as LMS, social networking, blog, web quest and wiki may also be available. Online learning environments created with internet technologies; learner's constructivist theory that advocates access to information by using critical thinking skills (Zengin & Can, 2011).

Although there are studies in the literature that measure the effectiveness of LMSs and determine whether the systems are sufficiently flexible and easy to use, studies that

examine the views of people who may use the system in detail are rare. Therefore, this study is important in terms of developing more effective LMSs and using the views and experiences of instructors and students about LMSs which have a key role in integration of Office365 / Moodle portal to education.

## **1.5 Limitations**

This research was conducted with the following limitations:

- In this study, there are some economic and time limitations. The students included in the research were limited to Preschool Instructors of Eastern Mediterranean University Faculty of Education.
- 106 students participated in the survey of the study.
- The research was limited to the Office365 / Moodle portal included in the curriculum of computer introduction course in 2019-2020 academic year.
- The research is limited to the Office365 / Moodle classroom management environment.

## **1.6 Key Definition**

**Information Technology:** These are the technologies that cover all technologies including computers and computers used to collect, process, store and transmit information from networks to networks and networks to present it to users. These are the technologies that cover all technologies that provide communication with computers, mobile phones, tablets, used for collecting, processing, storing information, transmitting networks from place to place and presenting them to the users. Information technology is a concept used for all information services that can be connected with communication and computer systems (Fidan & Debbağ, 2019).

**Computer Aided Education:** Computer aided education; the training process and the activities carried out in this process are carried out with the content consisting of computer and educational software. Computer aided education; the process of education and the activities carried out in this process is done with the content of computer and educational software. Computer Aided Education is also defined as the use of computers to teach students a subject or concept through courses programmed into the system or to reinforce previously acquired behaviors (Tareef, 2014).

**E-content & E-Learning:** Educational materials prepared for electronic environments for use in education and training activities are called e-content. E-content can be a plain text or an image, or an audio, video or animation file. E-contents are the educational resources and teaching materials of the computer aided education process. These products can be easily accessed, transformed and reproduced by anyone. Computerized learning resources provide some important benefits to distance education students and instructors in general (Makokha & Mutisya, 2016).

**Distance Education:** Regardless of the physical environment, it is the type of education that the teacher and the student carry out with interconnected devices over a network. Distance education can take place in local environments in the form of a local network or on large networks such as the Internet (Sadeghi, 2019).

Some of the definitions made in recent years are also:

- It is a form of education that uses electronic media or personalized learning tools.
- It is the education where the majority of the educational communication between the teacher and the students is not met, the two-way communication

between the teacher and the student is provided remotely and the technology is used in the two-way transmission to support and configure the educational process.

- It is all the arrangements made to provide people with printed or electronic communication devices and information through mass media, which are planned at different places and times.
- It is the official form of education where many teaching functions are carried out in an environment where the educator and the student are distant from each other.



## **Chapter 2**

### **LITERATURE REVIEW**

#### **2.1 E-Learning**

In general, e-learning (electronic learning) is a concept used when the learning environment is information technologies. According to the Digital Strategy glossary, e-learning: “It is learning supported by digital content and tools, and often includes different forms of interaction, such as the learner-teacher or learner-learner online interaction (Afşar & Ata, 2015).

With the widespread use of computer and internet technologies, the idea of learning in electronic environment has attracted great attention worldwide. It is possible to examine e-learning efforts on the basis of three major transformations from the emergence of computers in the 1960s to the present day.

In order to support teaching, the learning orientation in electronic environment, which started with training and practice-based educational software in teaching basic skills, gained a great momentum with the instant communication opportunities of the Internet, which came to the web in 1991 (Ergüney, 2015). Thus, computer-based educational software has been replaced by server-based Learning Management Systems (LMS). Therefore, content creation and control has also increased from CD-ROM to Web-based software languages.

With the spread of educational processes in the digital environment, the need for content management with Web 2.0 technologies has led to the derivation of many application areas covering each other's features related to learning and content management.

## **2.2 Learning Management System (LMS)**

Internet technologies such as AJAX, SOA, XML, RDF, Widget and Jscript, which are added every day, provide a high level of interaction and communication to their users, as well as content, reusable environments (Krouska, Troussas, & Virvou, 2017). Thus, it is seen that an intense effort has been made to adapt social web plugins in applications such as Blackboard, WebCT and Moodle.

Whether integrated with the system or provided as an additional application, most LMSs try to include discussion forums, chat rooms, blogs, wikis and other social web tools. However, it is not possible to say that these server-based applications are sufficiently adapted to the innovations provided by continuously individualized Internet technologies (Chugh, Ledger, & Shields, 2017).

These systems are called LMS because they contain a learning panel that helps students to learn and a management panel that enables instructors to manage the system. With these features of the system, while learning is provided in a virtual environment, classroom management can also be provided in a virtual environment (Reid, 2019).

One of the best ways to raise awareness by making students responsible in the use of technology is LMS. While the LMS are encouraging students to explore the system during their understanding of the system, they are directed to conduct research via

internet technology for the courses they take with the help of the LMS. General characteristics of the LMS can be summarized as follows (Chen, 2018):

- LMSs provide solutions that facilitate the teaching-learning process, as they provide systematicity in the management of instruction.
- LMSs provide the opportunity to follow the situation of the learners in the teaching process. Thus, the instructor can guide learners.
- LMSs are systematic structure that can be applied at a class and course level and can be designed for a large number of learner groups.
- LMSs reduce the limitations arising from time and space in education.
- For the LMS, it is aimed to reach and increase the level of interaction achieved by face-to-face communication in the classroom environment by providing interaction between the learner-learner, learner-teacher and learner-environment.

Educational institutions or faculty members can choose the LMS that they will use for their courses according to whether the software is open source or not.

### **2.2.1 Moodle**

With the widespread use of Web technologies in the field of education, Learning Management Systems (LMS) have become an important element. The most important feature of the LMS is that they provide learning and teaching skills regardless of time and place. Consequently, the developments in internet technology, LMS started to be used as blended teaching at universities (Zhang & Zhonga, 2018). LMS are software applications that provide users with various tools for education. There are many commercial and open source LMS softwares available on the web.

Moodle LMS is one of the most preferred LMS with 246 countries around the world, about 164000 registered sites, over 26 million courses and over 213 million users (Moodle Statistics, 2020). Moodle LMS offers advanced features for students, educators, and Moodle system users. Moodle LMS can be run on Windows, Linux, MacOS etc. operating systems. Moodle LMS offers many usage advantages for system administrator, educator and students. System administrators perform the maintenance, update, backup, authorization and follow-up operations of the system used with Moodle LMS.

Educators can perform their courses, lecture notes, evaluation criteria and student follow-up efficiently through Moodle LMS. Students can access their lecture notes, homework, exams, activities such as forums and questionnaires via Moodle LMS with interfaces that provide modern ease of use. As the LMS at Eastern Mediterranean University, the use of Moodle LMS has been preferred since 2005 to support the courses carried out in distance education programs and formal education due to the advanced features it provides for educators and students.

### **2.3 Technology Acceptance Model**

TAM established by Davis (1989) to explain and predict the behavior of individuals in the implementation of a new technology, is based on the Cause of Behavior Theory developed by Fishbein and Ajzen (1975). The simple building block in the plan, application and improvement of information organizations is the user. When the user is mentioned, the human or humans who have directorial duty under the control of the professional components, enter the information, arrange the output reports, use the IT, advantage from the outputs of the organization are understood. Since users are

concerned with the impact of the new system on their work, the system that meets the expectations of the users is successful (Elkaseh, Wong, & Fung, 2016).

TAM developed by Davis (1989) explains the features that state the use of information systems on an individual level. When the literature is examined, TAM has widespread use in explaining the adaptation of different management information systems and in revealing the reasons why users accept new systems.

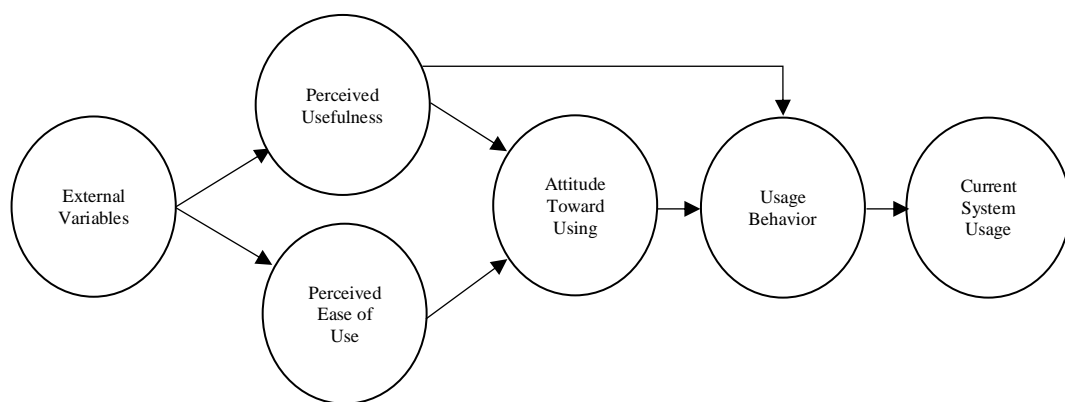


Figure 2.1: Technology Acceptance Model

### 2.3.1 How the Technology Acceptance Model Works

The current information system usage behavior includes a four-step process (Figure 2.1). There are exterior factors in the first phase. The second phase generates beliefs that comprise perceived ease of use and perceived benefit. The third phase is the attitude towards use. The fourth and last phase is behavioral intent. These cause current system usage (Davis, 1989).

External variables; are variables that management cannot control. Exterior factors affect user beliefs. Confidence is attitude towards the object. Perceived ease of use and perceived utility attitudes are beliefs. Beliefs against that object can be used to predict an individual's attitude towards using a particular system. Beliefs affect the individual's

attitude as it is related to performance. The key determinants of information technology use are perceived easy to use and perceived benefit. Perceived easy to use; It is explained as the degree of perception that a person does not must physical and psychological effort while using a certain system (Tornatzky & Klein, 1982).

Perceived easy to use refers to well-defined as the degree of perception that a person does not must physical and psychological effort while using a certain system. The perceived easy to use of technology touches together perceived effectiveness and attitude towards use. Persons will be extra eager to use the technology when they perceive the new-fangled system as ease of use (Lanlan, Ahmi, & Popoola, 2019). The term perceived benefit refers to the belief that a person will improve their job performance when using a particular system. Easy to use of the technology helps the system to learn easily. Perceived benefit directly affects the attitude towards use and the intention to act for use (Davis, 1989).

The perceived advantage and perceived easy to use composed provide more benefits and easy to use. Perceived benefit and attitude towards use directly affect the intention to act for the use of the technology. The purpose to behave for use is the possibility of the person to exhibit a certain behavior. It shows how eager the individual is to perform the behavior (Mustapha & Obid, 2015). The intention to use behavior also determines the current system use alone. The use of the information system is a behavior.

The standard of handlers' use of new system indicates the use of the technology and their acceptance of the system. The production here is the person's decision to refuse or use the system. The stronger the individual's behavioral goal, the stronger the probability that the behavior will occur. Users participate by providing inputs to the

management information system and by using the outputs of the system (Ozturk, Bilgehan, & Nusair, 2016).

## **Chapter 3**

### **RESEARCH METHODOLOGY**

#### **3.1 Overall Research Design**

In this study, a research pattern based on case study together mix method with qualitative and quantitative data collection methodologies were used to describe the perceptions of students and course instructors about the use of Moodle / Office365 single sign on system (EMU-Virtual Learning Environment, EMU-VLE) in educational activities. The purpose of the research based on case study is important 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). As a result, this study emphasis on a single case: Use of EMU-VLE in educational activities that was knowledgeable by pupils and course instructor.

The main purpose of using quantitative and qualitative methods in this study is to understand the students' and course teachers' perceptions in depth.

One of the common qualitative research designs is case study. Case studies are one of the most well-known methods used in the in-depth study of complex structures with many relationships and variables (Starman, 2013). Case studies are experimental descriptions of rich and specific examples based on many data sources. Case analysis has been described as the study of experimental researches at the same time in the



concept of real life, particularly when the limitations between phenomenon and concept are not clear (Rashid, Rashid, & Warraich, 2019).

Case studies generally say "how often?" or "how?" rather than "how?" and why?" answers questions. It also has very high potential to reveal causality in situations that are too complex for statistical or experimental methods (Merriam & Tisdell, 2015). Many strategy researchers generally examine the correlation of data at a time in a particular section. In case study, it is considered that it is a more dynamic environment unlike other methods, and it is questioned how strategy outputs develop and how strategic change is experienced. Therefore, the case analysis approach is one of the appropriate approaches for analyzing strategic processes (Lee & Saunders, 2017).

### **3.2 Problem Statement of the Study**

This research is carried out at the Eastern Mediterranean University, which gives great importance to online learning. Many projects have been developed for distance education at the university. In addition, the distance education institute supports these developments and personally contributed to the development. Nevertheless, the academicians of the university had difficulties about sharing e-documents between themselves and there was not an online communication with each other. In addition to that, during educational activities use of technology is not common because there was no solution giving access to use both online communication/collaboration tools and learning management system (LMS) features.

At this point, an e-learning system (EMU-VLE) managed by the Eastern Mediterranean University Distance Education Institute is used to find a way out of all

the problems mentioned above. In this study, students' perceptions of this system and their teachers' attitudes towards this system were tried to be understood.

### **3.3 Research Methods**

In this study, case study with a mixed approach meaning both qualitative and quantitative methodologies were used. In this section, qualitative and quantitative approaches will be briefly explained.

#### **3.3.1 Quantitative Method**

Quantitative research; It is the name given to experiential research method based on trial, observation or tests, or quantitative or mathematical research method where explanations and dimensions can be repeated. The quantitative method is based on objectivist, positivist and realist models. With the application of the positivist attitude to the research in the field of science, the objective attributes of science has developed. The researcher who researches on an objective subject does not include researcher's own ideas in the research while collecting or analyzing data on the subject. (Mehrad & Zangeneh, 2019).

Bacon-Shone (2015) mentioned in the quantitative research method, more numerical methods are used to discovery the correlation between truths and the outcomes are stated numerically. The objective of the objectivist view is to clarify social behavior with a determinist approach by pushing it in a scheme or pattern. For example; The survey technique is based on an objective style and the findings revealed by the survey are put into a steady shape after analysis.

Quantitative research technique was systematically applied in natural science practice for the first time. The main reason is the principle of objectivity (loaded into natural

sciences) and that it has become a science by system and method before social sciences. Since the 19th century when the social sciences gained a scientific character, the quantitative approach method applied by the natural sciences has also been adopted in the field of social sciences (Creswell, 2014).

### **3.3.2 Qualitative Research**

According to Creswell (2014), it is seen that qualitative research started in the anthropology, psychology and sociology sciences in the early twentieth century, as the complex nature of human life, the phenomenon and mysteries that human positivist approach did not accept. Historically, qualitative research has been given different names such as 'natural research' based on the attempt to identify natural phenomena, 'interpretative research' because it contains the subjective opinions of the researcher about the problem, and 'field research' because it examines a subject in a specific social environment (Mohajan, 2018).

Qualitative research is one of the ways of creating information that people progress to determine the depth of the social structures and systems that they build with their understanding of their potential, their secrets and efforts. In the studies designed with qualitative technique, there is an effort to touch a deep insight about the event or singularity observed (Rahman, 2017).

Despite the nature of quantitative research that requires proof-seeking identity and working on large sample groups, qualitative research is conducted with low sample or small study groups. Keeping the sample in low number provides the researcher with detailed and in-depth analysis with specific samples, while facilitating an executable research in time and cost. (Vaismoradi & Snelgrove, 2019).

Case studies are actually a way of looking at what is happening in the environment, systematically gathering data, analyzing and revealing the results (Gary, 2019). The resulting product is a keen understanding of why the event was that way and what to focus on for further research (Mariette, 2016).

### 3.4 Participants

Eastern Mediterranean University actively uses Moodle / Office365 system since 2016. 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 Moodle / Office365 system contributed to the collect of the data in this study during the 2019-2020 academic year. Participants were freshman of the Eastern Mediterranean University. There were 150 students enrolled in the class but 106 of them expressed their perceptions properly and gave appropriate answers to the questionnaire. As seen in Table 3.1, 23 (21.7%) male and 83 (78.3) female students answered the Students' Perceptions about Moodle/Office365 Questionnaire (SPAMO-Q).

Table 3.1: Distribution of Participants by Gender

	Gender				TOTAL	
	Male		Female		N	%
	N	%	N	%		
Students participating in the research	23	21.7	83	78.3	106	100

Microsoft Office 365 Forms used to collect the survey data. A link was given on the course's Moodle site to collect answers of the questions of students enrolled in ITEC190 and ITEC115.

Only course instructor participated in the interview part of the research. There were two more instructors also teaching the same course content in different sections. Interview were conducted with only course instructor. Instructors of the ITEC115 and ITEC190 course have been actively using the Moodle / Office365 system for 4 years. Interviewee had a lot of knowledge about the system and explained the shortcomings and advantages of the system very well in while answering the questions. The instructor knew how to meet the requirements of the system and added the necessary course materials, trial exams and lecture videos to the system.

### **3.4.1 Computer Proficiency Levels of Students**

According to the data that students report their knowledge level is expressed as "What is the status of students having information about IT softwares ?", as seen in the Table 3.2, it has been observed that 29.26% of their students were expert in using web browsers, search engines, e-mail, social network and online messaging. The percentage of intermediate is determined to be at this level in terms of students and 62.46% of students were intermediate in these software applications. Looking at the last two remaining criteria, 7.54% of students were beginner, and only a few (0.74%) have never used these software applications.

Eastern Mediterranean University provides to its staff and students with MS Office 365 cloud system applications. For these applications, 8.98% of the participants reported that they were at the expert level. Almost half of the students 50.7% reported that they were using this system as an intermediate level and 26.18% used the system as a beginner level. Lastly, 14.15% of the participants reported that they have never used the cloud system before. Among students (30.2%) MS Office 365 - OneDrive cloud storage system has been the least used program.

As seen in Table 3.2, for the competencies of using LMS, only 1.9% of students reported themselves as expert in using these systems. The percentage of the students who used the LMS system as intermediate (34%) and beginner (32.1%) were close to each other; and the percentage of the students who have never used the system is 32.1%, which was the same as the beginners. While 72 (68%) students were familiar with the LMS system, 34 (32.1%) students have never used this system before.

Table 3.2: Students' Self-Reported Computer Proficiency Levels

	Not Used		Beginner		Intermediate		Expert	
	N	%	N	%	N	%	N	%
Web browsers	3	2.8	16	15.1	82	77.4	5	4.7
Search Engines	0	0	6	5.7	75	70.8	25	23.6
E-mail	0	0	12	11.3	79	74.5	15	14.2
Social Networks	0	0	3	2.8	46	43.4	57	53.8
Online Messengers	1	0.9	3	2.8	49	46.2	53	50
MS Word 365	7	6.6	16	15.1	66	62.3	17	16
MS Powerpoint 365	7	6.6	25	23.6	61	57.5	13	12.3
MS One Drive 365	32	30.2	37	34.9	65	61.3	2	1.9
MS Outlook 365	14	13.2	33	31.1	53	50	6	5.7
LMS	34	32.1	34	32.1	36	34	2	1.9

Students' information about their previous online learning experiences is also included in this section. As seen in the Table 3.3, 77.4% of the students previously used the internet in their courses, and 34.9% previously used distance learning supported applications in their courses. In addition to that, 97.2% of the participants have

previously used the internet for their studies. Finally, more than half of the students (60.4%) have previously used an application based on the cloud system in their courses.

Table 3.3: Students' Self-Assessment Knowledges

	Yes		No	
	N	%	N	%
Have you ever taken any <u>web-supported</u> or <u>online course</u> before this semester?	82	77.4	24	22.6
Have you ever taken any <u>distance learning application</u> in your courses before this semester?	37	34.9	69	65.1
Have you ever used the internet <u>for your course studies</u> until now? (Examples: Researches, homeworks, projects, etc.)	103	97.2	3	2.8
Have you have ever used any <u>Cloud-Based application in your courses</u> until now? (Examples: Applications that provide sharing documents, forums, chats, video conference, on-line exams etc...)	64	60.4	42	39.6

### 3.4.2 Instructor Characteristics

This section provides information about the course instructor. Only one instructor attended the interview.

Table 3.4: Instructor Characteristics of EMU University

Questions	Course Instructor
How long have you been working as an instructor at Eastern Mediterranean University?	10 Active Semester
How long have you been working with Moodle/Office365 Applications?	4 years (8 academic semesters)
Have you ever used any similar portal like Moodle/Office365 before?	No, I have not.

In Table 3.4, the course instructor and has been working at Eastern Mediterranean University for 10 active semester (5 years). In addition that, course Instructor has been

actively using the Moodle / Office365 system for 4 years. Course Instructor has never used a similar distance education system or portal before this system.

### **3.5 Context**

The research was carried out in a completely natural teaching and learning environment. It was carried out during the spring term of 2019-2020 academic year. More information about the study will be given in this section.

#### **3.5.1 Information on Moodle / Office365 (EMU-VLE) System and the Role of the System in Educational Activities**

The supervisor of this study has developed EMU-VLE system. This is an integration project and the aim this project to use features of the learning management system (Maphosa & Eunice, 2020) and a communication/collaboration tool Skype for business (Microsoft Office 365) in a single sign on situation. By this way, any user of the EMU-VLE will be able to login and use both tools' features just using their university email accounts.

EMU automatically assign MS Office 365 accounts to every student. With this account, students can easily access to the MS Office 365 Cloud system. However, the only MS Office 365 system was not sufficient for technology-enhanced teaching and learning. A learning management system (LMS) was required. For this reason, EMU-VLE system has been developed for overcoming all of the problems.

By using Skype for Business course lectures has been recorded during the lesson hours. After finishing the lecture, record the videos edited and shared the videos published on the Moodle site. Students who did not attend the lesson or wanted to watch the recorded lecture videos again can easily access this video from Moodle site.



Students join the system without any account activation. They were enrolling to the course are automatically. Thus, they logged into the system without any external requirements.

### **3.5.2 Information about EMU-VLE (Moodle / Office365)**

During the term, course instructor shared content with the students who has come to class. At the same time, lecture was streamed to the internet and the students of the same class watched lectures online by using Skype for Business. Any of the student of this system can easily communicate with the course instructor directly or by using audio, video, chat tools of the system. At the end of the lecture hour, recorded videos were available on the Moodle system.

In addition, ITEC115 and ITEC190 courses have computerized practice sessions in the laboratory. During the Lab period, students practice to reinforce the topics they learned in the lesson. The course instructor guides the student in this section. By using Moodle assignment module weekly assignments were given to students. When students finished their homeworks they have uploaded the applications assignments to the Moodle and the instructor graded the applications them on the Moodle and returned to the students. All of the course content proceeded through this system. In addition, course instructor also uploaded trial exams to this Moodle. Students were prepared for the real exam with the help of the practice exams.

### **3.6 Students' Perceptions about Moodle/Office365 Questionnaire (SPAMO-Q)**

This questionnaire used in the research is the main source in finding answers to the research questions. The language of the original questionnaire was English (Işık, 2009), so the questionnaire has been translated into Turkish because students enrolled

in these courses coming from the departments of which the medium for their instruction was Turkish. Because of the mother tongue of the students was Turkish, they could better understand and answer the Turkish questionnaire. Turşak (2007) developed original survey questions in his MSc thesis. Later, the questionnaire was revised and used by Işık (2009). In this research, this latest version translated into Turkish and revised the according to this research.

### **3.7 Validity**

The survey used in this was developed under the supervision of experts to ensure validity. During the progress process, they guided the arrangement and content with their feedback. This questionnaire was previously used from the Işık (2009) thesis with the title "Perceptions of Students and Teachers about the Use of E - Learning Sharing Portal in Educational Activities".

The feature that a validity measuring tool aims to measure is that it measures accurately and at the same time without mixing with any other features. Validity relates to the degree to which an instrument measures the phenomenon it is arranged to measure. With the help of validity, the degree of measurability of the variable to be measured is revealed (Anthony, 2000). Validity is valid if the measurement figures for a particular phenomenon accurately reflect, describe or provide theoretical explanations.

### **3.8 Reliability**

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. Since the Likert Scale was not used in section 5 survey questions, Cronbach alpha

values were not examined. The number of questions and Cronbach Alpha values for each structure are listed in Table 3.5 (See Appendix C).

Table 3.5: Reliability Statistics of Students Perception Survey

	Number of Items	Cronbach's Alpha
Self-Reported Computer Proficiency Levels	7	.87
Sub-Features of Perceived Motivational Feature	9	.87
Sub-Features of Perceived Usefulness Feature	10	.75
Sub-Features of Perceived Ease of Use	8	.79
General Perception Structures	27	.90

### 3.9 Data Collection Tools

In this study, two different data collection tools 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. Data collection questions related to research questions are given in Table 3.6.

Table 3.6: 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) (These questions in the survey Section 3; 04, 06, 19, 16, 07, 11, 18, 03, and 12)

1.2. How do students perceive the usefulness of Moodle / Office 365 technology?	Students' Perceptions about Moodle / Office365 Questionnaire (SPAMO-Q) (These questions in the survey Section 3; 01, 15, 02, 14, 05, 08, 09, 10, 13 and 17)
1.3. How do students perceive the ease of use of Moodle / Office365 technology?	Students' Perceptions about Moodle / Office365 Questionnaire (SPAMO-Q) (These questions in the survey; Section 4: 01 to 08 and Section5: 01 to 03)
2. How do Eastern Mediterranean University instructors 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 instructors 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) (These questions in the interview Section 2; 04)
2.2. How do course instructors at Eastern Mediterranean University perceive the usefulness of Moodle / Office 365 portal technology?	The Instructor Perception about Moodle / Office365 System Interview (TIPMOS-I) (These questions in the interview; Section 3: 05 to Section 5: 03)
2.3. How do course instructors at Eastern Mediterranean University perceive the ease of use of Moodle / Office 365 technology?	The Instructor Perception about Moodle / Office365 System Interview (TIPMOS-I) (These questions in the interview Section 4; 06 to 12)
2.4. What are the advantages and disadvantages of using Moodle / Office365 technology from the perspective of course instructors' in educational activities?	The Instructor Perception about Moodle / Office365 System Interview (TIPMOS-I) (These questions in the interview; Section 5: 14 and Section5: 15)
2.5. What are the course instructors' suggestions regarding the use of this technology?	The Instructor Perception about Moodle / Office365 System Interview (TIPMOS-I) (These questions in the interview Section 5; 13)

### 3.9.1 Survey Sub-Scales

The 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 3.7: 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
Self-Assessment Practice	5	3
General		41

As seen in Table 3.7, there were 7 questions in section 1, which evaluate students' computer usage skills. These questions consist of 4 kinds of answers. The answers of these questions were as follows; Not used, Beginner, Intermediate and Expert. Section 2 contains information about the online or 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 answer was as follows; Strongly, Disagree, Disagree, Neutral, Agree, and Strongly Agree. The other part of the third part was the perceptions of the students to usability of the system. There were 10 questions in this section. These questions included the same answers as the other section 3. Section 4 contained questions about the ease of usability 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 answers in the first question in this section (Never - More than one in a day). The other two questions were asked to enter a data from the student (See Appendix A).

Sub-Features of Perceived Motivational Feature section included questions of Section 3: 04, 06, 19, 16, 07, 11, 18, 03, and 12. Sub-Features of Perceived Usefulness Feature section involved questions of Section 3: 01, 15, 02, 14, 05, 08, 09, 10, 13 and 17. As the last section, there were questions from Section 4: 01 to 08 in the Sub-Features of Perceived Ease of Use section (See Appendix A).

### **3.10 The Instructors' Perception about Moodle / Office365 System**

#### **Interview (TIPMOS-I)**

In the research, an interview was made with an instructor on the subject. These interview questions and details have been added to Appendix B. The main language of the interview is English. Since the instructor knows English, it was not necessary to translate it into Turkish. The instructor easily understood and answered all the questions. A question he did not understand or hesitate was not observed. The instructor answered all questions appropriately and easily interpreted the questions.

Interview questions were used also and passed the validity and reliability test. The patterns of the questions have not been changed (Turşak, 2007). However, Moodle / Office365 system was only added to the application parts of the questions. The questions were approved by the supervisor of the research and passed through the ethics committee.

## Chapter 4

### RESULTS AND FINDINGS

In this section, the findings obtained from the survey conducted with 106 students and the interview with 1 course instructor who participated in the research, are included. The findings were collected through MS Office365 Forms and analyzed with the help of IBM SPSS program.

#### 4.1 Students' Perceptions about Moodle/Office365 (SPAMO-Q)

##### 4.1.1 Students Perception of the Use of Moodle / Office365 Technology in Educational Activities

SPAMO-Q was performed to achieve students' perceptions about using Moodle / Office365 System. Perception of students' had been studied in terms of 3 characteristics: Motivation in educational activities, usefulness and ease of use of the system.

Table 4.1: Abbreviations Used in Student Perception Questions

Abbrev	Description
SD	Strongly Disagree
D	Disagree
N	Neutral
A	Agree
SA	Strongly Agree

The answers to the survey questions were given in Table 4.1 above, these abbreviations will be used in the rest of this section.

The general question is students' perception of the use of Moodle / Office365 technology in educational activities. Table 4.2 shows the data in the 3 subheadings of this general research question. Other questions are sub-questions of the general question. 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 4.2: Descriptive Data of Perception Structures

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
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
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
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

As seen in Table 4.2, 44.4% of the students were positive for *Ease of Use* and only 19.7% were negative for this perception. In addition, 37% were neutral for *Ease of Use*. Other perception is the *Motivation* of using Moodle / Office365, where majority of the students were negative with 45.4%; whereas 28.6% of the students were positive and 29.4% of the students were neutral. Moreover, 37.7% of the participants submitted



affirmative perception about *Usefulness* while only 10.8% of them recorded negative notion. 31.9% of students were neutral for *Usefulness*. 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 distance education system. In addition, students expressing negative perception and neutral perception had similar ratio (31.6%).

#### **4.1.2 Students' Perceptions Regarding the Consequences of the Utilization of Moodle/Office365 Portal on Their Motivation towards the Tutorial Activities**

The data in this section about "How do students perceive Moodle / Office365 technology in terms of perceived effects on their motivation for educational activities?" answers the first research question. There are 9 questionnaire questions in this section (These questions in the survey Section 3; 04, 06, 19, 16, 07, 11, 18, 03 and 12). 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 4.3: 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 4.3. 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 4.3, 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).

In Figure 4.1, mostly participants' results were between D and A. This refers that the participants' average perceptions were among "disagree", "agree" and "neutral". Most students (48.8%) showed a negative perception of the effects of motivation on the educational activities of the Moodle / Office365 system. 28.2% of students perceived the positive effect of this system on motivation in educational activities.

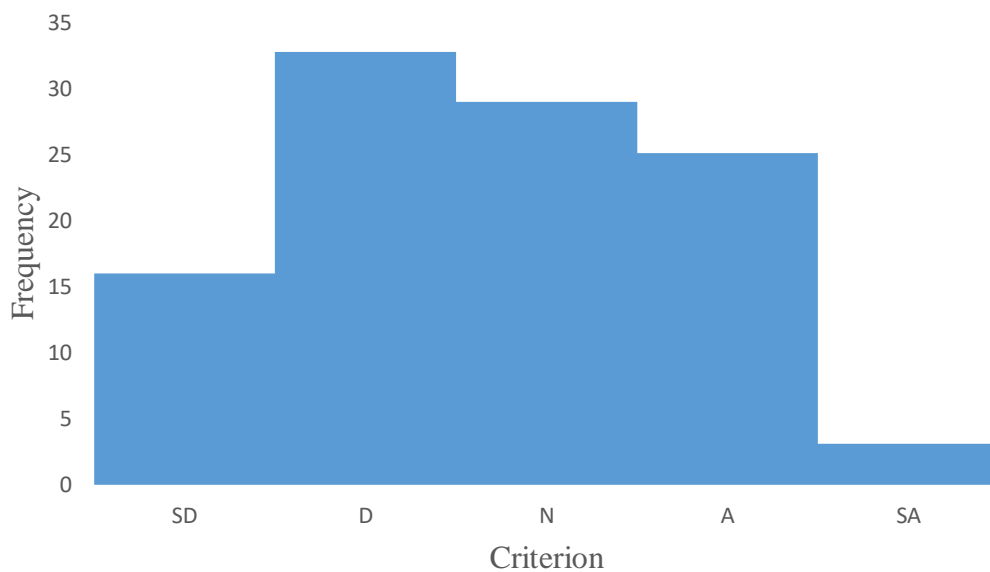


Figure 4.1: Distribution Table of Sub-Features of Perceived Motivation Features

In *Willingness and Interest / Enjoyment* sections, there was a reverse-coded question for each section. In this section, reverse coded questions were examined.

### **Participation Sub-Factor of Perceived Motivational Feature**

This section is about the participation sub-factor of the research question "How do students perceive Moodle / Office365 technology in terms of perceived effects on their motivation for educational activities?". There are two survey questions in this sub-factor of *Perceived Motivational Feature*. Statistical data of these questions are given in Table 4.4 (M = 2.90 and Std Dev = 1.60).

Table 4.4: Descriptive Data of the Participation Sub-Factor of Perceived Motivational Feature

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S3.03</b> ...enhanced my participation to our educational actions.	9	8.5	32	30.2	29	27.4	30	28.3	6	5.7	2.93	1.08
<b>S3.12</b> ...improved my learning time on our educational activities.	11	10.4	30	28.3	30	28.3	32	30.2	3	2.8	2.87	1.05
Overall	10.0	9.5	31.0	29.3	29.5	27.9	31.0	29.3	4.5	4.3	2.90	1.06

In Question S3.03, participants were asked the use of the Moodle / Office 365 system, which increased my participation in our training activities. The majority of participants (38.7%) responded negatively to this question. While 27.4% were neutral, 34% perceived positively (M = 2.93 and Std Dev = 1.08).

In Question S3.12, participants were asked the use of the Moodle / Office 365 system, which improved my learning time on our educational activities. %33 of participant were responded positive perception. While 28.3% were neutral, 38.7% perceived negatively (M = 2.87 and Std Dev = 1.05).

### **Willingness Sub-Factor of Perceived Motivational Feature**

This section is about the willingness sub-factor of the research question "How do students perceive Moodle / Office365 technology in terms of perceived effects on their motivation for educational activities?". There are three survey questions in this sub-factor of *Perceived Motivational Feature*. In additionally, there is a reverse-coded

question. Statistical data of these questions are given in Table 4.5 (M = 2.85 and Std Dev = 1.08).

Table 4.5: Descriptive Data of the Willingness Sub-Factor of Perceived Motivational Feature

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S3.07</b> ...decreased my willingness to effort on our educational activities.	2	1.9	27	25.5	26	24.5	32	30.2	19	17.9	3.37	1.11
<b>S3.11</b> ...augmented my motivation towards our educational activities.	21	19.8	30	28.3	31	29.2	21	19.8	3	2.8	2.58	1.10
<b>S3.18</b> ...increased willingness to work on our educational activities.	17	16.0	32	30.2	33	31.1	23	21.7	1	0.9	2.61	1.30
Overall	13.3	12.6	29.7	28.0	30.0	28.3	25.3	23.9	7.7	7.2	2.85	1.08

In Question S3.11, participants were asked the use of the Moodle / Office 365 system, which augmented my motivation towards our educational activities. 22.6% of the participants responded positively to this factor. While 29.2% were neutral, 48.1% perceived negatively (M = 2.58 and Std Dev = 1.10).

In Question S3.18, participants were asked the use of the Moodle / Office 365 system, which rised willingness to work on our educational activities. While 46.2% of the

participants stated negative perception, 22.6% stated positive perception (M = 2.61 and Std Dev = 1.30).

In Question S3.07 is the reverse code question. The question was asked negatively, participants were asked the use of the Moodle / Office 365 system, which decreased my willingness to effort on our educational activities. 27.4% of the participants for this reverse coded question showed a negative perception. Additionally, 48.1% of the participants were positive and only 24.6% of the participants were neutral in this regard (M = 3.37 and Std Dev = 1.11).

### **Perceived Competence Sub-Factor of Perceived Motivational Feature**

This section is about the perceived competence sub-factor of the research question "How do students perceive Moodle / Office365 technology in terms of perceived effects on their motivation for educational activities?". There is a survey question in this sub-factor of *Perceived Motivational Feature*. Statistical data of these questions are given in Table 4.6 (M = 2.62 and Std Dev = 1.11).

Table 4.6: Descriptive Data of Perceived Competence Sub-Factor of Motivational Feature

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S3.16</b>												
...increased my satisfaction about our educational activities.	18	17	34	32.1	28	26.4	22	20.8	4	3.8	2.62	1.11

In Question S3.16, participants were asked the use of the Moodle / Office 365 system, which increased my satisfaction about our educational activities. 24.6% of the

participants responded positively to this factor. While 26.4% participants were neutral, 49.1% perceived negatively.

### **Interest / Enjoyment Sub-Factor of Perceived Motivational Feature**

This section is about the interest / enjoyment sub-factor of the research question "How do students perceive Moodle / Office365 technology in terms of perceived effects on their motivation for educational activities?". There are three survey questions in this sub-factor of *Perceived Motivational Feature*. In additionally, there is a reverse-coded question. Statistical data of these questions are given in Table 4.7 (M = 2.64 and Std Dev = 1.06).

Table 4.7: Descriptive Data of the Interest / Enjoyment Sub-Factor of Perceived Motivational Feature

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S3.04</b> ...increased my attention on our educational activities.	13	12.3	37	34.9	29	27.4	26	24.5	1	0.9	2.67	1.01
<b>S3.06</b> ...made our educational process pleasant.	21	19.8	33	31.1	24	22.6	25	23.6	3	2.8	2.59	1.14
<b>S3.19</b> ...made our educational activities uninteresting.	14	13.2	35	33	35	33	18	17	4	3.8	2.65	1.03
Overall	16.0	15.1	35.0	33.0	29.3	27.7	23.0	21.7	2.7	2.5	2.64	1.06

In Question S3.04, participants were asked the use of the Moodle / Office 365 system, which increased my attention on our educational activities. 27 participants responded

positively to this factor. While 29 participants were neutral, 50 participants perceived negatively ( $M = 2.67$  and  $Std Dev = 1.01$ ).

In Question S3.06, participants were asked the use of the Moodle / Office 365 system, which made our educational process pleasant. 28 participants responded positively to this factor. While 24 participants were neutral, 54 participants perceived negatively ( $M = 2.65$  and  $Std Dev = 1.03$ ).

In Question S3.07 is the reverse code question. The question was asked negatively, participants were asked the use of the Moodle / Office 365 system, which made our educational activities uninteresting. 49 of the participants for this reverse coded question of the *Interest / Enjoyable* section reported their negative perceptions. Only 22 of the participants had positive perception that using Moodle / Office 365 makes educational activities uninteresting. In addition, 35 of the participants were reported to show a neutral perception due to this factor. The mean score for the Reverse Coded Question of The *Interest / Enjoyment* Section factor was 2.65 and standard deviation was 1.03.

#### **4.1.3 Students' Perceptions about the Usefulness of Moodle / Office365 System**

The data in this section is "How do students perceive the usefulness of Moodle / Office 365 technology?" answers the second research question. There are 10 survey questions in this section (These questions in the survey Section 3; 01, 15, 02, 14, 05, 08, 09, 10, 13 and 17). Students' perceptions concerning the usefulness of the Moodle / Office365 System utilized in this research were examined with 6 reported questions. Descriptive Data for the factors achieved from the SPAMO-Q results were stated in Table 4.8.



In Table 4.8, most of the students had negative and neutral perceptions about the *Benefits* of Moodle / Office365. However, positive 35.1% and negative 35.5% perceptions were very close to each other.

Table 4.8: 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).

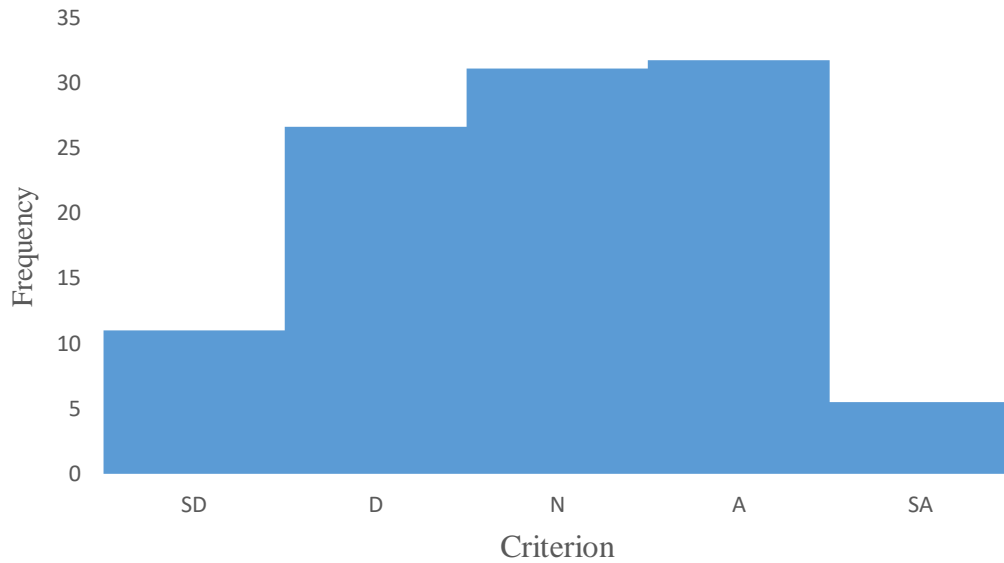


Figure 4.2: Moodle / Office 365 Perceived Usefulness Distribution

In Figure 4.2, results were between D and A. This meant that the participants' medium of the perceptions were among "disagree", "agree" and "neutral". A large number of "agree" participants were noticed.

#### **Useful Sub-Factor of Usefulness Feature**

This section is about the useful sub-factor of the research question "How do students perceive the usefulness of Moodle / Office 365 technology?". There are three survey questions in this sub-factor of *Perceived Usefulness Feature*. Statistical data of these questions are given in Table 4.9 (M = 3.09 and Std Dev = 1.00).

Table 4.9: Descriptive Data of the Useful Sub-Factor of Perceived Usefulness Feature

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S3.10</b> ...was beneficial to access the educational activities.	5	4.7	17	16.0	34	32.1	43	40.6	7	6.6	3.28	0.97
<b>S3.13</b> ...enhanced our chance to work on our educational activities.	7	6.6	28	26.4	35	33.0	30	28.3	6	5.7	3.00	1.02
<b>S3.17</b> ...was beneficial in our educational activities.	8	7.5	26	24.5	34	32.1	34	32.1	4	3.8	3.00	1.01
Overall	6.7	6.3	23.7	22.3	34.3	32.4	35.7	33.7	5.7	5.4	3.09	1.00

In Question S3.10, participants were asked the use of the Moodle / Office 365 system, which was beneficial to access the educational activities. 47.2% of the participants responded positively to this factor. While 32.1% of the participants were neutral, 20.7% of the participants perceived negatively (M = 3.28 and Std Dev = 0.97).

In Question S3.13, participants were asked the use of the Moodle / Office 365 system, which enhanced our chance to work on our educational activities. 34% of the participants responded positively to this factor. While 35% of the participants were neutral, 33% of the participants perceived negatively (M = 3.00 and Std Dev = 1.02).

In Question S3.17, participants were asked the use of the Moodle / Office 365 system, which was beneficial in our educational activities. 35.9% of the participants responded

positively to this factor. While 32.1% of the participants were neutral, 32% of the participants perceived negatively (M = 3.00 and Std Dev = 1.01).

### **Make Job Easier Sub-Factor of Usefulness Feature**

This section is about the make job easier sub-factor of the research question “How do students perceive the usefulness of Moodle / Office 365 technology?”. There is a survey question in this sub-factor of *Perceived Usefulness Feature*. Statistical data of these questions are given in Table 4.10 (M = 2.66 and Std Dev = 1.10).

Table 4.10: Descriptive Data of the Make Job Easier Sub-Factor of Perceived Usefulness Feature

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S3.09</b> ...made it simpler to learning on our educational activities.	18	17.0	30	28.3	32	30.2	22	20.8	4	3.8	2.66	1.10

In Question S3.09, participants were asked the use of the Moodle / Office 365 system, which made it simpler to learning on our educational activities. 24.6% of the participants responded positively to this factor. While 30.2% of the participants were neutral, 45.3% of the participants perceived negatively.

### **Effectiveness Sub-Factor of Usefulness Feature**

There is a survey question in this sub-factor of *Perceived Usefulness Feature*. Statistical data of these questions are given in Table 4.11 (M = 2.76 and Std Dev = 1.01).

Table 4.11: Descriptive Data of the Usefulness Sub-Factor of Perceived Usefulness Feature

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S3.08</b> ...boosted my usefulness in our educational activities.	10	9.4	38	35.8	28	26.4	28	26.4	2	1.9	2.76	1.01

In Question S3.08, participants were asked the use of the Moodle / Office 365 system, which boosted my usefulness in our educational activities. 45.2% of the participants responded positively to this factor. While 26.4% of the participants were neutral, 28.3% of the participants perceived negatively.

### Raise Practicality Sub-Factor of Usefulness Feature

This section is about the raise practicality sub-factor of the research question “How do students perceive the usefulness of Moodle / Office 365 technology?”. There is a survey question in this sub-factor of *Perceived Usefulness Feature*. Statistical data of these questions are given in Table 4.12 (M = 2.77 and Std Dev = 1.11).

Table 4.12: Descriptive Data of the Raise Practicality Sub-Factor of Perceived Usefulness Feature

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S3.05</b> ...raised my practicality in our educational course.	15	14.2	30	28.3	29	27.4	28	26.4	4	3.8	2.77	1.11

In Question S3.05, participants were asked the use of the Moodle / Office 365 system, which raised my practicality in our educational course. 30.2% of the participants responded positively to this factor. While 27.4% of the participants were neutral, 42.5% of the participants perceived negatively.

### Job Performance Sub-Factor of Usefulness Feature

This section is about the job performance sub-factor of the research question “How do students perceive the usefulness of Moodle / Office 365 technology?”. There are survey questions in this sub-factor of *Perceived Usefulness Feature*. In additionally, there is a reverse-coded question. Statistical data of these questions are given in Table 4.13 (M = 3.11 and Std Dev = 1.09).

Table 4.13: Descriptive Data of the Job Performance Sub-Factor of Perceived Usefulness Feature

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S3.02</b> ...improved my efficiency in our educational activities.	12	11.3	28	26.4	30	28.3	31	29.2	5	4.7	2.90	1.10
<b>S3.14</b> ...has diminished my performance in our educational activities.	7	6.6	17	16.0	28	26.4	42	39.6	12	11.3	3.33	1.08
Overall	9.5	9.0	22.5	21.2	29.0	27.4	36.5	34.4	8.5	8.0	3.11	1.09

In Question S3.02, participants were asked the use of the Moodle / Office 365 system, which improved my efficiency in our educational activities. 33.9% of the participants

responded positively to this factor. While 28.3% of the participants were neutral, 37.7% of the participants perceived negatively (M = 2.90 and Std Dev = 1.11).

In Question S3.14 is the question with reverse code. The question was asked negatively, participants were asked the use of the Moodle / Office 365 system, which has diminished my performance in our educational activities. 22.6% of the participants for the reverse code question of the Job Performance section reported their negative perceptions on the factor "When we used Moodle / Office365, It has diminished my performance in our educational activities." More than half (50.9%) of the participants perceived that using Moodle / Office 365 diminished their performance in our educational activities. In addition, 26.4% of the participants reported to show a neutral perception due to this factor (M = 3.30 and Std Dev = 1.08).

### **Work More Quickly Sub-Factor of Usefulness Feature**

This section is about the work more quickly sub-factor of the research question "How do students perceive the usefulness of Moodle / Office 365 technology?". There are two survey questions in this sub-factor of *Usefulness Feature*. In additionally, there is a reverse-coded question. Statistical data of these questions are given in Table 4.14 (M = 3.27 and Std Dev = 1.03).

Table 4.14: Descriptive Data of the Work More Quickly Sub-Factor of Perceived Usefulness Feature

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S3.01</b> ...enabled us to perform educational activities faster.	8	7.5	10	9.4	39	36.8	44	41.5	5	4.7	3.26	0.97
<b>S3.15</b>	6	5.7	21	19.8	30	28.3	36	34.0	13	12.3	3.274	1.091

---

...reduced my study velocity in our educational activities.													
Overall	7.0	6.6	15.5	14.6	34.5	32.6	40.0	37.8	9.0	8.5	3.269	1.030	

---

In Question S3.01, participants were asked the use of the Moodle / Office 365 system, which enabled us to perform educational activities faster. 46.2% of the participants responded positively to this factor. While 39% of the participants were neutral, 16.9% of the participants perceived negatively ( $M = 3.26$  and  $Std Dev = 0.97$ ).

In Question S3.15 is the reverse code question. The question was asked negatively, participants were asked the use of the Moodle / Office 365 system, which reduced my study velocity in our educational activities. 25.5% of the participants for the reverse coded question showed a negative perception. Besides, 46.3% of the participants were positive to use Moodle / Office365 to reduce their study velocity in our educational activities and only 28.3% of the participants were neutral in this regard ( $M = 3.27$  and  $Std Dev = 1.09$ ).

#### **4.1.4 Students' Perceptions about Ease of Use**

The data in this section is "How do students perceive the ease of use of Moodle / Office 365 technology?" answers the last research question. There are 11 survey questions in this section (These questions in the survey; S4.01 to S4.08, S5.01 to S5.03, Likert scale was used only in the questions in section 4.). 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 4.15.



Table 4.15: 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 observed in Table 4.15, maximum of the 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 4.15. The majority of neutral students was 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).

As seen in Figure 4.3, the most of the perceptions were on the "A". This meant that the most of the participants' perceptions were "agree". The neutral perception of the participants was close to "agree" option as well. Almost none of the participants chose the exact (strongly) answers. According to the distribution of the *Ease of Use* factor, the perceptions of the participants reported at least in the SD section, which means that most of the participants did not have any difficulty using the Moodle / Office365 portal.

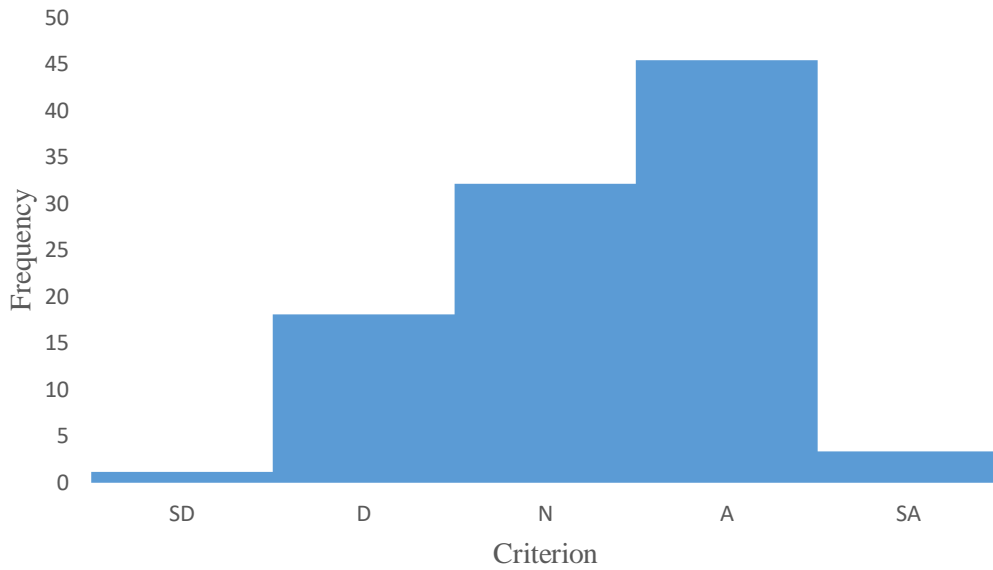


Figure 4.3: Moodle / Office 365 Perceived Ease of Use Distribution

In *Clear & Understandable* sections, there was a reverse-coded question for each section. In this section, reverse coded questions were examined.

#### Easy to Use Sub-Factor of Perceived Ease of Use

This section is about the easy to use sub-factor of the research question “How do students perceive the ease of use of Moodle / Office 365 technology?”. There is a survey question in this sub-factor of *Perceived Ease of Use*. Statistical data of these questions are given in Table 4.16 (M = 3.45 and Std Dev = 0.76).

Table 4.16: Descriptive Data of the Easy to Use Sub-Factor of Perceived Ease of Use

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S4.08</b> I found “Moodle/Office365” easy to use.	0	0	14	13.2	33	31.1	56	52.8	3	2.8	3.45	0.76

In Question S4.08, participants were asked that the Moodle / Office365 system was easy to use. 55.6% of the participants responded positively to this factor. While 31.1% of the participants were neutral, 13.2% of the participants perceived negatively.

### Clear & Understandable Sub-Factor of Perceived Ease of Use

This section is about the clear & understandable sub-factor of the research question “How do students perceive the ease of use of Moodle / Office 365 technology?”. There are 5 survey questions in this sub-factor of *Perceived Ease of Use*. In additionally, there is a reverse-coded question. Statistical data of these questions are given in Table 4.17 (M = 3.23 and Std Dev = 0.77).

Table 4.17: Descriptive Data of the Clear & Understandable Sub-Factor of Perceived Ease of Use

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S4.03</b> User interfaces and messages of “Moodle/Office 365” were clear and understandable.	1	0.9	12	11.3	32	30.2	56	52.8	5	4.7	3.49	0.80
<b>S4.04</b> GUI (Graphical User Interfaces) and notifications of “Moodle/Office 365” were user-friendly.	1	0.9	10	9.4	51	48.1	41	38.7	3	2.8	3.33	0.73
<b>S4.05</b> User interfaces and messages of “Moodle/Office 365” were user-friendly.	1	0.9	12	11.3	43	40.6	48	45.3	2	1.9	3.36	0.75
<b>S4.06</b> User interfaces and messages of “Moodle/Office 365” uses terms familiar to me.	2	1.9	20	18.9	50	47.2	33	31.1	1	0.9	3.10	0.78
<b>S4.07</b> It was hard to understand the user interface of “Moodle/Office365”.	0	0	38	35.8	46	43.4	20	18.9	2	1.9	2.87	0.78
Overall	1.0	0.9	18.4	17.3	44.4	41.9	39.6	37.4	2.6	2.4	3.23	0.77

In Question S4.03, participants were asked the user interfaces and messages of “Moodle/Office 365” were clear and understandable. 57.5% of the participants responded positively to this factor. While 30.2% of the participants were neutral, 12.2% of the participants perceived negatively ( $M = 3.49$  and  $Std Dev = 0.80$ ).

In Question S4.04, participants were asked the GUI (Graphical User Interfaces) and notifications of “Moodle/Office 365” were user-friendly. 41.5% of the participants responded positively to this factor. While 48.1% of the participants were neutral, 10.3% of the participants perceived negatively ( $M = 3.33$  and  $Std Dev = 0.73$ ).

In Question S4.05, participants were asked the user interfaces and messages of “Moodle/Office 365” were user-friendly. 47.2% of the participants responded positively to this factor. While 40.6% of the participants were neutral, 12.2% of the participants perceived negatively ( $M = 3.36$  and  $Std Dev = 0.75$ ).

In Question S4.06, participants were asked the user interfaces and messages of “Moodle/Office 365” uses terms familiar to me. 32% of the participants responded positively to this factor. While 47.2% of the participants were neutral, 20.8% of the participants perceived negatively ( $M = 3.10$  and  $Std Dev = 0.78$ ).

In Question S4.07 is the reverse code question. The question was asked negatively, participants were asked the use of the Moodle / Office 365 system, which was hard to understand the user interface. 35.8% of the participants for the reverse coded question showed a negative perception of the factor that “It was hard to understand the user interface of “Moodle/Office365”.”. Besides, 20.8% of the participants were positive

for hard to understand the user interface of “Moodle/Office365” and almost half the participants (43.4%) were neutral in this regard (M = 2.86 and Std Dev = 0.78).

### Easy to Learn Sub-Factor of Perceived Ease of Use

This section is about the easy to learn sub-factor of the research question “How do students perceive the ease of use of Moodle / Office 365 technology?”. There is a survey question in this sub-factor of *Perceived Ease of Use*. Statistical data of these questions are given in Table 4.18 (M = 3.47 and Std Dev = 0.89).

Table 4.18: Descriptive Data of the Easy to Learn Sub-Factor of Perceived Ease of Use

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S4.01</b>												
Learning to use “Moodle/Office 365” was easy for me.	2	1.9	17	16.0	21	19.8	61	57.5	5	4.7	3.47	0.89

In Question S4.01, participants were asked that learning to use “Moodle/Office 365” was easy for me. 62.2% of the participants responded positively to this factor. While 19.8% of the participants were neutral, 17.9% of the participants perceived negatively.

### Easy to Become Skillful Sub-Factor of Perceived Ease of Use

This section is about the easy to become skillful sub-factor of the research question “How do students perceive the ease of use of Moodle / Office 365 technology?”. There is a survey question in this sub-factor of *Perceived Ease of Use*. Statistical data of these questions are given in Table 4.19 (M = 3.13 and Std Dev = 0.90).

Table 4.19: Descriptive Data of the Easy to Become Skillful Sub-Factor of Perceived Ease of Use

	SD		D		N		A		SA		Mean	Std. Dev.
	N	%	N	%	N	%	N	%	N	%		
<b>S4.02</b> It was easy to become skillful at using “Moodle/Office 365”.	2	1.9	26	24.5	38	35.8	36	34.0	4	3.8	3.13	0.90

In Question S4.02, participants were asked that learning to use “Moodle/Office 365” was easy for me. 37.8% of the participants responded positively to this factor. While 35.8% of the participants were neutral, 26.4% of the participants perceived negatively.

#### 4.1.4.1 Students’ Self-Assessment Practice

In this section, questionnaire questions that are not used Likert scale are evaluated. The data in this section is "How do students perceive the ease of use of Moodle / Office 365 technology?" answers the last research question (These questions in the survey; Section 5: 01 to 03). In addition, the participants were asked about the system's in-class and out-of-class usage times regarding the Moodle / Office 365 system.

In Table 4.20, 9 of the students (8.5%) never used the Moodle / Office365 system. The majority (28.5%) of the participants used it once a week. There were 22 (20.8%) participants who used the system every day, and finally 16 (15.1%) students used this system more than once a day.

Table 4.20: Approximately, How Frequently Did You Use “Moodle/Office 365” in Your Educational Activities?

	N	%
Never	9	8.5
Once a Week	30	28.5

Three Times a Week	29	27.4
Everyday	22	20.8
More Than One in a Day	16	15.1
Total	106	100

As can be seen in Table 4.21, according to the question of "Approximately how many times did you use" Moodle / Office 365 "in your out-of-class training activities?", 57.4% of the students used the Moodle / Office 365 application at least 15 times. Moreover, 21(19.8%) participants have never used the application before.

Table 4.21: Approximately, How Many Times Did You Use “Moodle/Office 365” in Your Out-Of-Class Educational Activities?

Usage Times	N	%	Usage Times	N	%	Usage Times	N	%	Usage Times	N	%
.00	21	19.8	6	2	1.9	18	1	.9	40	7	6.6
1.00	3	2.8	10	9	8.5	20	8	7.5	45	2	1.9
2.00	7	6.6	12	2	1.9	25	5	4.7	50	4	3.8
3.00	6	1.9	13	1	.9	26	1	.9			
4.00	2	4.7	14	1	.9	30	7	6.6			
5.00	5	1.9	15	10	9.4	35	2	1.9			
Total	106	100									

As seen in Table 4.22, the usage of Moodle/Office365 in educational activities of the participants in the 3 and 30 periods was reported as 58.3%. In addition, in Figure 4.4, the usage bar graph was created for educational activities for Moodle / Office 365 class. In Figure 4.4, the majority of participants (15.1%) used the system for 20 hours.

Table 4.22: Approximately, How Many Class Hours Did You Use “Moodle/Office 365” In Your In-Class Educational Activities?

Usage Periods	N	%
.00	7	6.6
1.00	3	2.8
2.00	12	11.3
3.00	8	7.5
4.00	2	1.9
5.00	2	1.9
6.00	4	3.8
10.00	3	2.8
12.00	2	1.9
15.00	2	1.9
17.00	1	0.9
18.00	4	3.8
20.00	16	15.1
22.00	1	0.9
24.00	2	1.9
25.00	3	2.8
27.00	1	0.9
28.00	1	0.9
30.00	10	9.4
32.00	1	0.9
36.00	8	7.5
40.00	5	4.7
42.00	1	0.9
50.00	4	3.8
55.00	1	0.9
80.00	1	0.9
100.00	1	0.9
Total	106	100



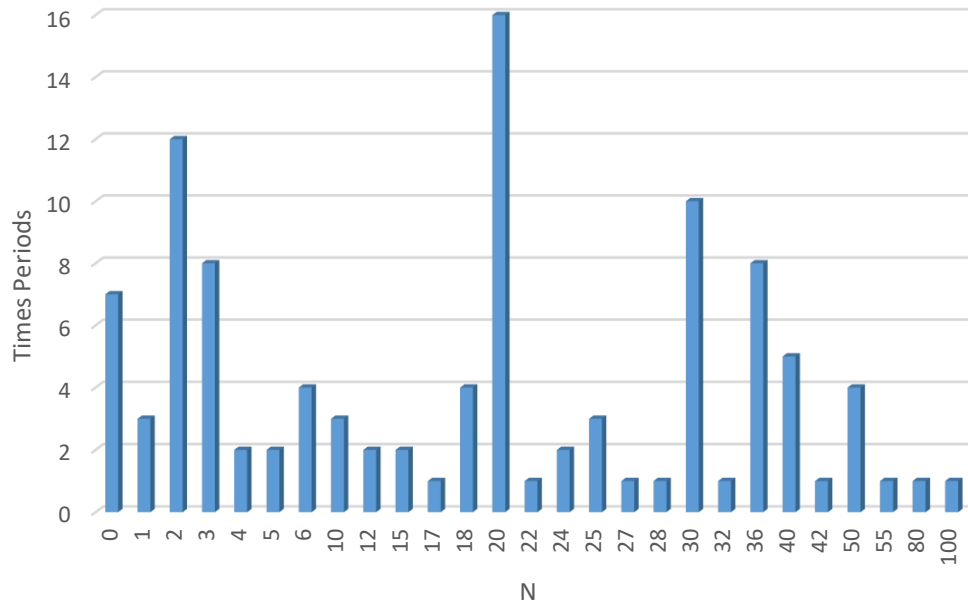


Figure 4.4: Moodle / Office 365 Usage Hours Distribution

## 4.2 The Instructor’s Perception

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

The interview records were examined using the descriptive study method described by (Nassaji, 2015). According to this approach, a conceptual structure has been shaped.

### 4.2.1 Instructor’s Perception about the Effects of Using Moodle / Office365 Portal Technology on Students' Perceived Motivation for Educational Activities

To examine the effects of using this Moodle / Office365 System on students' perceived motivation for educational activities. First of all, 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 by the use of 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.”

**4.2.2 The Instructor’s 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.”

**4.2.3 The Instructor’s Perception about Ease of Use of Moodle / Office365**

To examine 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 of 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.”

The fourth question for perceived ease of use was related to "Easy to learn". This question was asked to investigate the course instructor's perception of this factor “Was learning to use “Moodle/Office365” system easy for your students?”. The course instructor responded positively to this question as well:

**Course Instructor:**

“Learning to use the system for students was easy. It is often used in school age for use in technology and homework and research for education. In more adult individuals, the use of technology in education for research, drawing and design processes remains important.”

The fifth question for perceived ease of use was related to "Easy to become skillful". The question “Was becoming skillful at using “Moodle/Office365” system easy for your students?” was asked to investigate the course instructor's perception of this factor. The course instructor responded positively to this but mentioned the problem:

**Course Instructor:**

“The only problem in Moodle is that the students can see all the courses available, so; they may click on the incorrect course link. When they do this, they get a message like “You do not have a permission to access this page”.”

The sixth question for perceived ease of use was related to "Clear & Understandable". "Were user interfaces and messages of "Moodle/Office365" system clear for your students?" question was asked to investigate the course instructor's perception of this factor. The course instructor responded positively to this but mentioned the problem:

**Course Instructor:**

"The interface of the application was very clear. It looks like just any other website that we visit every day."

Another question that continues with the subject is; "Were user interfaces and messages of "Moodle/Office365" system user friendly for your students?"

**Course Instructor:**

"The interface of the application was really user-friendly. The message box option of Moodle system is hidden on the left-side of the page which might be overlooked."

Another question that continues with the subject is;" Does user interfaces and messages of "Moodle/Office365" system uses terms familiar for your students?"

**Course Instructor:**

"This is also a part of the question 9. The terms given on the interface direct users to where exactly they want to visit."

The last question on the subject is;" Was it hard to understand the user interfaces of "Moodle/Office365" system for your students?"

**Course Instructor:**

"No, it was not. The only problem was about course list available on the website. This can be organized in a better way."

The overall question is;" In overall, was the use of "Moodle/Office365" system easy for your students?"

**Course Instructor:**

“No, it was not. The only problem was about course list available on the website. This can be organized in a better way. If instructors and students need to spend a lot of time learning; for example, software, to develop and use a course material, this effort will keep their focus away from learning and teaching. Of course, there will be a need for basic literacy skills such as reading and writing, using keyboards, using word processing software, surfing the Internet and using internet software, and especially the ability to use mobile devices recently. These general skills are the skills that we can qualify as prerequisites. If students are unable to develop these skills at school, the school will need to provide preparatory training to students on these issues.”

**4.2.4 Advantages and Disadvantages of Moodle / Office365 Portal for Instructors**

In the interview, the course instructor was asked about the advantages and disadvantages of this technology. The questions and answer are as follows:

- What can be your suggestions about the future and other possible uses of this technology in the educational activities?

**Course Instructor:**

“Moodle system is an open-source system. Because of this, there will be a future for it in education without a doubt. Office 365 system is a commercial system which will be taught at school and will definitely be used in professional life.”

- What can be other advantages of the use of this technology?

**Course Instructor:**

“The root of “Technology” term is Ancient Greek Language which means that “the act of knowing”. Since there is no limit to learn and know the things, there cannot be the limit of getting benefit from using it.”

- What can be other disadvantages of the use of this technology?

**Course Instructor:**

“Humans are social beings and putting distance between them may harm their habits and cultures. Of course, this is the study topic of psychology and sociology. I do not see any disadvantage of using technology in educational activities from my perspective.”

#### **4.2.5 Instructor's Suggestion about the Use of Moodle / Office365**

- Instructors should be trained on the use of technology in education.
- Infrastructures to provide technology-supported education should be provided to instructors and expert support should be provided to assist instructors in the created teaching environments.
- Instructors' deficiencies in technology-supported education should be improved through in-service training to be provided by experts in the field of education and training technologies.
- High-level computer and internet literacy should be provided to prospective instructors at Education Faculties. Prospective instructors should be able to use computers and the internet effectively in educational environments after they graduate.
- Change of technology also forces education to change. Education faculties should provide an education and infrastructure to the instructor candidates trained to adapt to the curriculum changes and new teaching methods that will occur because of the change of technology, and to enable the instructor to follow the educational technologies individually.
- Education faculties should provide training to prospective instructor in all branches so that they can prepare their own materials. Prospective teachers should have the infrastructure to prepare teaching materials for teachers as well as existing teaching materials.

## **Chapter 5**

### **DISCUSSION AND CONCLUSION**

This section includes the topics of discussion, conclusion and suggestions.

#### **5.1 Discussion**

The aim of this research is to learn the perceptions of students and faculty members using the Moodle / Office365 portal at Eastern Mediterranean University. The case study was conducted with 106 undergraduate students taking ITEC190 and ITEC115 courses at the IT department in the spring semester of 2019/2020. At the end of the term, a Likert-type Students' Perceptions about Moodle/Office365 Questionnaire (SPAMO-Q) was distributed to the students. In addition to that, the usage time and how many times they have used this system.

##### **5.1.1 Students' Perceptions about Moodle/Office365 (SPAMO-Q)**

###### **5.1.1.1 Perceived Effects on Students' Motivation towards Educational Activities**

According to the results of the study, half of the participants (49%, the mean score was 2.685) stated that they had negative perceptions about the effects of using Moodle / Office365 system on their perceived motivations for the course. The percentage of students expressing positive perception was 26.7%. Nevertheless, the remaining students (27.4%) were neutral about the effects of using this system on their perceived motivation. In case of longer working time on the system, the effect of using this system on perceived motivations may be higher. In addition, since the survey was conducted during the Covid-19 outbreak, the negative results found may appear high.

However, this reported rate shows that the use of the system has a negative effect on students' perceived motivation.

When looking at the sub-factors, 38.6% of the students showed negative perception for participation sub-factor of perceived motivational feature. While 33.4% of the students showed positive perception for the participation, only 27.8% were neutral for participation sub-factor of perceived motivational feature. For the willingness sub-factor of perceived motivational feature, 47.1% of students reported negative perceptions. While 24.6% of the students showed positive perception, 30.2% of the students were neutral. For the perceived competence sub-factor of perceived motivational feature, half of the students (49.1%) reported negative perceptions. While 24.6% of students showed positive perception, 26.4% of students were neutral. For the interest / enjoyment sub-factor of perceived motivational feature, 49% participants were reported with negative perceptions. Though 26% of the students showed positive perception, 25% of the students were neutral.

According to the researcher's literature review results, this study is one of the first studies on the effects of the Moodle / Office365 system on students' perceived motivation. Therefore, there are researches on the effects of online learning systems on students' perceived motivation in different fields that support the results of this study.

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).

#### **5.1.1.2 Perceived Usefulness**

According to the results of the perceived usefulness of the Moodle / Office365 Portal, it is seen that in accordance with the results of this study, students predominantly (35.5%) reported that the Moodle / Office365 system was useless for them. 35.1% of the students stated that they had a positive perception . The percentage of neutral students was 29.4% (M = 2.94).

When looking at the sub-factors, 28.6% of the students showed negative perception for useful sub-factor of usefulness feature. While 38.1% of the students showed positive perception for the useful and 32.4% were neutral for useful sub-factor of usefulness feature. For the make job easier sub-factor of usefulness feature, 45.3% of students reported negative perceptions. While 24.6% of the students showed positive perception, 30.2% of the students were neutral. For the effectiveness sub-factor of usefulness feature, 45.2% of students reported negative perceptions. While 28.3% of the students showed positive perception, 26.4% of the students were neutral. For the raise practicality sub-factor of usefulness feature, 42.5% of students reported negative perceptions. While 30.2% of the students showed positive perception, 27.4% of the students were neutral. For the job performance sub-factor of usefulness feature, 30.2%

of students reported negative perceptions. While 42.4% of the students showed positive perception, 27.4% of the students were neutral. For the work more quickly sub-factor of usefulness feature, 21.2% of students reported negative perceptions. While 46.3% of the students showed positive perception, 32.6% of the students were neutral.

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, Tomažević, & Umek, 2016).

#### **5.1.1.3 Perceived Ease of Use**

When perceived ease of use of Moodle / Office 365 system is analyzed, it is seen that 48.8% participants specified that this system is easy to use. The percentage of undecided students in this matter was 32.1%. Only 19.3% of students showed negative perception ( $M = 3.32$ ).

When looking at the sub-factors, 26.4% of the students showed negative perception for easy to become skillful sub-factor of ease of use feature. While 37.8% of the students showed positive perception for the easy to become skillful, 35.8% were neutral for easy to become skillful sub-factor of ease of use feature. For the easy to learn sub-factor of ease of use feature, 62.2% participants stated positive perceptions. While 17.9% of students showed negative perception, 19.8% of students were neutral. For the clear & understandable sub-factor of ease of use feature, 39.9% of participants

stated positive perceptions. While 19.8% of students showed negative perception, 41.9% of students were neutral. For the easy to use sub-factor of ease of use feature, more than half of students (55.6%) of participants stated positive perceptions. While 13.2% of students showed negative perception, 31.1% of students were neutral.

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 researches described in the literature, it can be said that the Moodle / Office365 system is putative by pupils and instructors in the e-learning environment. In addition, many neutral participants can be minimized by providing longer use time in upcoming research.

#### **5.1.1.4 Advantages and Disadvantages of Moodle / Office 365**

In this section, the advantages and disadvantages of the Moodle / Office 365 system were reported during interviews with the teacher. These advantages and disadvantages are listed below:

##### **Advantages**

- It increases motivation since it is in continuous interaction with the student.
- It improves the self-confidence of students who remain passive in group work in a traditional classroom setting and are afraid to ask questions.
- It offers unlimited education opportunities for the learner by removing time and space limitations.
- It allows different perspectives to emerge thanks to virtual group works.

- It allows the individual to instantly access the information he / she needs in a certain period of time.
- It also allows informal learning through new concepts throughout the learning process.
- Through continuous new information constantly updated content teaches students.
- Besides written documents, it enables interaction and makes education more effective thanks to visual, mobile and audio applications.
- It creates a multidimensional interaction environment between student-teacher and student-student.
- Information can be repeated easily when requested.

### **Disadvantages**

- The process in the preparation of educational content can be quite time consuming, costly and inconvenient.
- Individuals who will benefit from the e-learning environment must have certain skills in computer and internet use. In addition, users should be computer literate and individuals who can use technology.
- It may be time-consuming to update the technical infrastructure due to educational content of e-learning content.
- Due to the fast developing technology, updating the technical infrastructure can be time consuming.
- It is a limitation for students who do not have the ability to learn on their own.
- If used unconsciously and unbalanced, problems may arise in terms of socialization.

- In order for the learning individuals to access the e-learning environments, they must be in an environment with a computer and internet connection.

As a result, it can be said that in a world where computer and internet technologies gradually increase the effect, e-learning will become more important in the near future and the advantages will prevent the disadvantages. In this context, it will be appropriate to incorporate the e-learning method into education methods without losing time in the courses of instructor and students (Grabinski, Kedzior, Krasodomska, & Herdan, 2020).

## **5.2 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 had a 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 Education Technology in this study and the technology in Işık's study are similar. All results were positive in Işık's research. 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.

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## **APPENDICES**

## Appendix A: Students' Perceptions about Moodle/Office365 Questionnaire (SPAMO-Q)

Please enter following information about yourself.

Gender       Male       Female

### SECTION 1:

In this part, there are 8 technologies. For each of this technology, please select one of the ability levels that best defines your qualification. Please select just one answer per rows.

		Not Used	Beginner	Intermediate	Expert
1.1	<b>Web browsers</b> ( <i>Examples: Internet Explorer Edge,, Firefox, Chrome, Opera</i> )	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.2	<b>Search Engines</b> ( <i>Examples: Google, Yahoo, Bing</i> )	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.3	<b>E-mail</b> ( <i>Examples: Gmail, Outlook, Yahoo! Mail, etc.</i> )	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.4	<b>Social Networks</b> ( <i>Examples: Facebook, Twitter, Instagram, etc.</i> )	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.5	<b>Online Messenger</b> ( <i>Examples: Hangout, Skype, Team Slack, WhatsApp, Telegram, etc.</i> )	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.6	<b>Microsoft Office</b>				
	1.6.1 <b>Microsoft Word</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1.6.2 <b>Microsoft PowerPoint</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1.6.3 <b>Microsoft Skype</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1.6.4 <b>Microsoft Outlook</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.7	<b>Microsoft Office Online (Office 365)</b>				
	1.7.1 <b>Microsoft Word</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1.7.2 <b>Microsoft PowerPoint</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1.7.3 <b>One Drive</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1.7.4 <b>Microsoft Outlook</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.8	<b>Learning Management Systems (LMS)</b> ( <i>Examples: Moodle, etc.</i> )	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## SECTION 2:

In this section, you see questions about your past skills of online and web-based learning environments. Please choose just one choice per question.

#	Question	Yes	No
2.1	Have you ever taken any web-supported or online course until now?	<input type="radio"/>	<input type="radio"/>
2.2	Have you ever taken any distance learning application in your courses before this semester?	<input type="radio"/>	<input type="radio"/>
2.3	Have you ever used the internet for your course studies until now? (Examples: Researches, homeworks, projects, etc.)	<input type="radio"/>	<input type="radio"/>
2.4	Have you have ever used any Cloud-Based application in your courses until now? (Examples: Applications that provide sharing documents, forums, chats, video conference, on-line exams etc...)	<input type="radio"/>	<input type="radio"/>

## SECTION 3:

Please choose how much you agree or disagree with following statements listed below. Please choose just one choice per question.

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3.1	When we used "Moodle/Office365", It ... enabled us to perform educational activities faster.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.2	...improved my efficiency in our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.3	... enhanced my participation to our educational actions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.4	... increased my attention on our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When we used “Moodle/Office365”, It		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3.5	... raised <i>my practicality</i> in our educational course.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.6	... made our educational process <i>pleasant</i> .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.7	... decreased my willingness to effort on our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.8	... boosted my usefulness in our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.9	... made it simpler to learning on our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.10	... was beneficial to access the educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.11	... augmented my motivation towards our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.12	... improved my learning time on our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.13	... enhanced our chance to work on our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.14	... has diminished my performance in our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.15	... reduced my study velocity in our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.16	... improved my pleasure about our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.17	... was beneficial in our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

		<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
When we used “Moodle/Office365”, It						
<b>3.18</b>	... increased willingness to work on our educational activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>3.19</b>	... made our educational activities uninteresting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**SECTION 4:**

How much are you agree or disagree with each of the next statements arranged here? Please choose just one choice per question.

		<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
<b>4.1</b>	<u>Learning to use</u> “Moodle/Office 365” was <u>easy</u> for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>4.2</b>	It was <u>easy to become skilful</u> at using “Moodle/Office 365”.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>4.3</b>	User interfaces and messages of “Moodle/Office 365” were <u>clear and understandable</u> .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>4.4</b>	GUI (Graphical User Interfaces) and notifications of “Moodle/Office365” were <u>user-friendly</u> .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>4.5</b>	User interfaces and messages of “Moodle/Office 365” were <u>user-friendly</u> .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>4.6</b>	User interfaces and messages of “Moodle/Office 365” <u>uses terms familiar to me</u> .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>4.7</b>	It was <u>hard to understand</u> the user interface of “Moodle/Office365”.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4.8	I found “Moodle/Office 365” <u>easy to use</u> .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**SECTION 5:**

#	Question	Please indicate your reason:
5.1	<p>Approximately, <u>how frequently</u> did you use “Moodle/Office 365” in your educational activities? Please select one of the choices, which best describes your usage.</p> <p> <input type="radio"/> never  <input type="radio"/> once in a week  <input type="radio"/> three times in a week  <input type="radio"/> everyday  <input type="radio"/> more than one in a day </p>	
5.2	<p>Approximately, <u>how many times</u> did you use “Moodle/Office 365” in your out-of-class educational activities? Please enter your answer in the following box.</p> <p> <input style="width: 60px; height: 20px;" type="text"/> times </p>	

**5.3**

Approximately, how many class hours did you use “Moodle/Office 365” in your in-class educational activities? Please enter your answer in the following box.

Class hours



## **Appendix B: The Instructor Perception about Moodle / Office365 System Interview (TIPMOS-I)**

### **SECTION – 1**

1. How long have you been working as an instructor at Eastern Mediterranean University?
2. How long have you been working with Moodle/Office365 Applications?
3. Have you ever used any E-Learning/Sharing Portal before?

*If the answer is yes, continue with following questions;*

- 3.1. What was your purpose when you were using Moodle/Office365 system?
- 3.2. What kind of computer applications did you use in your experience?
- 3.3. Did you find it beneficial?

*If the answer is yes, continue with following questions;*

- 3.3.1. What were the beneficial features?

*If the answer is no, continue with following questions:*

- 3.3.2. What can be the possible enhancements?

## SECTION – 2

4. How did the use of this technology affect students' motivation to focus on educational activities? Positive, negative or not effected?

*If the answer is “not effected”, continue with the following questions;*

- 4.1. Why do you think that the use of the system not effected student's motivation? What can be the possible factors in your opinion?

*Continue with question 4.2.1 to drill down to get detailed information and to ensure negative answer.*

*If the answer is “negatively”, continue with the following questions;*

- 4.1. Why do you think that the use of the system effected student's motivation negatively? What can be the possible factors in your opinion?

*Continue with question 4.2.1 to drill down to get detailed information and to ensure negative answer.*

*If the answer is “positively”, continue with the following questions;*

- 4.2. What are the indicators of the increase of the students' motivation by the use of this technology?

*If the following indicators are not covered, ask following questions.*

Have you observed that the use of the technology has increased?

- 4.2.1. ...student's participation to the educational activities?
- 4.2.2. ...student's attention to the educational activities?
- 4.2.3. ...student's pleasure in the educational events?
- 4.2.4. ...student's study time in the educational activities?
- 4.2.5. ...student's satisfaction about the educational actions?
- 4.2.6. ...student's willingness to work on the educational activities?

### SECTION – 3

5. What do you think about the effectiveness of Office365 / Moodle system in the student's educational activities? Was it useful or not?

*If the answer is negative, continue with the following questions;*

- 5.1. Why do you think that the use of the system was not useful?

5.1.1. What were the insufficient features?

5.1.2. What can be the possible improvements?

*Continue with question 5.2.1 to drill down to get detailed information and ensure negative answer.*

*If the answer is positive, continue with the following questions;*

- 5.2. In what aspects was the Office365 / Moodle system useful for the student's educational activities?

*If the following indicators are not covered, ask the following questions.*

Have you observed that the use of the technology has;

- 5.2.1. ... increased students' work speed in the educational activities?  
5.2.2. ... increased students' performance in the educational activities?  
5.2.3. ... increased students' productivity in the educational activities?  
5.2.4. ... increased students' contribution to the educational activities?  
5.2.5. ... made the development of the educational activities easy?  
5.2.6. ... made it easy for students to access to the sources of the educational activities?  
5.2.7. ... improved students' opportunity to work on the educational activities?

- 5.3. Was the use of this technology useful overall?

## **SECTION – 4**

Please answer the following questions based on your observations.

6. Was learning to use “Moodle/Office365” system easy for your students?
7. Was becoming skillful at using “Moodle/Office365” system easy for your students?
8. Were user interfaces and messages of “Moodle/Office365” system clear for your students?
9. Were user interfaces and messages of “Moodle/Office365” system user friendly for your students?
10. Does user interfaces and messages of “Moodle/Office365” system uses terms familiar for your students?
11. Was it hard to understand the user interfaces of “Moodle/Office365” system for your students?
12. In overall, was the use of “Moodle/Office365” system easy for your students?

## **SECTION – 5**

13. What can be your suggestions about the future and other possible uses of this technology in the educational activities?
14. What can be other advantages of the use of this technology?
15. What can be other disadvantages of the use of this technology?

My questions end here.

Thank you very much for your contribution.

Do you have any other comments on the issue or the questions?

## Appendix C: Cronbach Alpha Value

```
GET
  FILE='C:\Users\Woctek\Desktop\alpha.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
RELIABILITY
  /VARIABLES=Section_3.1 Section_3.2 Section_3.3 Section_3.4 Section_3.5 Section_3.6 Section_3.7
    Section_3.8 Section_3.9 Section_3.10 Section_3.11 Section_3.12 Section_3.13 Section_3.14
    Section_3.15 Section_3.16 Section_3.17 Section_3.18 Section_3.19 Section_4.1 Section_4.2
    Section_4.3 Section_4.4 Section_4.5 Section_4.6 Section_4.7 Section_4.8
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /SUMMARY=TOTAL.
```

### Reliability

[DataSet1] C:\Users\Woctek\Desktop\alpha.sav

#### Scale: ALL VARIABLES

##### Case Processing Summary

		N	%
Cases	Valid	106	100.0
	Excluded <sup>a</sup>	0	.0
	Total	106	100.0

a. Listwise deletion based on all variables in the procedure.

##### Reliability Statistics

Cronbach's Alpha	N of Items
.896	27

## Appendix D: Ethics Committee Approval

 <p><b>Doğu Akdeniz Üniversitesi</b> "Erdem, Bilgi, Gelişim"</p>	<p><b>Eastern Mediterranean University</b> "Virtue, Knowledge, Advancement"</p>	<p>99628, Gazimağusa, KUZZEY KIBRIS / Famagusta, North Cyprus, via Mersin-10 TURKEY Tel: (+90) 392 630 1995 Faks/Fax: (+90) 392 630 2919 E-mail: bayek@emu.edu.tr</p>
<p>Etik Kurulu / Ethics Committee</p>		

**Reference No:** ETK00-2020-0118

03.04.2020

**Subject:** Your application for ethical approval.

**Re:** Mustafa Güler

Faculty of Education.

EMU's Scientific Research and Publication Ethics Board (BAYEK) has approved the decision of the Ethics Board of Education (date: **27.03.2020**, issue: **2020/67**) granting Mustafa Güler from the Faculty of Education to pursue with his MA thesis work titled "**Perceptions of Students And Instructors About The Use of Moodle/Office365 Portal in Educational Activities**" supervised by Prof. Dr. Muhammet Yaşar Özden.



Prof. Dr. Yücel Vural

Chair, Board of Scientific Research and Publication Ethics - EMU

YV/ns.

[www.emu.edu.tr](http://www.emu.edu.tr)