Pegem Journal of Education and Instruction, Vol. 14, No. 1 , 2024 (pp. 150-166)

RESEARCH ARTICLE WWW.PEGEGOG.NET

Academicans' Perceptions Towards Online Teaching Tools Within the Context of the Unified Theory of Acceptance and Use of Technology-2 (UTAUT-2)

Burcu Duman[1]*, Tuğba Oğuz[2]
[1.2]Bartın University, Bartın/Turkey

Abstract

The research aims to disclose academicians' perceptions of "Online Teaching Tools" (OTT) within the UTAUT-2. In the study, a qualitative research method was implemented. The case study pattern has also been used for the study. The study group of the research was determined through maximum variation sampling from purposive sampling methods. Twenty-six academicians working at the faculties of education of two universities in the Western Black Sea Region of Turkey constitute the study group of the study. A semi-structured interview form was employed as a data collection tool. The data were analyzed inductively. MAXQDA 20 program was implemented in data analysis. In terms of performance expectancy, OTT can be integrated into teaching methods and techniques. In terms of effort expectancy, it has also been found that the use of OTT is mostly straightforward, and the fact that it is time-consuming, and challenging does not mean negative and technical problems might occur. Regarding social influence, academicians receive support and advice on using OTT. In terms of facilitating conditions, most academicians perceive themselves as sufficient. In terms of hedonic motivation, academicians are of the opinion that that OTT become enjoyable, primarily if it is used via student participation. It is shown that the difference in the exchange rate within Turkey increases fees as a price value. In further studies, it is possible to refer to the opinions of academicians from various fields based on the relevant theory via the following qualitative and quantitative methods.

Keywords: UTATUT-2, online education, academician

Introduction

The digital transformation and pandemic have reinforced the relationship with technology, and education has also been affected by recent technological developments. Because of the increasing numbers of student in educational institutions, the shortage of trained instructors, the understanding of lifelong learning, and the aim of providing faster in-service training, people have started preferring applications such as distance education, distance learning, web-based learning, and online Education (Demirören, 2014). After all, technology in education has become a necessity, not a choice (Günaydın& Kurt, 2021). Online education is one of the educational methods enabling technology in education. It was predicted many years ago that online education would become a significant part of education because it is accessible and affordable for every user in a wide variety of disciplines (Kim, 2004).

Online education creating new opportunities for students, faculty members, higher education institutions, and other educational institutions (Mayadas, Bourne & Bacsich, 2009; Bell & Fedeman, 2013) is considered a kind of distance education. Online Education, also known as web-based education and internet-based education, benefits from the internet by offering distance education (Kim, 2004). Online education has developed as of the 1990s when the Internet was on the rise (Volery, 2001). Its influence has, therefore, increased (Hassanzadeh, Kanaani & Elahi, 2012). In the last few years, it has drawn great attention owing to the quarantines caused by COVID-19 and has become an important way of obtaining information at all levels of schools (Zhang, Lu & Zhang, 2020). In the relevant literature, online education is associated with such concepts as distance education, e-learning, online learning, blended learning, computer-based learning, web-based learning, and virtual learning (Sun & Chen, 2016). Even though various concepts are used, the term online education generally implies the application of internet technology to realize learning experiences (Grimes & Whitmyer, 2009). Via online education, reference is made not to specific applications but to the field of computer networking, regardless of the level of education, pedagogy, or design (Harasim, 1990, qtd.

Corresponding Author e-mail: dmn.brc@gmail.comac.id

https://orcid.org/ 0000-0001-7414-8866

How to cite this article: Duman B, Oğuz T (2024). Academicans' Perceptions Towards Online Teaching Tools Within the Context of the Unified Theory of Acceptance and Use of Technology-2 (UTAUT-2). Pegem Journal of Education and Instruction, Vol. 14, No. 1, 2024, 150-166.

Source of support: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors..

Conflict of interest: None.

DOI: 10.47 750/pegegog.14.01.18

Received: 09.11.2023

Accepted: 07 .04.2023 **Publication:** 01.01.2024

in Harasim, 1996, 204). Nichols (2003, 2), online education is described as the use of different web-based, web-distributed, and web-compatible technological tools for educational purposes. Cappel (2004) defines online education as an educational environment based on online interaction, offering diversity, and supporting flexible learning independent of time and space (Qtd. Iris & Vikas, 2011, 1869). Online education has many benefits, from easy access to resources to monitoring student progress, from innovative teaching methods to fast and transparent assessment and evaluation, from ensuring personal discipline to improving the individual's cognitive, psychomotor, and personal skills (Pinho, Franko & Mendes, 2020). Online education systems might compensate for the weaknesses of face-to-face education, and they have become a very good opportunity for information seekers through modern technology (Hassanzadeh, Kanaani & Elahi, 2012).

As Grimes & Whitmyer (2009) put it, online education is a collection of e-mail, online meetings, online discoveries, and online learning. On the basis of this statement, it can be claimed that a part of online education is online learning. Online learning is a broad field of research drawing the attention of many different disciplines, such as educational psychology, computer science, information science, management, communication, etc. On the one hand, due to the scope of the subject, different understandings have come out as to what online learning also means and how it should be described. On this basis, online learning is associated with concepts such as e-learning, which refers to education obtained through computer technologies, distance learning, distance education, computer-assisted education, computer-based education, technology-based teaching, computer-based simulation, and simulation games (Bell & Federman, 2013). Online learning generally contains interaction between the learner and the material, the student and the instructor, and interactions of learners with each other (Grimes & Whitmyer, 2009). According to Khan (1997), online learning is defined as computer-delivered instructional material offering instruction to a remote audience via the web, where the Internet is used to access learning materials, allowing interaction with content, instructors, and other learners. qtd in. Ally, 2004, 2). In online learning, participants learn together in technology-enriched environments (Grimes & Whitmyer, 2009).

Online education requires effective tools to create, manage and offer content and collaborative events (Kim, 2004). OTT are becoming increasingly essential in online education mediated by technology (Sun et al., 2016; Şahin Durmaz & Kunt, 2022). OTT are software platforms offering different educational functions, such as collaborative communication, digital educational resources, and instant feedback. Learning management systems, communication tools, online learning resources, and digital educational games are considered among OTT. The learning management system (LMS) is an online learning tool offering online courses with extensive educational functions and reviewing student performance. Communication tools are online platforms that allow students and colleagues to discuss. Online learning resources usually include various learning materials, such as research articles, tests, and engaging activities. Digital educational games are online platforms for teaching while entertaining students (Indeed Editorial Team, 2022). Online learning tools have been used intensively in educational activities, particularly during the pandemic. Video conferencing applications such as Google Meet, Microsoft Teams, and Zoom, storage areas such as Google Drive, Dropbox, and Yandex Drive, and learning management systems such as Moodle, Google Classroom, and Canvas have been preferred to increase interaction (Günlük & Ozcan, 2022). An online learning tool offers attractive activities. It makes flexible teaching possible. It ensures instant feedback. Besides, it stores student data (Indeed Editorial Team, 2022).

Online education has drawn attention in the last few years because of the quarantines caused by COVID-19. Online education, where lifelong learning can be made possible, has become an essential way of obtaining knowledge at all levels of schools (Zhang, Lu & Zhang, 2020). There are many models in the relevant literature regarding the acceptance of innovations used in educational or working environments by those who use them (Gunasinghe et al., 2019). These models disclose the use behavior of developing technologies. The most commons are the technology acceptance models (Venkatesh, 2000).

Different theoretical models have been put forward to make the adoption and use of the technology possible. One of them is The Unified Theory of Acceptance and Use of Technology-2 (UTAUT-2), a framework designed by Venkatesh, Thong & Xu (2012) to enable technology acceptance in organizational settings. The UTAUT is based on integrating the dominant constructs of eight previous valid models (i.e., Theory of Reasoned Action, Technology Acceptance Model, Motivational Model, Theory of Planned Behavior, Unified Theory of Acceptance Model and Theory of Planned Behavior, Computer Use Model, Diffusion of Innovations Theory and Social Cognitive Theory) that vary from human behavior to computer science (Chang, 2012). On the basis of these eight models, there are four elements affecting the intentions and behaviors of people in the UTAUT. These are performance expectancy, effort expectancy, social influence, and facilitating situations (Venkatesh et al., 2003). UTAUT adopts an approach highlighting the importance of extrinsic motivation. Complementing this point of view from the theory of motivation is intrinsic and hedonic motivation.

Moreover, the price is also essential since consumers must meet the charges associated with purchasing tools and services. Based on these factors, in addition to the four elements of the UTAUT, hedonic motivation and price elements were added

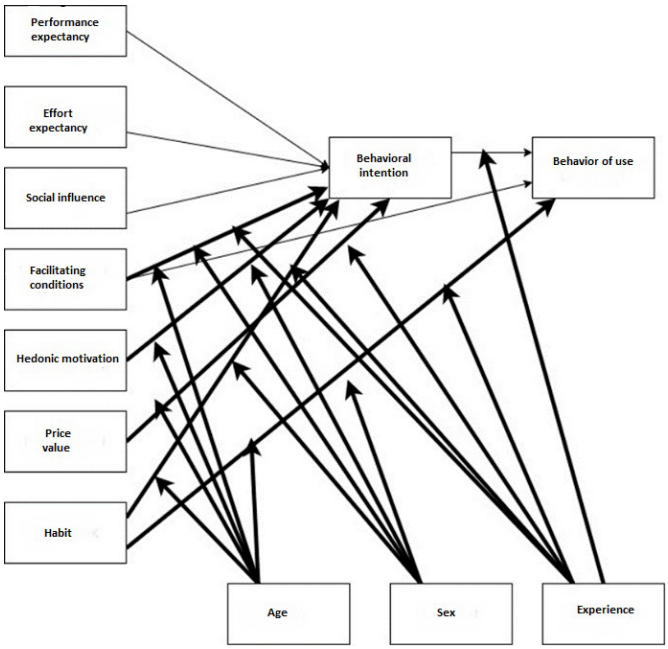

Fig. 1: The elements of UTAUT-2

to the UTAUT-2 (Venkatesh, Thong & Xu, 2012). The elements of UTAUT-2 are presented in Figure 1 (Venkatesh, Thong & Xu, 2012, 160).

Performance expectancy is the degree to which an individual thinks that using a system will help him/her to achieve gains in job performance. In other words, performance expectancy is the degree to which consumers benefit from using technology to carry out certain activities. The root constructs of performance expectancy are perceived benefit, extrinsic motivation, job fit, relative advantage, and outcome expectancy. Perceived benefit is the degree to which a person believes using a particular system will improve work performance. On the other hand, extrinsic motivation is the user's desire to use the system because the system is instrumental in obtaining valuable outputs. Job fit is how a system's capacity improves an individual's job performance. The relative advantage is the degree to which an innovation is perceived as better than its antecedents. The outcome expectancy is related with the consequences of the behavior (Venkatesh et al., 2003).

In UTAUT, effort expectancy is described as the degree of convenience associated with the use of the system. An application perceived by people as easier to use is more likely acceptable. Performance expectancy, effort expectancy, facilitating conditions, and social influence affect overall intention to use, and perceptions of these antecedents differ significantly between potential and early users (Chang, 2012). The root constructs of effort expectancy are perceived ease of use and complexity. Perceived ease of use is when a person thinks using a system will not require effort. Complexity is the degree to which a system is perceived as relatively difficult to understand and use. Ease of use is the degree to which an innovation is used (Venkatesh et al., 2003).

Social influence is the degree to which consumers perceive their significant others to believe they should use a specific technology (Venkatesh, Thong & Xu, 2012). The root constructs related to social influence are subjective norms, social factors, and image. Subjective norms are the perception of what is vital to one's self that most people should or should not do the behavior in question. Social factors are known as the individual's internalization of the subjective culture of the reference group and the specific interpersonal agreements the individual makes with others in social situations. Image is the degree to which an innovation is perceived to improve a person's image or status in the social system (Venkatesh et al., 2003).

Facilitating conditions express consumers' perceptions of the resources and support available to perform a behavior (Venkatesh et. al., 2003). Facilitating conditions are the degree to which the individual thinks that the organizational and technical infrastructure is available to support the use of the system (Chang, 2012). The root constructs related to facilitating conditions are perceived behavioral control, facilitating conditions, and compatibility. Perceived behavior control reflects perceptions of behavior. Facilitating conditions are objective factors in which the surrounding observers agree and are the provision of computer support. Compatibility is the degree to which an innovation is perceived as consistent with the current values, needs, and experiences of potential adopters (Venkatesh et. al., 2003).

In accordance with UTAUT, performance expectancy, effort expectancy, and social influence affect the behavioral intention to use technology, whereas behavioral intention and facilitating conditions are assumed to determine the use of technology. Hedonic motivation, price value, and habit are integrated into UTAUT to adapt it to the context of consumer technology use (Neulfeld et al., 2007; Venkatesh, Thong & Xu, 2012).

Hedonic motivation is depicted as the entertainment or pleasure derived from using technology. In the context of the consumer, hedonic motivation has been found to be an essential determinant of technology acceptance and use (Brown & Venkatesh 2005). Thus, hedonic motivation has been added to UTAUT-2 as an indicator of consumers' behavioral intentions to use a technology (Venkatesh, Thong & Xu, 2012).

One of the indicators of behavioral intention to use technology is its price value. The cost and pricing construct have a significant impact on the use of technology by consumers. The price value is positive when the benefits of using technology are perceived to be greater than the monetary cost. This price value creates a positive effect on the intention (Venkatesh, Thong & Xu, 2012).

Variables of individual differences, such as age, sex, and experience, have been theorized to control various UTAUT relationships. Therefore, performance expectancy is regulated by age and sex. Age, sex, and experience regulate effort expectancy and social influence. The influence of facilitating conditions on the behavior of use is regulated by age and experience (Venkatesh, Thong & Xu, 2012).

Habits are automatic behaviors outside the consciousness (Kim & Malhotra, 2005, 11). It is handled as situations performed automatically, not intentionally (Limayem & Hirt, 2003, 66). Limayem et al. (2007,709) regard habit as the degree to which an individual believes that behavior is automatic. On the other hand, Kim et al. (2005, 5) argue that past behaviors are important for habits.

Within the scope of online education, research with UTAUT and UTATUT-2 has heavily focused on the perceptions and opinions of higher education students. In some studies, massive open online courses (Altahi, 2020; Meet et al., 2022; Amid & Din, 2021), online learning (Mahande & Malago, 2019; Osei et al., 2022; Kosiba et al., 2022; Kurnia, 2020; Prasetyo et al., 2021 Raman & Thannimalai, 2021), social media such as Linkedin, Technorah, Blogger, Flickr, Myspace, Instagram, etc. social (Odewumi et al., 2018), learning management systems (Ain et al., 2015), online learning systems (Al-Masri & Tarhini, 2017), use of Google Classroom (Bervell et al., 2022; Jakkaew & Hemrungrote, 2022), mobile learning (Arain et al., 2019), augmented reality (Faqih & Jaradat, 2021), online learning platforms (Zacharis & Nikolopoulou, 2022), blended learning (Rudhumbu, 2022), online learning (Goto & Munyai, 2022), the use of social network sites for educational purposes (Gharrah & Aljaafreh, 2021), using a mobile phone in studies (Nikolopoulou et al., 2020) were highlighted. A limited number of prospective teachers were included in the studies performed with higher education students. In one of these studies, Yıldız Durak (2018) investigated the acceptance and use of social networks for educational purposes of prospective teachers in the context of UTAUT, whereas Raman & Don (2013) dealt with the factors that might influence the acceptance of Moodle in the learning processes of prospective teachers. Like those of prospective teachers, the lack of research on teachers also draws attention. Al-Zboon et al. (2021) scrutinized the attitudes of science and mathematics teachers toward integrating knowledge and technology in the context of UTAUT. Salehi et al. (2021) handled the factors influencing Iranian EFL teachers' adoption of Web 2.0 technologies within the theoretical framework of UTAUT and technological pedagogical content knowledge (TPACK). On the other hand, Tseng et al. (2019) conducted research on teachers' driving forces to adopt and use massive open online courses (MOOCs) from the perspective of UTAUT-2. On the one hand, only one study investigated faculty members' opinions within the scope of UTAUT and UTAUT-2. Within this research, Radovan & Kristl's (2017) questioned the relationship between the acceptance and use of learning management systems (LMS) and teaching approaches among faculty members. Finally, the most crucial factor for the acceptance of learning management systems by the faculty members was expressed as having an immediate social influence in the business environment. It turns out that the formation of the learning process largely relies on the characteristics of the LMS tools and the perceived usefulness of the application. Generally, it was seen that while the studies based on UTAUT were intensive within the scope of online education, the studies on UTAUT-2 were few. In many studies, evaluations were made based on student opinions via quantitative research methods. Nonetheless, in the age of technology, it is essential to determine the perceptions of teachers educating students, especially faculty members educating prospective teachers, about online education and its tools in connection with UTAUT-2. Hence, in this study, the perceptions of the faculty members working in the faculties of education about online teaching tools (OTT) were investigated using the qualitative research method and considering the missing aspects within the current studies. It was, therefore, desired to add novelty and diversity to the research on online education related to UTAUT-2. It has been assumed that determining faculty members' perceptions will guide technology-supported teacher education.

The primary aim of the research is to disclose the perceptions of the academicians working at the faculty of education about OTT within the context of UTAUT-2. Depending on this general purpose, answers to the following questions have been sought:

What OTT do academicians use, and what are the new OTT for themselves?

What are academicians' performance expectancies for the new OTT?

What are academicians' effort expectancies regarding the new OTT?

How do academicians evaluate the social influences of the new teaching tools?

How do academicians evaluate the facilitating conditions for the new OTT?

What are academicians' hedonic motivations toward the new EEA?

How do academicians evaluate the price value of the new OTT?

Are the new OTT turning into a habit among academicians? How?

Method

Research Design

The research was conducted out as a case study design, one of the qualitative research designs. To disclose the results of

a specific situation, designs via a quantitative or qualitative approach, investigating the factors related to a situation with a holistic approach, and focusing on how the relevant situation is influenced are referred to as case study design (Yıldırım & Şimşek, 2021, 70). In addition, the design, based on an in-depth explanation and analysis of a limited system, investigates the situation in a real-life context, mainly when the boundaries between a situation and the context are unclear (Merriam, 2009, 40). Perceptions of the academicians working at the faculty of education about OTT within the context of UTAUT-2 was handled as a case.

Study Group

The study group of the research consists of twenty-six academicians who worked at the faculty of education of two state universities in the Western Black Sea Region of Turkey. The study group was determined according to maximum variation sampling, one of the purposive sampling types. Maximum variation sampling involves identifying and seeking those who represent the broadest possible range of characteristics of interest for the study (Merriam, 2009, 79). Maximum variation sampling is sampling performed to create a relatively small sample and to reflect the variation of individuals who might be parties to the problem studied in this sample to the maximum extent (Yıldırım & Şimşek, 2021,117). In this context, the study group was selected from man and woman academicians who work in various departments and divisions with different academic titles and seniority. Figure 2 presents the distribution of the participants by sex.

According to Figure 2, 11 academicians are women, and fifteen 1of them are men. Figure 3 offers the distribution of the study group by seniority.

As in Figure 3, seven academicians have a seniority between 1-10 years, fifteen have a seniority between 10-20 years, and four have a seniority of 20 years or above. Figure 4 offers the distribution of academicians by academic title.

According to Figure 4, seventeen of the academicians are assistant professors, and eight of them are associate professors. Moreover, one of them is prof. Figure 4 shows the distribution of academicians by the type of department in which they work.

As seen from Figure 5, seven academics work in educational sciences, six work in mathematics and science education, five work in Turkish and social sciences education, five work in elementary education, two work in special education and one works in foreign languages education. Figure 6 shows the distribution of academicians by the department in which they work.

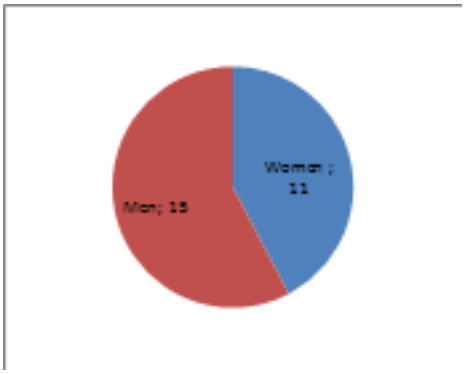

Fig. 2: Distribution of the study group by sex

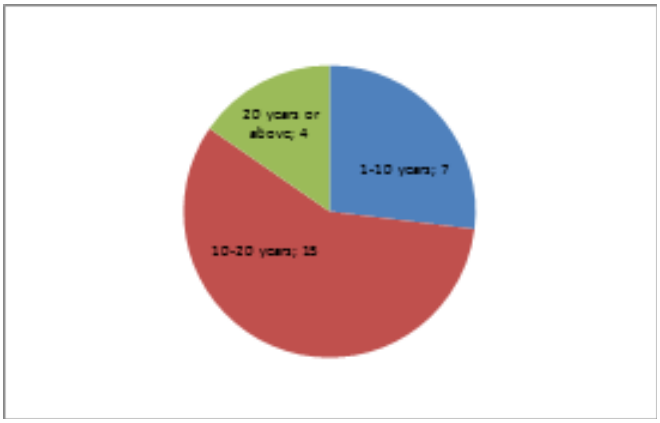

Fig. 3: Distribution of the study group by seniority.

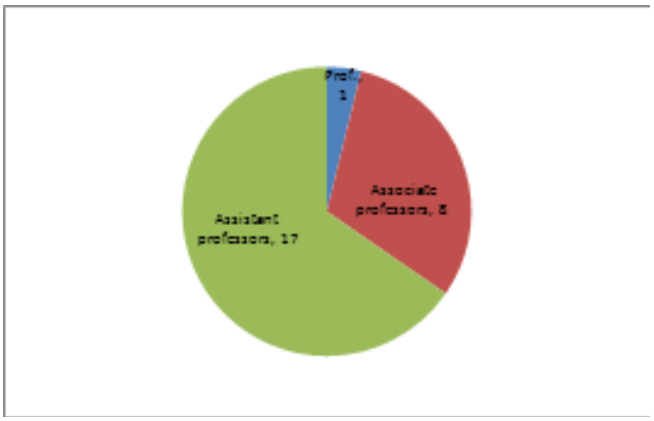

Fig. 4: Distribution of the study group by academic title

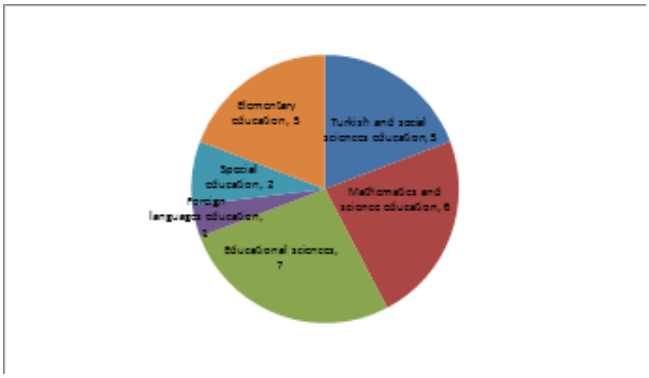

Fig. 5: Distribution of the study group by the type of department in which they work.

As seen from Figure 6 of the academicians work in the department of Social Studies Teaching, three work in the department of Mathematics Teaching, three work in the department of Science Teaching, three work in the department of Guidance and Psychological Counseling, two work in the department of Classroom Teaching, two work in the department of Preschool Teaching, two work in the department of Curriculum and Instruction, two work in the department of Teaching the Mentally Handicapped, one works in the department of Measurement and Evaluation, one works in the department of English Language Teaching, one works in the department of Turkish Language Teaching and one works in the department of Lifelong Learning.

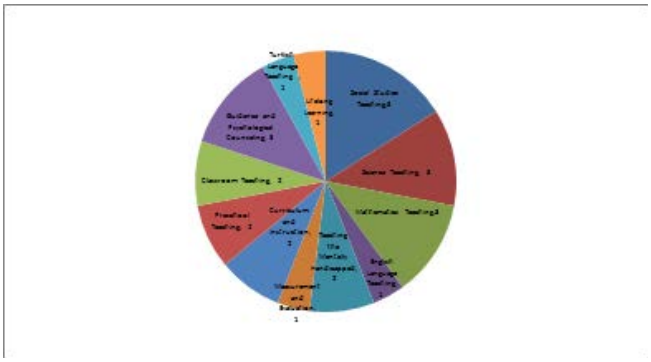

Fig. 6: Distribution of the study group by the department in which they work.

Data Collection Tools

A semi-structured interview form, which has a flexible and organic structure, is open to adaptation into constantly changing conditions, leaves the control of the discussion to the interviewer and can be planned within specific periods of time (Tracy, 2013, 139), was preferred as a data collection tool for the study. The interview form consists of 3 main sections. In the first section, questions related to the duties of academicians (Seniority, academic title, department, and division) were included. In the second section, general questions about the OTT that are used by academicians (which OTT they use, which ones are new to them, etc.) are present. In the last section, fourteen open-ended questions reflect the theory upon which the actual research is based, and the final version is offered. While developing the open-ended questions in the last section, the following stages were followed:

An open-ended question pool was formed in accordance with the purpose of the research and based on UTAUT-2. While forming the question pool, to ensure content validity, care was taken to write questions regarding all elements and components of the UTAUT-2. The draft interview questions were sent to a total of 6 specialists, 4 of whom were information technologies specialists, and 2 of whom were program development specialists. Expert opinions were taken based on the Lawshe technique. The Lawshe technique has come out to examine the comprehensibility of the prepared questions,

Table 1: Distribution of questions by UTAUT-2 elements

Performance Expectancy	1. What are your thoughts regarding the benefits of the new OTT for the learning-teaching process?
	2. What are your thoughts regarding the effectiveness of the new OTT in improving teaching skills?
	3. Can you integrate teaching methods and techniques into the new OTT? How?
Expectancy Effort	4. What are your thoughts regarding the ease of use/difficulty of the new OTT?
	5. Do you have problems with the new OTT? How do you try to solve these problems?
	6. How do you evaluate the new OTT in terms of time use?
Social influence	7. Do you have any new OTT that you use on recommendation? Who did you get advice from? What was/were the factors/s influencing you to consider the recommendations of these people?
	8. From whom did you receive/ receive support when using the new OTT? How?
Facilitating Conditions	9. What are your thoughts regarding the organizational and technical infrastructure of the new OTT? (How is their technical infrastructure? How are the explanations related to the use and the directions? Does it help to solve the problems you face?)
	10. What are your thoughts about your competence in using the new OTT? (How is your knowledge and skill level?)
	11. What are your thoughts regarding the compatibility of the new OTT with your needs, job, and working style?
Hedonic motivation	12. Is the new online teaching tool entertaining and enjoyable for you? How?
Price Value	13. What are your thoughts about the fees (benefit-cost balance) of the new OTT?
Habit	14. Have the new OTT become a habit for you? How?

their suitability for the target audience, the compatibility/incompatibility between the expert opinions obtained in preliminary studies, and the content or construct validity (Yurdugül, 2005). In the technique, requiring at least 5 and at most forty expert opinions, there are gradings for each item as "the item measures targeted construct," "the item is related to the construct but unnecessary", "the item does not measure the targeted construct" (Lawshe, 1975). Experts have presented their opinions according to the mentioned gradings. Based on these evaluations, content validity ratios (CVRs) were calculated for each question. The CVR is calculated as the ratio of the difference between the number of experts who state the "essential" opinion (the item measures what is targeted) for each question and half of the total number of experts to the number of experts who state an opinion on the item (Lawshe, 1975). (CVR: Content Validity Ratio, N_G= Valid respondents, N=Total number of experts) [KGO=(NG-N/2) /(N/2)]. The CVR of the research items offered to six experts should be at least .99. Items meeting this ratio are considered essential (Lawshe, 1975). Accordingly, a total of fourteen open-ended questions reflecting the theory upon which the research is based by considering CVR have been created. Table 1 presents the distribution of the questions in the last section by the elements of UTAUT-2.

Data Collection

To collect the data of the research, a total of twenty-six academicians who work at two state universities in the Western Black Sea region of Turkey were contacted, and the environment, place, time, and time of the interview were adjusted by making an appointment. Seven academicians said that it would be convenient for them to have a face-to-face meeting, while nineteen academicians preferred an online meeting via zoom. Plans have been arranged in accordance with the demands of the academicians. The interviews were carried out for approximately forty minutes. Via obtaining the consent of the academicians, audio recordings were made using a voice recorder in face-to-face meetings, whereas audio and video recordings were made using the recording feature in online Zoom meetings.

Data Analysis

The inductive analysis approach has been adopted in data analysis. Inductive analysis deals with the whole targets to reach the whole by starting from the parts and adopting to make sense of the whole (see Tracy, 2013). The stages of inductive analysis, performed to disclose the concepts and relationships that might explain the collected data, are as follows: Encoding of data; Determination of the themes of the encoded data; Arrangement of codes and themes,and Identification and interpretation of the findings (Yıldırım & Şimşek, 2021).

Before data analysis, audio recordings were converted into text to be able to encode. These texts have been transferred to the MAXQDA 20 package program. The data read several times by the researchers have started to be encoded in the last reading. Sentences or phrases containing meaning integrity were encoded, and a code list covering all data was created. After the coding stage, the codes were evaluated as a whole, and themes and sub-themes were formed according to their similarities and differences. The researchers have read the themes and sub-themes several times and have taken their final form. Finally, it has been visualized on MAXMAP. Direct quotations explaining the themes and sub-themes were included.

Validity and Reliability

The studies performed to ensure the credibility of qualitative research support the internal validity of the research (Yıldırım & Şimşek, 2021; Türnüklü, 2000; Baltacı, 2019). Within the scope of ensuring internal validity, expert opinions were obtained while developing the data collection tool following the Lawshe technique, and the content validity rate was calculated. Both researchers determined and confirmed the themes and sub-themes for the data analysis. The study group was created from academicians who work in different universities, departments, and divisions to provide diversity. Direct quotations have been given in the Findings section. The studies performed to ensure the transferability of the research support its external validity. Within the scope of ensuring external validity, the data collection and analysis process has been described in detail, and purposive sampling has been carried out. Not to negatively influence the validity during the interview process, the information regarding the interview and the interviewer has been offered straightforwardly. During the interview, to avoid contradictions in interpreting the statements without directing the participants, the participants were asked such questions as, "Is this what you mean? "Is this what I should understand from your statements?" for confirmation. Studies regarding the consistency and confirmability of qualitative research support the reliability of the research (Yıldırım & Şimşek, 2021; Türnüklü, 2000; Baltacı, 2019). For the reliability of the study, the interview questions were given to all participants in the same format. Two researchers separately examined the consistency in the organization of the data collection tools, data collection, and analysis stages. The research findings have been offered according to the conceptual framework. In the method section, data collection tools, data collection, and analysis have been presented in detail, and an attempt has been made to increase reliability.

For quantitative studies, analysis procedure(s) and the statistical methods used and their justification for appropriateness for each research question or hypothesis

should be explained in detail in this section. Data analysis procedures in qualitative studies should also be discussed comprehensively.

Findings

In this section, the findings as a result of the research have been separated in accordance with the themes determined in line with the opinions of the participants and have been summarized via direct quotations from the participant's opinions. The parts indicated with numbers in the images present frequency values. The names of the participants are not mentioned in the direct quotations. Instead, P1 (Participant 1) has been encoded as P2.

OTT Used by Academicians

The OTT used by academics have been given in Figure 7.

Academicians use a total of seventy-four different OTT. Zoom (F:16) is the most used tool, and it has been followed by Kahoot (f:11), PowerPoint (f:10), Edmodo (f:7), Wordwall (f:6) Kanva (f:5), Microsoft Teams (f:5), Quizizz (f:4), Whiteboard(f:4), the E-lesson(f:4) Office tools (f:4), Office Forms (f:4), Google Classroom (f:3), Youtube (f:3) Padlet (f:3), Learningapps (f:3), Digital Stories (2), Edpuzzel (f:2), Google Backes (f:2), H5P (f:2), Loom (f:2), Mentimeter (f:2) Office 365 (f:2), Online Photoshop (f:2), Online site (f:2), Perculus (f:2), Powtoon (f:2) scratch (f:2), Sokrative (f:2) and Uzem (Distance Education Application and Research Center (f:2), On the basis of this finding, it can be stated that academician use various OTT. Figure 8 presents the OTT new to academicians.

Academicians assert that thirty-three of the OTT are new to them. Zoom (f:13) has been the most expressed new tool. Zoom was followed by Wordwall (f:4), Edmodo (f:3), Kahoot (f:3), Learningapps (f:3), Loom (f:2), Microsoft Teams (f:2), Perculus (f:2), Pixtoon (f:2), Quizizz (f:2), Scratch (F:1), Slido (f:1), Sokrative (f:1), Tundo (f:1), Uzem I (F:1), Vyond (f:1), Wooclap (f:1), Comix (f:1), Drive (f:1), Easel (f:1), Edraw Max (F:1), Educandy (f:1), Exelearning (f:1), Great Fleep (f:1) Google Classroom (f:1), H5P (f:1), Kanva (f:1), Meeting the words (f:1), Office 365 (f:1), Padlet (f:1), Powtoon (f:1) and Session (f:1).

Fig. 7: Tools used in online educational environment

Performance Expectancy of Academicians for the New OTT

To determine the performance expectancy of academicians for the new OTT, the benefits of these tools for the learning-teaching process have been discussed. Figure 9 gives the perceptions of academicians regarding the benefits of the new OTT used for the teaching-learning process.

It is apparent that the most expressed benefit of the new OTT for the learning-teaching process is instant information sharing (f:10). This benefit can be listed as follows: universal education (f:9), rich teaching environment (f:6), instant feedback (f:5), group work (f:5), flexibility (f:5), recording of course (f:4), easy accessibility (f:3), suitability for every stage of the course (f:2), increasing attention span (f:2), affordability (f: 2), active participation (f:2), integration of education and

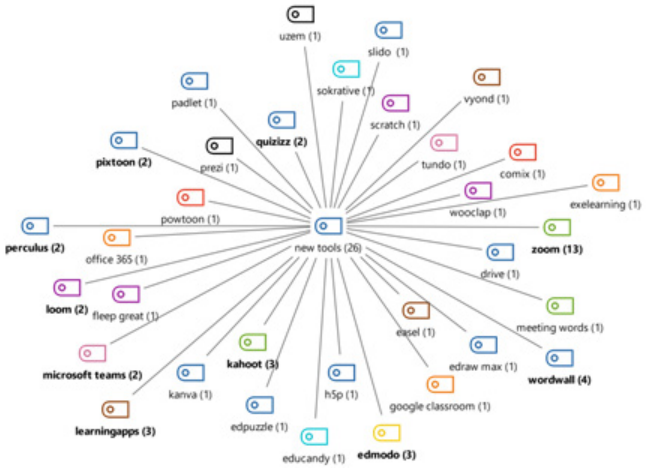

Fig. 8: New OTT

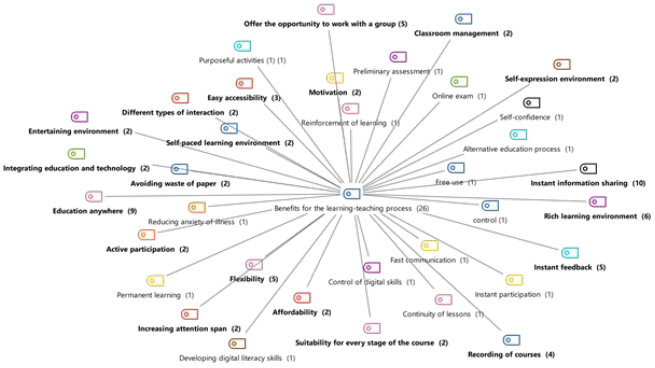

Fig. 9: The benefits of the new OTT for the learning-teaching process

technology (f:2), entertaining environment (f:2), different types of interaction (f:2), preventing paper waste (f:2), self-paced learning environment (f:2), self-expression environment (f:2), providing motivation (f:2) and classroom management (f:2). Some direct quotations regarding the benefits for the learning-teaching process are offered below:

P11: Taking education and training activities out of the classroom is one of the most important things today. Education anywhere, education anytime. While drinking coffee in the evening, people are studying by the window in front of the TV or in their own room... we have eliminated certain limitations in teaching education with distance education tools or web 2 tools. This, in turn, benefits us in the rapid adaptation of the new generation of education. One of the most important benefits of the pandemic in the field of education and training has been the rapid integration of technological tools for the benefit of education.

P26: I think it undoubtedly has a positive effect. We have created an alternative process for children. The children have seen a richer environment. It was challenging to adapt to the process at first, but we all experienced a rapid transformation when we adapted. We used these tools in our courses.

To determine the performance expectancy of the academicians for the new online teaching tool, their ability to integrate teaching methods and techniques into the new OTT was discussed, and the findings are offered in Figure 10.

Twenty-two of the academicians said they could fully integrate the new OTT into their teaching methods and techniques, while 4 said they could partially achieve this integration. It is obvious that academicians who can partially integrate themselves have difficulties, especially in courses that require practice. Some direct quotations regarding the integration of teaching methods and techniques into the new OTT are listed as follows:

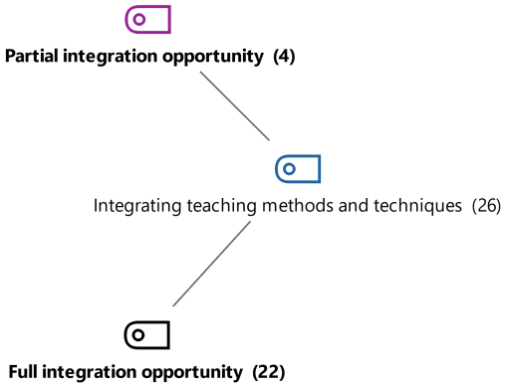

Fig. 10: Integration of teaching methods and techniques into the new OTT

P9: One day, you will study with students according to problem-based learning. You can present the problem you have prepared in a video to the students. Let's say you want to do cooperative learning. You can create collaborative learning groups using applications such as Padlet, Canva…

P11:.....we can use six thinking hats or brainstorming. I have used it. I did it on Zoom, for example. Those who did not want to talk with the microphone wrote to the chat section. We had a brainstorm on a micro-scale. Nevertheless, it is much simpler to integrate the direct instruction method that we use in the classroom.

In another inquiry to determine the performance expectancy of academicians regarding the new OTT, the effectiveness of the new OTT in developing teaching skills has been scrutinized. The findings related to this have been expressed in Figure 11.

Academicians stated that the new OTT contribute to their teaching skills mostly in terms of "providing different educational environment experience" (f:16). This is followed by improving techno-pedagogical content knowledge (f:8), improving pedagogical competencies (f:5), improving technological literacy (f:4), keeping up with the developing age (f:4), individual development (f:3), improving communication skills (f:2), improving self-efficacy (f:2) and prevention against phobia (f:2). Based on these findings, it can be said that the new OTT used in online educational environments contribute to individual and professional development. Direct quotations that support this situation are presented below.

P2: Definitely, I attach great importance to it, and I believe that it has improved me a lot. We divide teaching content knowledge into pedagogical knowledge and techno-pedagogical knowledge. I think that the presence of a teacher living in our era in the classrooms and lecturing without this techno-pedagogical knowledge will lead to a very simple and unqualified education.

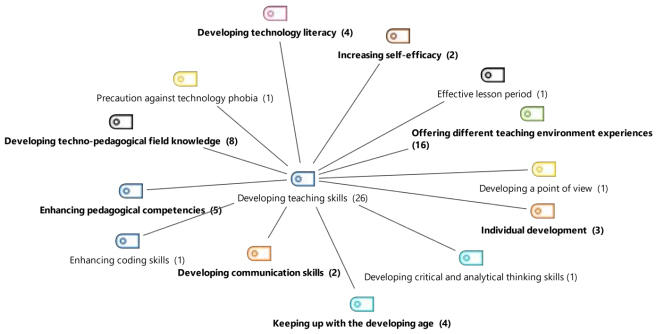

Fig. 11: The impact of the new OTT in improving teaching skills

P15: These tools affect all teaching skills, from communication to self-confidence, self-control, and self-efficacy. The use of the online platform significantly contributes to teachers in terms of both knowledge development and skill development in every sense.

Expectancy Efforts of Academicians on the New OTT

Expectancy efforts of academicians regarding the new OTT were handled under the themes of ease of use/difficulty, problems, and solutions, and challenging/time-consuming. Figure 12 presents the perceptions of academicians about the ease/difficulty of using the new OTT.

Nineteen of the academicians specified that the new OTT provided ease of use, while five stated that they provided partial ease of use. On the other hand, two academicians stated that using these tools is difficult for them, whereas two academicians stated that it is difficult for students. Based on the findings, it can be said that the new OTT are easy in general. The direct quotations below support this situation:

P3: in this digital world where it is very easy to obtain information, we can say that this has become easier. When you meet a new tool, you can easily access videos on how to use it and learn how to use it immediately from there....

P7: Actually, they are very easy to use, but we need to work on them a bit. People who are not interested in technology face challenges. We will have to tinker with it a bit. I do not think it is too hard to figure out. It is not easy for older teachers to adapt. Nevertheless, though it may seem difficult to some, it is not.

In Figure 13, the problems experienced by academicians regarding the new OTT and the solutions they face are present.

It is seen that the most common problem of academicians regarding the new OTT is technical problems (f:18). This is followed by a lack of motivation in students (f:2), exam security problems (f:1), time restriction (f:1) and lack of digital literacy (f:1). It is observed that the most expressed solution is "solving by individual efforts" (f:26). Besides, assistance from field experts (f:6) was also stated as a preferred solution. Based on the findings, it can be stated that mainly technical problems are encountered, and these problems are tried to be solved individually. The direct quotations below support this situation:

P7: Problems regarding Internet, sound, camera, connection, and computer software. If the Internet is disconnected, we cannot fix it. We are trying to get support from more knowledgeable friends for voice and connection problems.

P12: So sometimes we have technical problems. For example, the video we share while using Loom does not reach students the way we share it. Therefore, we are editing some parts of the video. We have tried to solve some problems by sending e-mails since it is not a company originating from Turkey, but that has not been very fast either. I have not had any problems with Zoom. It is one of the applications that we are delighted with. I have not had such a noticeable problem with other tools so far. In Office Forms, I tried to solve it by sending an e-mail the same way.

Figure 14 gives the perceptions of academicians regarding whether the new OTT are challenging and time-consuming.

It has been stated that the new OTT are time-consuming and challenging (f:12) and partially time-consuming and challenging (f:8). On the one hand, it was also emphasized that these tools save time (f:6). It was stated that being time-consuming and challenging is not perceived as a negative situation, on the contrary, it is necessary for the effective use of the tools. Some direct quotations are as follows:

P3: It can change based on the content. It is sometimes challenging, but it is not very difficult for me if I enjoy it. I do not see it as a waste of time.

P11: It needs to take time because if you are going to produce something beautiful, you have to spare time and make an effort. Let's see, if you say I am going to class and join unprepared, it does not take time, but it does not function in any way ....

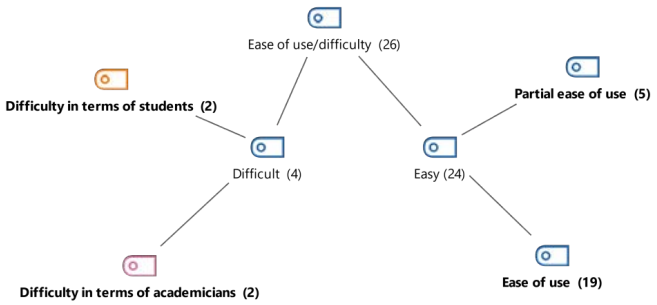

Fig. 12: Ease of use/difficulty of the new OTT

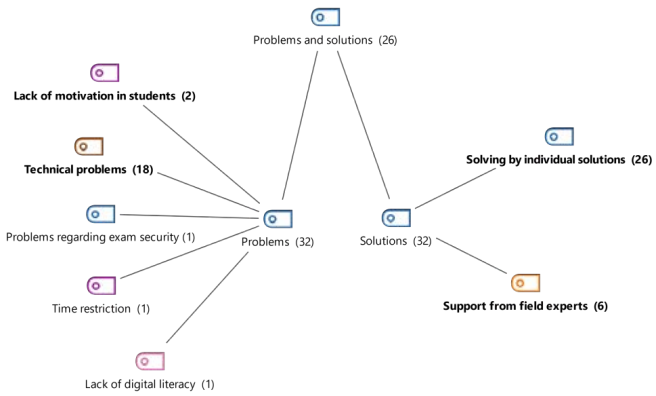

Fig. 13: Problems and solutions related to the new OTT

P23: On the contrary, it saves time. I can share the direct link; I can embed the video or can do a quick survey. You can exchange ideas and brainstorm. I think it saves time...

Evaluations of Social Influence of New OTT by Academicians

Evaluations of the social influence of the new OTT by academicians were analyzed under the themes of support and recommendation. Figure 15 shows the findings regarding from whom and how the academicians received support when using the new OTT.

It is clear that academicians learn the new OTT with the most individual efforts (f:18). This is followed by receiving support from users (f:12), support from field experts (f: 8), support from the institution (f:3) and training (f:3). The direct quotations given below support the obtained data.

P14: ...when I open a program and tinker with it a few times, I can learn basic things very easily. There is a video of each program for those who want to learn. When we search on the Internet, we can access the essential manual of the programs. It takes your individual effort to improve on this.

P18: Our teachers at the university supported us on Z oom. I can say they taught us. Then we got help from our close friends and friends who are related to technology. Then we have already gotten used to it and learned it

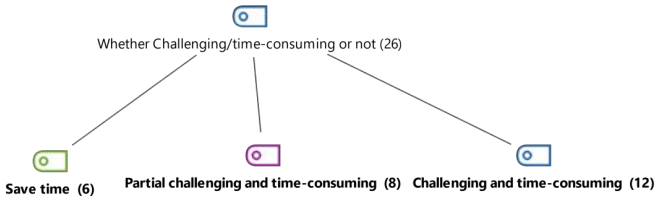

Fig. 14: Whether the new OTT are challenging/time-consuming or not

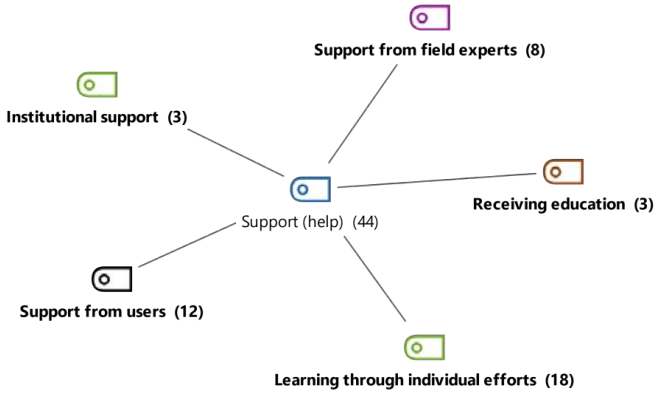

Fig. 15: Status of receiving support for the new OTT

Figure 16 shows the findings as to academics receiving advice about the new OTT.

It is seen that academicians receive the most advice from users regarding the new OTT (f:18). This is followed by learning through individual research (f:12), institutional advice (f:6), learning as a result of education (f:5) and receiving advice from experts (f:4). The direct quotations given below support the obtained data.

P19: I used H5P on the recommendation of a content developer, a friend of ours who graduated from METU. He recommended it a few years ago. Other than that, I am usually on the side of giving advice, not taking advice. I cannot say that I use the program on the recommendation.

P21: I usually did my own research to see what was being used. Some projects were being done about techniques that could be used in online teaching environments. I tried to apply what I learned in those projects.

The Evaluations of The Academicians regarding the Facilitating Conditions of the New OTT

Academicians' evaluations of the facilitating conditions of the new OTT were addressed under the themes of organizational and technical infrastructure, competence in using new tools, and adaptability to needs and working style. In Figure 17, the perceptions of academicians related to the organizational and technical infrastructure status of OTT are available.

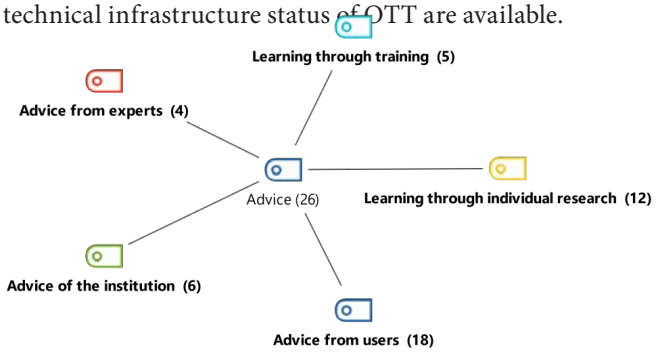

Fig. 16: Getting advice about the new OTT

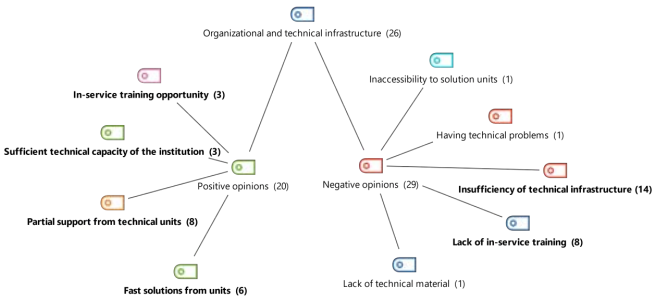

Fig. 17: The organizational and technical infrastructure status of the new OTT

Academicians expressed positive (f:20) and negative (f:29) opinions regarding the organizational and technical infrastructure status of the new OTT. The opinions considered positive are listed as partial support from technical units (f:8), the quick solution from units (f:6), institutionally sufficient capacity (f:3) and in-service training opportunity (f:3). The most repeated opinion among the negative opinions was the lack of technical infrastructure (f:14). This was followed by a lack of in-service training (f:8), inability to reach solution units (f:1), lack of technical materials (f:1), and encountering technical problems (f:1). Some direct quotations regarding this topic are as follows:

P7: I think there are shortcomings. For example, there is a lack of infrastructure. There is a lack of in-service training. We can be offered training about these technologies. They can give the teachers unlimited rights for Zoom. Every 45 minutes, we break off and come back. Gather again and connect again. They always it is a process.

P8: We have a teaching management system, but our connection becomes very weak. I do not think the infrastructure is sufficient.

P18: The technical infrastructures of online tools, which are more professional, do not cause much trouble. Such as Teams and Blackboard. They have almost never had problems with the technical infrastructure. However, there has been a lot of infrastructure shortage in the programs that we have just started using or developed during this process. We tried to solve the technical problems with the technical staff at that faculty. They got back to us very fast. The software company was contacted if it was something caused by the software. We had problems at the beginning. But in general, people really made an effort to help.

Academicians' perceptions of competence for using the new OTT are given in Figure 18.

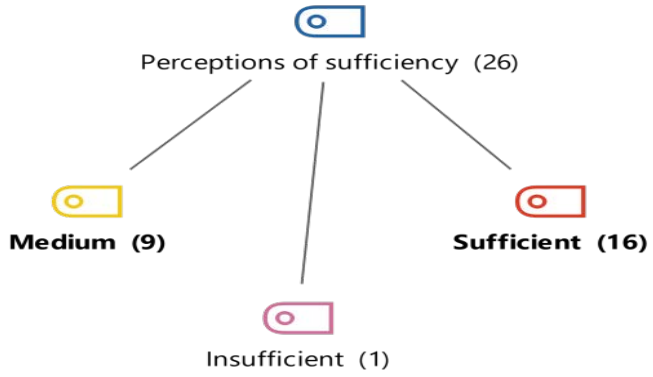

Fig. 18: Perceptions of competence for using the new OTT

Academicians regarded their competence in using the new OTT as sufficient, moderate, and insufficient. The majority of the academicians considered themselves sufficient (f:16), followed by medium (f:9) and insufficient (f:1) levels. The academicians perceived themselves as sufficient because of the ease of use of the new OTT and the easy access to the relevant videos. On the one hand, it can be stated that moderate and insufficient opinions were reported, mainly because of a lack of information. Direct quotations regarding the subject support this situation.

P3: I am a person who is constantly open to learning. So I can realize that I have shortcomings…

P7: I think it is very little. I mean, I am not at the bottom, I see worse ones. But there are very good, very different programs. I could have done better.

P20: I consider my skill level to be insufficient. I am also not very good at the level of knowledge. There are several trainings I have received. I am open to improving myself; I need to work.

P23: I think I am enough. Because I already had to use these tools in my master's degree and doctorate. I got out of that atmosphere. But I also keep updating myself.

Academicians' opinions regarding the compatibility of the new OTT with their needs, job and working styles are available in Figure 19.

Opinions as to the compatibility of the new OTT with the needs, job, and working style were grouped under 2 sub-themes as positive and negative opinions. In the sub-theme of positive opinions, compatibility with courses (f:16) stands out. This is followed by responding to needs (f:15), partial compatibility with jobs (f:7), the opportunity to reach anywhere in the world (f:1), and the opportunity to interact (f:1). In the sub-theme of opposing opinions, non-compliance for exams (f:3) stands out. This is followed by non-compliance with the courses (f:2) and creating a lack of interaction (f:1). Generally, OTT are suitable for their jobs and the working styles of academicians,

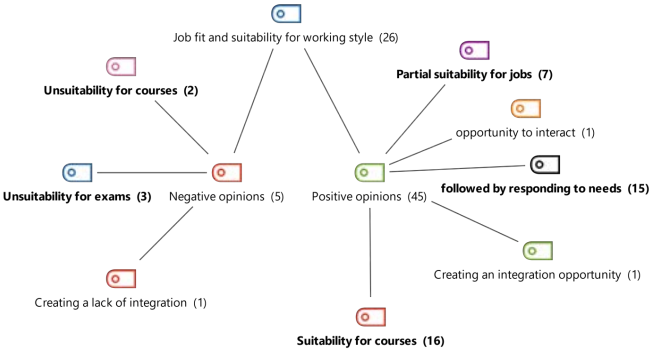

Fig. 19: Compliance of the new OTT with the needs, job, and working style

and academicians might choose the appropriate tools for their courses. Some direct quotations are as follows:

P1: When we look at the current structure, it meets our needs. The student also understands this situation. We teach the class, but we do the exams face-to-face. This was the right thing for us to prevent cheating in exams.

P5: I think it is very compatible. Because I am a person who likes to be interactive, talk and communicate while lecturing. I think that these tools also contribute to the fact that the class is active. For example, I gave Socratives to students. I gave you multiple-choice questions. Typically, if I asked that question, I would get very few answers, but when I ask it in Socrative, I see answers.

Hedonic Motivation of Academicians Towards the New OTT

To determine the academicians' hedonic motivations towards the new OTT, the situation of the new OTT entertaining and enjoyable for them was questioned. The findings are shown in figure 20.

Some of the academicians specified that the new OTT offer an entertaining environment (f:19), whereas some of them stated that it offers a partially entertaining environment (f:7). Hence, it can be stated that the use of the new OTT, in general, is entertaining. Some direct quotations related to this topic are as follows:

P4: We can enjoy when there is mutual interaction. When we provide this, we are satisfied with the process. But when not enough feedback is received, the state of entertainment does not continue.

P9: I really enjoy doing it. I enjoy the freedom it gives me.

P16: Since it contains a lot of stimulants for both the student and me, it can involve us in a lot of work. It provides active learning. When we measure and evaluate the classroom environment, even the students who hesitate can suddenly get involved in the process. And that gives me happiness.

P21: I could not make it very fun. I could not make it interactive. I tried to make it a little more fun with the things I did to attract students to the course.

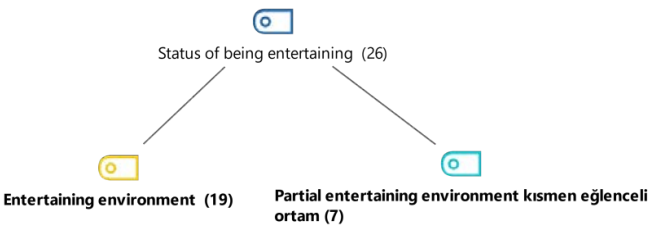

Fig. 20: Status of being entertaining of the new OTT

Academician's Perceptions of the Price Value of the New OTT

The opinions of the academicians regarding the fees of these instruments (benefit-cost balance) were asked to determine their perceptions as to the price value of the new OTT. The findings are presented in Figure 21.

Academicians have expressed positive and negative opinions regarding the status of fees of the new OTT. The opinion that the free parts are sufficient (f:12) was repeated the most as positive. This was followed by the fact that the fees of some tools is worth paying (f:5). The most repeated negative opinion is that data fees are high (f:19). This was followed by the fact that the free parts do not meet the need (f:7) and the fees of some tools are not worth paying (f:2). Based on the findings, it can be stated that the fees of the existing tools in our country are high owing to the exchange rate difference, so the need is tried to be met with free parts. The direct quotations given below support this situation.

P3: I think the fees are cheap but not cheap for us. It can be reached according to individuals or institutions living abroad. Convenience is provided in terms of pricing. Considering the economic conditions in Turkey, if there is no institutional support for professors, the economic burden is a bit high. Prices are not very reasonable unless support is received.

P23: When we think on the basis of Web 2 tools, they do not really want very extreme prices. But we also use statistical programs in course analysis. For example, the most well-known of these is SPSS. They want very high sums for such programs. So, we prefer their free ones, that is how we solve this problem. I cannot say anything standard for all of them. Some of them are not worth the requested fee, so I am developing an alternative. For some, I prefer to give that money because it saves time.

The Status of Transformation of the New OTT into a Habit

The findings regarding the status of habit for using new OTT for academicians are shown in Figure 22.

In the majority of academicians (f:21), it is observed that the new OTT have become a habit. This is followed by partly

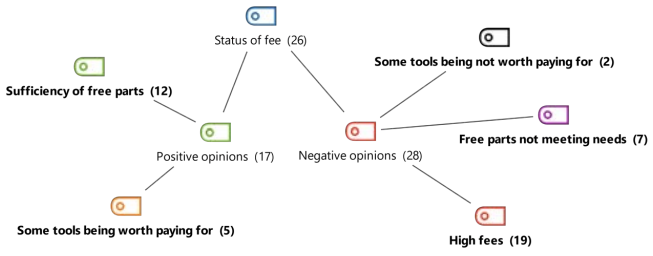

Fig. 21: Status of fee of the new OTT

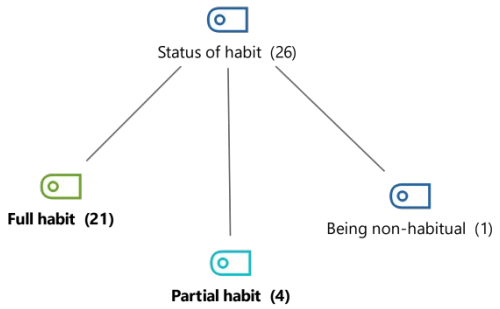

Fig. 22: The status of transformation of the new OTT into a habit

habitual (f:4) and non-habitual (f:1). It can be asserted that the individual use of the new OTT in and out of the classroom has become a habit. Some direct quotations related to the topic are as follows:

P7: It has not been transformed but partially transformed. We are very familiar with Zoom now, but it has not become a habit in other issues. I use it when I need it.

P19: It becomes a habit. You automatically use Breakout Rooms in Zoom when doing group work. When explaining a concept the student does not understand, you need to write it, draw it, or draw a graph, and your hand goes on the Sketchpad. Such practices have become a habit.

P25: Partly, yes, it has transformed; it is transforming. Because if I try to teach without using these tools, I do not know how I can systematically share the syllabus, announcements, and content with the students.

Conclusion and Discussion

This research was performed to disclose the perceptions of the academicians towards the OTT in the context of the UTAUT-2. As a result of the research, it was found out that academicians use a wide variety and a number of OTT, and they think that half of them are new to them. This result can be evaluated as increasing interest in OTT, primarily through the COVID-19 process. As a performance expectancy, it was concluded that OTT were found to be useful, especially in terms of doing what was desired instantly and in terms of being flexible regarding time and space, and that OTT could be integrated into teaching method techniques in general. However, there have been some difficulties in practical classes. On the one hand, it is clear that OTT contribute to individual and professional development. Similar to these results, Whedlock & Trahan (2019) found that survey tools provide early feedback correction and are effective on student attendance; Al-Zboon et al. (2021) found that teachers can integrate information and communication technologies into science and mathematics courses. On the one hand, Thomas et al. (2020) showed that performance expectancy affects the use of mobile learning. Similar results in studies by Ain et al. (2015), Yıldız Durak (2018), El-Masri & Tarhini (2017), Jakkaew & Hemrungrote (2017), Anderson et al. (2006), Arain et al. (2019), Faqih & Jaradat (2021), Bharati & Srikanth (2018), Zacharis & Nikolopoulou (2022), Meet et al. (2022) have been reached.

In terms of effort expectancy, it was highlighted that OTT were easy to use thanks to their user-friendly interfaces; mainly technical problems were encountered, and these problems were tried to be solved individually. It was concluded that the fact that OTT are time-consuming, and challenging is not perceived as a negative situation; on the contrary, it is necessary for effective use. Nonetheless, it has been said that the institutions remain incomplete in terms of technical support and tool introduction. This result supports the result of Bervell et al. (2022) that effort expectancy is an important predictor of intention to use Google Classroom, an online teaching tool The finding by Tseng et al. (2019) that ease of use does not have an effect on the acceptance of the massive open online courses (MOOCs) contradicts the results mentioned above. Apart from these results, there are various studies that both support (Al-zboon et al. 2021; Mahande & Malago 2019; Nizari et al. 2019; Odewumi et al. 2018; Yıldız Durak 2018; Jakkaew & Hemrungrote, 2022; Bharati & Srikanth 2018) and contradict (Salehi et al. 2021, Ain et al. 2015, El-Masri & Tarhini 2017, Faqih & Jaradat 2021, Zacharis & Nikolopoulou 2022) the current research.

Regarding social influence, academicians generally receive advice from users on using OTT. Academicians following the use and introduction videos of OTT perceive themselves as sufficient, while those who lack information about OTT perceive themselves as moderately sufficient or insufficient. The results of the research support these results by Gharrah & Aljaafreh (2021) that the recommendation of essential people is an influential factor in the use of social networking sites for educational purposes and the results of the research by Amid & Din (2021) that social influence positively affects the acceptance and use of massive open online courses. The study of Prasetyo et al. (2021) varies from other research outcomes concluding that social influence is not influential in the acceptance of online medical education. Apart from these studies, studies by Alghatrifi et al. (2019), Raman & Thannimalai (2021), Goto & Munyai (2022), Gunawan et al. (2019), Kurnia (2020), Zacharis & Nikolopoulou (2022) overlap with the current research outcomes, while the research by Bharati & Srikanth (2018) and Thomas et al. (2020) differ.

In terms of facilitating conditions, academicians can choose OTT suitable for their courses and also find them suitable for their job and working style. These results support Khechine et al.'s (2020) conclusion that facilitating conditions positively affect using a learning management system that

integrates social learning tools. Nevertheless, facilitating conditions were found to have no effect on online learning environment satisfaction and use in Kosiba et al.'s (2022) study and on university students' intentions to use online learning in Raman & Thannimalai's (2021) study. Apart from these, some studies support the research outcomes about facilitating conditions (Jakkaew & Hemrungrote 2022, Al-Zboon et al. 2021, Salehi et al. 2021, Mahande & Malago 2019, Khechine et al. 2020, El-Masri & Tarhini 2017, Faqih & Jaradat 2021, Meet et al. 2022) and contradict the research outcomes (Thomas et al. 2020, Ain et al. 2015, Bharati & Srikanth 2018, Zacharis & Nikolopoulou 2022).

In terms of hedonic motivation, using OTT was found to be entertaining in general. Primarily it has been specified that as students' participation levels increase, the entertainment level also increases. Raman & Don (2013) state that hedonic motivation is effective in the acceptance of the learning management system and behavioral intention of prospective teachers. Bharati & Srikanth (2018) also stated that hedonic motivation affects the use of mobile learning technologies in terms of entertainment. On the other hand, Tseng et al. (2019) state that hedonic motivation does not affect teachers' acceptance and use of massive open online courses. Except for Gharrah &Aljaafreh's (2021) research, other results mostly show that hedonic motivation affects online learning (Amid & Din, 2021; Wijaya & Weinhandl, 2022; Kurnia, 2020; Rudhumbu, 2022; Bervell et al. 2022; Nikolopoulou et al. 2020; Meet et al. 2022; Zacharis & Nikolopoulou, 2022).

Regarding price value, Turkey's current OTT charges are high due to the exchange rate difference. Therefore, academicians can use free versions of these tools. This result shows that the price value significantly impacts the acceptance and use of OTT. Goto & Munyai's (2022) research, disclosing that law school students have an impact on the acceptance and use of online education, supports this conclusion. Nevertheless, Rudhumbu (2022) states in terms of blended learning, and Faqih & Jaradat (2021) state that price value is not effective in the acceptance and use of augmented reality. In the literature, there are studies both supporting (Ain et al. 2015, Tseng et al. 2019, Gunawan et al. 2019) and not supporting (El-Masri & Tarhini 2017, Zacharis & Nikolopoulou 2022, Raman & Thannimalai 2021) the research outcome.

In terms of habit, it can be stated that individual use of OTT in and out of the course has transformed into a habit. This result is supported by the result of Amid & Din (2021) that the habit factor affects the acceptance and use of massive open online courses, while the result of Prasetyo et al. (2021) that habit does not affect medical students' acceptance and use of online education is not supported. Likewise, there are different studies in the literature supporting the current research (Kurnia 2020, Bervell et al. 2022, Zacharis & Nikolopoulou 2022).

Recommendations

Based on the research outcomes, the following suggestions can be offered: In-service training on OTT can be provided to institutions for practical courses. The technical infrastructure and support units of the institutions can be strengthened. Domestic-origin OTT can be produced, and thus, fees can be reduced. The study group of this research is limited to the academicians of the faculty of education working at two state universities. For this reason, the study group can include academicians who work in both public and private universities, and the number of universities included in the study group can be increased. Apart from the academicians working in the faculty of education, the perceptions of academicians working in different faculties towards online educational tools might be scrutinized. The number of qualitative research can be increased based on the UTAUT-2 theory.

References

Ain, N., Kaur, K., & Waheed, M. (2016). The influence of learning value on learning management system use: An extension of UTAUT2. *Information Development*, 32(5), 1306-1321.

Ally, M. (2004). Foundations of educational theory for online learning. *Theory and practice of online learning*, 2, 15-44.

Al-zboon, H. S., Gasaymeh, A. M., & Al-Rsa'i, M. S. (2021). The attitudes of science and mathematics teachers toward the ıntegration of ınformation and communication technology (ICT) in their educational practice: The application of the unified theory of acceptance and use of technology (UTAUT). *World Journal of Education*, 11(1), 75-85.

Alghatrifi, I., & Khalid, H. (2019). A systematic review of UTAUT and UTAUT2 as a baseline framework of information system research in adopting new technology: a case study of IPV6 adoption. *6th International Conference on Research and Innovation in Information Systems (ICRIIS)* (pp. 1-6). IEEE.

Altalhi, M. (2021). Toward a model for acceptance of MOOCs in higher education: the modified UTAUT model for Saudi Arabia. *Education and Information Technologies*, 26(2), 1589-1605.

Amid, A., & Din, R. (2021). Acceptance and use of massive open online courses: extending UTAUT2 with personal innovativeness. *Journal of Personalized Learning*, 4(1), 57-66.

Anderson, J. E., Schwager, P. H., & Kerns, R. L. (2006). The drivers for acceptance of tablet PCs by faculty in a college of business. *Journal of Information Systems Education*, 17(4), 429.

Arain, A. A., Hussain, Z., Rizvi, W. H., & Vighio, M. S. (2019). Extending UTAUT2 toward acceptance of mobile learning in the context of higher education. *Universal Access in the Information Society*, 18(3), 659-673.

Baltacı, A. (2019). Nitel araştırma süreci: Nitel bir araştırma nasıl yapılır? *Ahi Evran Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 5(2), 368-388.

Bell, B. S. & Federman, J. E. (2013). E-Learning in postsecondary education. *The Future of Children*, 23(1), 165-185. doi: 10.1353/foc.2013.0007

Bervell, B. B., Kumar, J. A., Arkorful, V., Agyapong, E. M., & Osman, S. (2022). Remodelling the role of facilitating conditions

for Google Classroom acceptance: A revision of UTAUT2. *Australasian Journal of Educational Technology*, 38(1), 115-135.

Bharati, V. J., & Srikanth, R. (2018). Modified UTAUT2 model for m-learning among students in India. *International Journal of Learning and Change*, 10(1), 5-20.

Brown, S. A., & Venkatesh, V. (2005). Model of adoption of technology in households: A baseline model test and extension incorporating household life cycle. *MIS quarterly*, 399-426.

Cappel, J. J., & Hayen, R. L. (2004). Evaluating e-learning: A case study. *Journal of Computer Information Systems*, 44(4), 49-56.

Chang, A. (2012). UTAUT and UTAUT 2: A review and agenda for future research. *The Winners*, 13(2), 10-114.

Demirören, S. (2014). Başarım ölçütlü uyarlanabilir öğrenmenin etkililiğinin ve verimliliğinin değerlendirilmesi. *Eğitim Bilimleri ve Uygulama*, 13 (25), 47-6.

El-Masri, M., & Tarhini, A. (2017). Factors affecting the adoption of e-learning systems in Qatar and USA: Extending the unified theory of acceptance and use of technology 2 (UTAUT2). *Educational Technology Research and Development*, 65(3), 743-763.

Faqih, K. M., & Jaradat, M. I. R. M. (2021). Integrating TTF and UTAUT2 theories to investigate the adoption of augmented reality technology in education: Perspective from a developing country. *Technology in Society*, 67, 101787.

Gharrah, A.S.A., & Aljaafreh, A. (2021). Why students use social networks for education: Extension of UTAUT2. *Journal of Technology and Science Education*, 11(1), 53-66.

Goto, J., & Munyai, A. (2022). The acceptance and use of online learning by law students in a South African University: An application of the UTAUT2 Model. *The African Journal of Information Systems*, 14(1), 3.

Grimes, G. T & Whitmyer, C. (2009). E-education: What is it? FutureU Press. *Retrieved August 25, 2022, from* https://www.researchgate.net/publication/269699938_e-Education_What_is_it

Gunasinghe, A., Abd Hamid, J., Khatibi, A., & Azam, S. F. (2019). The adequacy of UTAUT-3 in interpreting academician's adoption to e-Learning in higher education environments. *Interactive Technology and Smart Education*, 17(1), 86-106.

Gunawan, A., Muchardie, B. G., & Liawinardi, K. (2019, August). Millennial Behavioral Intention To Adopt E- Book Using Utaut2 Model. *International Conference on Information Management and Technology (ICIMTech)* (Vol. 1, pp. 98-102). IEEE.

Günlük, M. & Özcan, M. (2022). Muhasebe akademisyenlerinin çevrim içi eğitim yeterliliklerinin uzaktan eğitimin etkinliği üzerindeki etkisi. *Dijital çağda muhasebe eğitiminden beklentiler Genişletilmiş özet bildiriler kitabı. 40. Türkiye Muhasebe Eğitimi Sempozyumu.* Atlas Akademik Basım Yayın Dağıtım.

Günaydın, S. & Kurt, A. A. (2021). Dijital etkileşimli materyallerin öğrenme ortamında kullanımı. N. Dönmez Usta, E. Turan Güntepe ve Ü. G. Durukan (Ed.). *Dijital etkileşimli öğrenme materyalleri*. Nobel Yayıncılık.

Harasim, L. (1996). *Online education*. Computer networking and scholarly communication in the twenty-first-century university, 203-214.

Hassanzadeh, A., Kanaani, F., & Elahi, S. (2012). A model for measuring e-learning systems success in universities. *Expert systems with Applications*, 39(12), 10959-10966.

Indeed Editorial Team. (2022). What are online learning tools? *Retrieved June 20, 2022, from https://au.indeed.com/career-advice/career-development/online-learning-tools*

Jakkaew, P., & Hemrungrote, S. (2017). The use of UTAUT2 model for understandingstudent perceptions using Google classroom: A case study of introduction to information technology course. *International conference on digital arts, media and technology (ICDAMT)* (pp. 205-209). IEEE.

Kim, Y. (2004). Online education tools. *Public Performance & Management Review*, 28(2), 275-280.

Kim, S. S., & Malhotra, N. K. (2005). A longitudinal model of continued IS use: An integrative view of four mechanisms underlying postadoption phenomena. *Management science*, 51(5), 741-755.

Kosiba, J. P. B., Odoom, R., Boateng, H., Twum, K. K., & Abdul-Hamid, I. K. (2022). Examining students' satisfaction with online learning during the Covid-19 pandemic-an extended UTAUT2 approach. *Journal of Further and Higher Education*, 1-18.

Kurnia, D. (2020). Penerimaan dan penggunaan e-learning pada masa pandemi Covid-19: Aplikasi model UTAUT2. *Jurnal Kajian Teknologi Pendidikan*, 3(4), 435-47.

Lawshe, C. H. (1975). A quantitative approach to content validity. *Personnel psychology*, 28(4), 563-575.

Limayem, M., & Hirt, S. G. (2003). Force of habit and information systems usage: Theory and initial validation. *Journal of the Association for information Systems*, 4(1), 3.

Limayem, M., Hirt, S. G., & Cheung, C. M. (2007). How habit limits the predictive power of intention: The case of information systems continuance. *MIS quarterly*, 705-737.

Mahande, R. D., & Malago, J. D. (2019). An e-learning acceptance evaluation through UTAUT Model in a postgraduate program. *Journal of educators online*, 16(2), n2.

Mayadas, A. F., Bourne, J., & Bacsich, P. (2009). Online education today. *Science*, 323(5910), 85-89.

Meet, R. K., Kala, D., & Al-Adwan, A. S. (2022). Exploring factors affecting the adoption of MOOC in generation Z using extended UTAUT2 model. *Education and Information Technologies*, 1-23.

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. JOSSEY-BASS.

Neufeld, D. J., Dong, L., & Higgins, C. (2007). Charismatic leadership and user acceptance of information technology. *European Journal of Information Systems*, 16(4), 494-510.

Nichols, M. (2003). A theory for eLearning. *Journal of Educational Technology & Society*, 6(2), 1-10.

Nizarı, N. N. M., Rahmat, M. K., Maaruf, S. Z., & Damio, S. M. (2019). Examining the use behaviour of augmented reality technology through MARLCardio: Adapting the UTAUT model. *Asian Journal of University Education*, 15(3), 198-210.

Nikolopoulou, K., Gialamas, V., & Lavidas, K. (2020). Acceptance of mobile phone by university students for their studies: An investigation applying UTAUT2 model. *Education and Information Technologies*, 25(5), 4139-4155.

Odewumi, M. O., Yusuf, M. O., & Oputa, G. O. (2018). UTAUT Model: Intention to use social media for learning ınteractive effect

of postgraduate gender in South-West Nigeria. *International Journal of Education and Development using Information and Communication Technology*, 14(3), 239-251.

Osei, H. V., Kwateng, K. O., & Boateng, K. A. (2022). Integration of personality trait, motivation and UTAUT 2 to understand e-learning adoption in the era of COVID-19 pandemic. *Education and Information Technologies*, 1-26.

Pinho, C., Franco, M., & Mendes, L. (2021). Application of innovation diffusion theory to the E-learning process: higher education context. *Education and Information Technologies*, 26(1), 421-440.

Prasetyo, Y. T., Ong, A. K. S., Concepcion, G. K. F., Navata, F. M. B., Robles, R. A. V., Tomagos, I. J. T., ... & Redi, A. A. N. P. (2021). Determining factors Affecting acceptance of e-learning platforms during the COVID-19 pandemic: Integrating extended technology acceptance model and DeLone & Mclean is success model. *Sustainability*, 13(15), 8365.

Radovan, M., & Kristl, N. (2017). Acceptance of technology and ıts ımpact on teachers' activities in virtual classroom: Integrating UTAUT and CoI into a combined model. *Turkish Online Journal of Educational Technology-TOJET*, 16(3), 11-22.

Raman, A., & Don, Y. (2013). Preservice teachers' acceptance of learning management software: An application of the UTAUT2 model. *International Education Studies*, 6(7), 157-164.

Raman, A., & Thannimalai, R. (2021). Factors impacting the behavioural intention to use e-learning at higher education amid the covid-19 pandemic: UTAUT2 model. *Psychological Science and Education*, 26(3), 82-93.

Rudhumbu, N. (2022). Applying the UTAUT2 to predict the acceptance of blended learning by university students. *Asian Association of Open Universities Journal*, (ahead-of-print).

Salehi, Mohammad, B., Vaez-Dalili, M., & Heidari Tabrizi, H. (2021). Investigating factors that influence EFL teachers' adoption of Web 2.0 technologies: Evidence from applying the UTAUT and TPACK. *TESL-EJ*, 25(1), n1.

Şahin Durmaz, P. & Kunt, N. (2022). Making wonders with burned fingers: The experiences of ELT teachers during the online education process. *Journal of Educational Technology & Online Learning*, 5(1), 144-168.

Sun, Y., Qiao, Z., Chen, D., Xin, C., & Jiao, W. (2016). An approach to using existing online education tools to support practical education on MOOCs. *IEEE 40th Annual Computer Software and Applications Conference (COMPSAC)* (Vol. 1, pp. 696-705). IEEE.

Sun, A. & Chen, X. (2016). Online education and its effective practice: A research review. *Journal of Information Technology Education: Research*, 15, 157-190.

Thomas, T., Singh, L., & Renville, D. (2020). The utility of the UTAUT: An application to mobile learning adoption in the Caribbean. *International Journal of Education and Development using Information and Communication Technology*, 16(2), 122-143

Tracy, S. J. (2013). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact*. John Wiley & Sons.

Tseng, T. H., Lin, S., Wang, Y. S., & Liu, H. X. (2022). Investigating teachers' adoption of MOOCs: the perspective of UTAUT2. *Interactive Learning Environments*, 30(4), 635-650.

Türnüklü, A. (2000). Eğitimbilim araştırmalarında etkin olarak kullanılabilecek nitel bir araştırma tekniği: Görüşme. *Kuram ve Uygulamada Eğitim Yönetimi*, 24(24), 543-559.

Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information systems research*, 11(4), 342-365.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.

Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 157-178.

Volery, T. (2001). Online education: An exploratory study into success factors. *Journal of educational computing research,* 24(1), 77-92.

Whedlock, B. C., & Trahan, M. P. (2019). Revisiting the unified theory of acceptance and the use of technology (UTAUT) model and scale: An Empirical Evolution of Educational Technology. *Research Issues in Contemporary Education*, 4(1), 6-20.

Wijaya, T. T., & Weinhandl, R. (2022). Factors influencing students' continuous intentions for using micro-lectures in the post-COVID-19 period: a modification of the UTAUT-2 approach. *Electronics*, 11(13), 1924.

Yıldırım, A., & Şimşek, H. (2021). *Nitel araştırma yöntemleri.* Ankara: Seçkin Yayınevi.

Yıldız Durak, H. (2019). Examining the acceptance and use of online social networks by preservice teachers within the context of unified theory of acceptance and use of technology model. *Journal of Computing in Higher Education*, 31(1), 173-209.

Yurdugül, H. (2005). Ölçek geliştirme çalışmalarında kapsam geçerliği için kapsam geçerlik indekslerinin kullanılması. *XIV. Ulusal Eğitim Bilimleri Kongresi*, 1, 771-774.

Zacharis, G., & Nikolopoulou, K. (2022). Factors predicting University students' behavioral intention to use eLearning platforms in the post-pandemic normal: An UTAUT2 approach with 'Learning Value'. *Education and Information Technologies*, 1-18.

Zhang, Q., Lu, J. & Zhang, G. (2020). Recommender systems in e-learning. *Journal of Smart Environments and Green Computing*, 1, 79-89.