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Investigation of students' intent to use the online learning platform with usability dimensions

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ABSTRACT. When we look at today's technological developments, we see that the concepts of education and training experience diversity in parallel with Human Computer Interaction (HCI). Thanks to developments in technology, an increasing number of people are able to access more information day by day. The use of the Internet and the educational environments to which it is connected is increasing rapidly in Türkiye as well as around the world. With the integration of technology in education, the aim is to acquire the best and highest quality efficiency from education by striving to remain current and by being open to change, innovation, and development at all times. In this context, within the scope of the 'FATİH (Movement to Increase Opportunities and Improve Technology) Project' developed in 2010, to increase the quality and efficiency of education through the integration of technology, a digital education platform, the EBA (Educational Information Network), was established by the Ministry of National Education to communicate between teachers and students and to provide materials that they can use throughout their educational life. The aim of this study is to determine the effect of the usability of the EBA, which is a contributing factor in increasing the quality and efficiency of education, on the intentions of high school students to use it within the scope of Human-Computer Interaction. For this purpose, the 'Scale of the Usability of Online Learning Platform' was developed, and using this scale, the usability of the EBA was evaluated with the sub-dimensions of Content Design, General Design Considerations, and Learnability, and its effects on the Intentions to Use of high school students were measured.

Keywords: educational technology; human-computer interaction; online learning tools.

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Introduction[1]

It is possible to say that technological developments in our recent history have expanded traditional human-human interactions in various contexts. This situation leads to the re-examination of human-human interaction as human-computer, human-machine, and human-robot interactions in fields such as human-robot interaction in tourism and computer-assisted teaching in education when considered on a sectoral basis (Ivanov & Webster, 2019; Backer, Van Keer, Smedt, Merchie, & Valcke, 2022). While Human-Computer Interaction (HCI) is concerned with system-based technologies being effective, safe, easy to learn, efficient and useful, there are other aspects such as meeting the needs of users and improving system possibilities. The main purpose of the HCI field is to focus on the interface between humans and computers, to make systems more useful, and to provide users with experiences suitable for their specific knowledge and goals (Fischer, 2001).

Technological developments and changes in many fields, such as artificial intelligence, information technologies, integration, automation, and robotization, have affected human behavior, and the need to adapt to change has forced people remain current with technological developments. The connection of humanity with technology has been effective in the emergence of the HCI phenomenon. When observing developed countries, we see that they use technology at an advanced level in the field of education, as in every field, and that they constantly endeavor to improve it. With this developmental point of view, considering the communication opportunities in our age, the issues that may affect the design, development and implementation of effective teaching in education (Mao, 2014) through online platforms should be taken into consideration.

With the widespread use of technology in education, online education platforms offer personalized learning methods to satisfy the needs of students in their educational processes (Butola, 2021). In Türkiye,

[1] This article is extracted from the first author's master thesis entitled "Evaluation of the usability of educational information network in terms of human-computer interaction", supervised by the second author (Master's Thesis, Akdeniz University, Antalya, Turkey, 2021).

different education portals are being developed to use this technology more effectively in the field of education and to make education more efficient. The most important and most comprehensive of these is the Education Information Network (EBA), which was prepared in 2010 by the General Directorate of Innovation and Educational Technologies affiliated with the Ministry of National Education. The EBA is a digital education platform built on communicating between teachers and students, providing materials they can use throughout their educational life, as well as using information technology tools effectively in a way that appeals to more senses. With the help of this platform, students can access all electronic content materials and projects given by the teacher. They can share any information they have created in the EBA environment and repeat any subjects they have learned. In addition, teachers contribute to the need for digital content by sharing the content they develop on the EBA.

The Covid-19 pandemic, which emerged in the final months of 2019, spread all over the world and took its place in history. Face-to-face training in all educational institutions stopped in our country in March 2020. As a way of resuming classes, remote teaching was selected in the form of distance education over the Internet. Distance education is an innovative and systematic education method that provides individuality, independence, and flexibility to both parties in terms of space, time and environment, where the student and the teacher are in different environments (Uşun, 2006). In the distance education process, the Ministry of National Education used the EBA portal, the Internet and three different television channels in every school. Thus, it was aimed with the EBA platform that students use their time efficiently in the distance education process and avoid falling behind in their education. The importance of the usability of the EBA, which mediates the implementation of this method, became more important during this period.

Usability is the most important pillar of the HCI field. Easy, powerful, effective, and efficient communication between the User and the Computer is related to the usability of the systems. The fact that the person using the system says ‘it can be used easily’ is meaningless in terms of HCI. The cognitive differences of users cause them to make different gains from the usability of the system. In this case, the designer should seek answers to questions about for whom, for which tasks, and according to what criteria an interface is regarded as usable. Thus, usability can be defined in a meaningful way that does not change from person to person (Çağıltay, 2018). Brian Shackel (2009) defines usability as ‘a high-quality software product [that] is easy to use and effectively serves the purpose of a specific group of users performing specific tasks in specific environments’. According to Jacob Nielsen (1993), usability explains the predictions about and behavior of users when using complex systems in certain contexts. The most general definition of usability is given by the International Organization for Standardization (ISO) as ‘the level of achieving certain goals effectively, efficiently and with satisfaction by using a product by a certain user group in a certain context’ (International Organization for Standardization [ISO], 1998).

In Eason’s (1984) Usability model, usability cannot be measured without the user’s characteristics and user’s goals. The time, effort, and ease of learning when entering the system serve as the basis for measuring the usability of the designed system interface. Since the system is easy to learn, it can be defined as being more useful as it makes it easier for the user to achieve targeted tasks (Eason, 1984). In Brian Shackel’s (1991) Usability model, the evaluation of usability is handled in four basic dimensions: effectiveness, learnability, flexibility, and attitude. In the ‘system acceptability model’ created by Nielsen (1993), the two basic steps are ‘Social Acceptability’ and ‘Practical Acceptability’. Nielsen (1993) expressed usability in this model in five steps as ‘Easy to Learn’, ‘Easy to Remember’, ‘Efficient Use’, ‘Satisfaction’, and ‘Fewer Mistakes’. According to Nielsen, a system can be used if it meets the intended needs and tasks of the user and is not usable if it does not meet targeted needs.

At this point, it would be appropriate to discuss usability design approaches so that users can easily achieve their intended goals. Design approaches help in making usable and effective designs. Universal Design can be defined as the design of products and environments so that they can be used to the greatest extent possible by people of all ages who have the competence to use the system (Story, Mueller, & Mace, 1998). In order to realize interaction design, designs are required by considering user needs, making use of previous experiences of the user, and enabling easy communication with the system. Usability in a user-centered approach is the design process that tries to maintain the maximum degree of user satisfaction by concentrating on the changing demands of the user and involving the user in each phase of attaining what they want. User Experience Design includes ‘the user’s perception and product-related reactions resulting from the use of a system, product or service, their behavior, and the achievements before, during and after use’ (International

Organization for Standardization [ISO], 2019). In user-friendly designs, on the other hand, the aim is for designers to present websites to the target audience in a functional and usable way, knowing the target user audience well, knowing the needs, expectations, and wishes of the user target audience, and having easy-to-use, easy-to-understand designs, adaptable to all kinds of browsers and devices.

Evaluation of designed systems or products in terms of effectiveness, efficiency, and satisfaction is necessary and important for feedback. The purpose of usability evaluation methods, which is an important factor in an iterative design, is to reveal whether users achieve their goals while using the system, to reveal any missing parts, and any errors they may encounter. These methods measure the usability of designed systems. Usability Evaluation Methods are divided into two groups as Type and Approach, as shown in Figure 1 (Çağıltay, 2018).

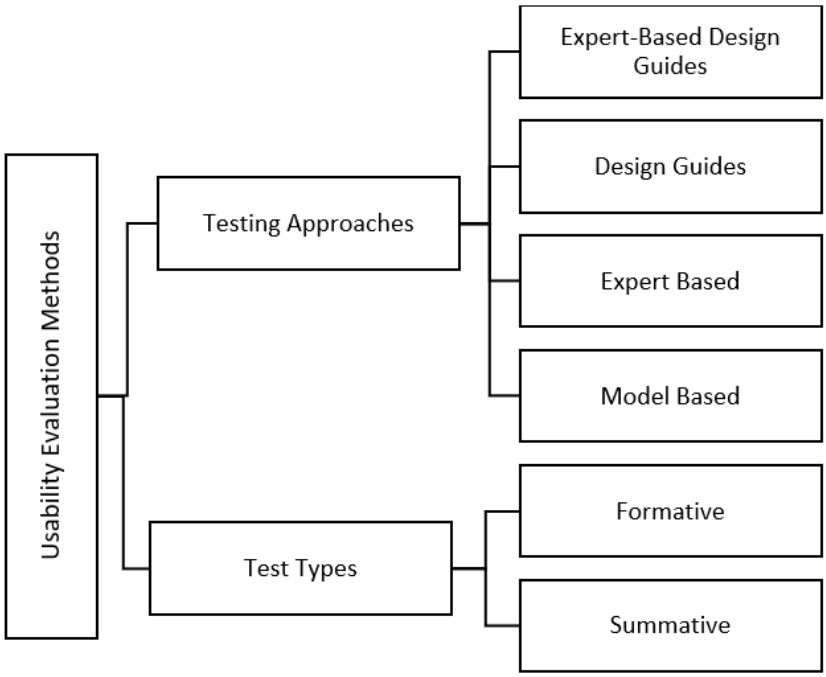

Figure 1. Usability evaluation methods.

To optimize usability evaluation results and minimize usability problems, we must first know what we are evaluating and what our usability goals are. Accordingly, an approach and a type should be determined to define our test targets and determine the usability criteria. The real user group that will use the system should also be targeted. In line with this goal, evaluations can be made empirically and analytically. The usability of the design can be evaluated by examining the data obtained qualitatively or quantitatively (Çağıltay, 2018).

Systems with effective and interesting content are perceived by students as systems that are easy to use. Such perceptions also have positive effects on usage behaviors (Al-Ammari & Hamad, 2008). For this reason, it can be said that usability in educational software is affected by content designs. The more easily and faster the user interacts with the system, the more usable he finds the system (Lee, Yoon, & Lee, 2009; Liu, Chen, Sun, Wible, & Kuo, 2010). In other words, usability is affected by the learnability of the designed systems. If the interface design in a system is not designed comprehensively or cannot meet the needs of the target user, the expected learning will not occur (Wang & Yang, 2005). As can be understood from here, it can be said that the usability of such systems is dependent on the general design considerations of the systems. The Technology Acceptance Model (TAM), developed by Davis (1989), is a model that affects the Intention to Use of the developed technological systems depending on the Perceived Usefulness and Perceived Ease of Use variables by users (Venkatesh & Davis, 2000). According to this model, participants' intention to use the EBA was examined by analyzing the data obtained in our study in the framework of 'content design', 'general design considerations', and 'learnability' dimensions. Thus, it is thought that revealing the opinions about user intention will contribute to increasing the success in education by enabling the more effective and efficient use of the EBA.

Related studies

Turan and Canal (2011) examined the usability of the learning management system used by the Gazi University English Language School in line with the 'Website Usability Principles' in their study called 'Learning Management System Usability Analysis – Gazi English Language School Example'. In his study, Ekici, Arslan, and Tüzün (2016) evaluated the usability of the Education Informatics Network (EBA) web portal with the eye-tracking method and analyzed the usability problems with nine participants who teach in various branches in their study named 'Evaluation of the Usability of the Education Informatics Network (EBA) Web Portal by Eye-Tracking Method'. Pala, Altan, Ilgaz, Çınar, and Tüzün (2017) also aimed to test the usability of the EBA with seven teachers from various fields in their study named 'Examination of the Usability of the Education Information Network Web Site with Authentic Tasks and Eye Tracking'. Hebebci and Alan (2017) evaluated the 'School Web Site Management Panel' project with a guide-based usability approach in their study called 'Usability Evaluation of the School Web Site Management Panel (MebWeb) System: Usability Based on Design Guides'.

In the light of the information given above and the relevant literature, the aim of this study is to examine the usability of the EBA, an online learning platform, in terms of content design and general design aspects, which are among the usability dimensions defined in ISO-9241, and the learnability dimensions revealed by Nielsen (1993). Since usability has a very significant effect on the intention to use web platforms (Belanche, Casaló, & Guinalíu, 2012), the level of usability in the research was examined based on its effect on the intention to use it.

When the literature on usability is examined, one can find many studies on the measurement and numerical expression of usability (Kirakowski, 1996; Bevan & Curson, 1997; Bevan, 2006; Seffah, Donyaee, Kline, & Padda, 2006; Abdullah & Wei, 2008; Hendra & Arifin, 2018; Kaya, Ozturk, & Gumussoy, 2019) in addition to studies in which the measurement is made through emotion analysis or perceptions. These studies are mostly concerned with measuring perceptions of various dimensions of usability using quantitative methods (Alcántara-Pilar, Blanco-Encomienda, Armenski, & Del Barrio-García, 2018; Longo, 2018; Portugal & Leite, 2018; Alshamsi & Andras, 2019; Franco, Lima, Paixão, Santos, & Meiguins, 2019; Petersen et al., 2020). However, although the EBA platform is widely used in Türkiye, it is clear from the 'Related Studies' section that not enough has been done to improve its usability. The EBA platform is addressed, particularly in this study, by combining Nielsen's (1993) learnability dimension with the usability items of the ISO standards. In this sense, students' opinions on their intention to use the EBA and the usability of the EBA, especially with regard to what they care about in the context of usability, are important for educational processes. In this study, the usability of the EBA platform and its effect on users' intentions to use were examined with the measurement tool obtained by blending the usability criteria determined by the globally accepted ISO standards and the learnability dimension of the usability of Jacob Nielsen, who is also accepted as an authority in this field.

In the light of the above information, it is possible to list the questions of this research as follows:

1. Is there an effect of content design, one of the usability dimensions, on the intention to use online education platforms?
2. Do general design considerations from usability dimensions have an impact on the intention to use online education platforms?
3. Does learnability, one of the usability dimensions, have an impact on the intention to use online education platforms?

Material and methods

This study is research conducted with the relational survey model, one of the quantitative research methods. Using the relational survey model, we aim to describe the existing situation together with two or more variables, the existence of this change or the extent of the change. Here, it is aimed to define the researched subject in its own environment (Erişti, Kuzu, Yurdakul, Akbulut, & Kurt, 2013). Within the scope of this model, the intentions of the participants to use the EBA were examined within the framework of Content Design, General Design Considerations, and Learnability dimensions by analyzing the data obtained from an online survey. Revealing the views on user intent will increase the success of this platform, which is also necessary for quality of education. If the interface design in a system is not designed comprehensively or if it cannot meet the needs of the target user, the expected learning will not occur (Wang & Yang, 2005). In the light of this information, the above-mentioned

dimensions affecting intention were examined, considering the fact that the expected learning outcomes are related to the intention to use, albeit indirectly, and the intention to use is directly related to usability. In this direction, the hypotheses of the study were determined as follows.

H1. 'Content Design in the EBA platform has a positive, statistically significant effect on Intention to Use'.

H2. 'General Design Considerations in the EBA platform have a statistically significant positive effect on Intention to Use'.

H3. 'Learnability in the EBA platform has a statistically significant positive effect on Intention to Use'.

"Scale of the Usability of Online Learning Platform", which was developed by the researchers based on ISO standards and presented in Table 1, was used as a data collection tool.. Items of the survey were presented on Google Forms for the participants. The items in this questionnaire were passed through all application-oriented stages, such as explanatory factor analysis, confirmatory factor analysis, validity and reliability analyses in the relevant study. As a result of the validity, reliability and factor analyzes applied to the scale, it is seen that the questionnaire consists of four dimensions: General Design Considerations, Content Design, Learnability, and Intention to Use. The online survey used within the scope of the study was conducted with students studying in high schools affiliated to the Ministry of National Education throughout the province of Antalya during the 2020-2021 academic year. Questions of the survey can be accessed from the following link: https://docs.google.com/forms/d/1939CXcvH5O6iwWtdTsVwjI8FrW6-Dvq48VaQu59g0gs/edit

Table 1. Items of the "Scale of the Usability of Online Learning Platform"

Dimension	Item
Content design	In the portal, I think the contents are designed in accordance with the purpose.
	I think that the content prepared on the portal is easy to understand.
	I can access and control the content on the portal whenever I want.
	I think that the prepared content is up-to-date and compatible with the curriculum.
	The page contents on the portal are updated regularly.
	When I have a problem with the portal, I can easily reach the people I can get help from.
	I believe the discussion groups and forums on the portal are useful for sharing content and providing feedback.
General design considerations	I can easily access and update the information on my profile.
	In the portal navigation, the elements allow me to navigate the site easily.
	I think the links provided on the portal are fully compatible with the contents.
	Page titles on the portal make it easy to use.
	I think the sitemap on the portal is sufficient for informational purposes.
	I can easily reach the content I am looking for in the portal with the search function.
	I think the portal's background design and use of color is good.
	I think that unnecessary links are avoided to reach the content on the portal.
	I can adjust the dimensions of the texts in the portal as I want.
	I can use the contents of the portal after downloading them to my own environment.
Learnability	Learning to use the portal was easy.
	The expressions used to navigate the portal or access content are easily understandable.
	I can navigate the portal with ease.
	I can easily remember the address of the portal.
	When I enter the portal, I do not feel foreign.
	Using the portal does not require any technical skills.
	It doesn't take much effort for new users to be proficient in the portal
	The portal has convenient help functions.
	The portal offers easy-to-understand menus.
	The portal provides well-organized help information for new users.
	I can easily find what I'm looking for when I log in again, even if I take a break from logging into the portal.
Intention to use	If I had a chance to take another course through the portal, I would welcome it.
	I would like to use this portal often in the future.
	I would like to use this portal often in the future.

In addition, the questions in this survey can be found at the end of the paper. The sample of the study consisted of 452 students selected following the random sampling method. As students continued their education remotely due to the pandemic, difficulties were encountered in reaching students. However, these difficulties were overcome through teachers in schools and social media platforms where these teachers were able to reach their students directly. Since the Provincial Directorate of National Education gave permission

to conduct research, school principals also provided convenience in reaching teachers who were willing to help with this study. The demographic information of the participants is presented in Table 2.

According to the data obtained from the demographic information section of the scale in Table 2, a total of 452 high school students, 259 female (57.3%) and 193 male (42.7%), participated in the study. The gender distribution of the participants is proportional. 110 (24.3%) of the participants are in the 9th Grade, 72 (15.9%) in the 10th Grade, 175 (38.7%) in the 11th Grade, and 95 (21%) in the 12th Grade. It was observed that participation in the EBA was mostly at the 11th Grade level. 335 (74.1%) of the participants stated that they could access the internet at any time and 220 (48.7%) of them stated that they spent 1-5 hours per day on the Internet; these data show that the participants were generally conscious Internet users at the desired level.

Table 2. Demographic Information of Participants.

Variables	Categories	n	%
Gender	Female	259	57.3
	Male	193	42.7
Grade Level	9th Grade	110	24.3
	10th Grade	72	15.9
	11th Grade	175	38.7
	12th Grade	95	21
Internet Access Level Any Time	Yes	335	74.1
	No	117	25.9
Level of Daily Time Spent on the Internet	Less than 1 hour	41	9.1
	1-5 hours	220	48.7
	6-10 hours	137	30.3
	Over 10 hours	54	11.9

The collection of data started with the decision of the Akdeniz University Social and Human Sciences Scientific Research and Publication Ethics Committee dated 04.11.2020 numbered 223 and the approval decision of the Antalya Provincial Directorate of National Education dated 30.12.2020 numbered 18612874.

The scale includes the questions determining demographic characteristics and 5-point Likert type items pertaining to the dimensions of 'Content Design' and 'General Design Considerations'. In addition, the scale included the 'Learnability' dimension from the field survey with Jacob Nielsen's Heuristic Analysis (1993) and the 'Intention to Use' dimension obtained from the study of Lin, Chen, and Yeh (2010) 'Understanding college students' continuing intentions to use multimedia e-learning systems'. SPSS 25.0 (Statistical Packet for The Social Sciences), Microsoft Office Excel 2010, and AMOS 24.0 were used for the statistical analysis of the obtained data. In the online survey conducted on a voluntary and confidential basis, the participants evaluated the items in the survey on a 5-point Likert scale [Strongly agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly disagree (1)].

Results

All analyses made to evaluate the reliability of measurement tools, such as tests and scales, are called Reliability Analysis (Çalışkan & Çınar, 2012). The reliability of the scale used in the research was tested with Cronbach's alpha coefficient. Table 3 shows the Cronbach's alpha value of the study.

Table 3. Reliability Coefficient of the Scale.

Cronbach's Alpha	Number of Items
0.982	31

The fact that the Cronbach alpha coefficient is between 0.80-1.00 indicates that the scale is highly reliable and that the scale consists of items that measure the same feature and the consistency among them (Uzunsakal & Yıldız, 2018). In Table 3, Cronbach's alpha coefficient was found to be 0.982, indicating that the scale was highly reliable.

Confirmatory factor analysis was applied to confirm the factoring structure of the 'Scale of the Usability of Online Learning Platform' developed to determine the high school students' intention to use the Education

Information Network. To do this, the structural equation model was used. Testing the model is carried out in five steps, including describing the model, defining parameters, calculating, testing how compatible the model is with the data, making modifications when necessary, and using the Structural Equation Model (Sümer, 2000).

Since the fit indices for the scale obtained in the confirmatory factor analysis differ according to the sample size of the research and the number of items, there is no single truth or value as a result of the fit test performed with the model. For this reason, it is necessary to look at many values together for the suitability of the model (Hair, Black, Babin, & Anderson, 2010; Byrne, 2010). The fit of the model was measured by χ^2 df^{-1} (CMIN df^{-1}), RMSEA, SRMR, GFI, AGFI, NFI, and CFI values.

When the fit indices obtained as a result of the modified confirmatory factor analysis were examined, it was observed that χ^2 df^{-1} reached a perfect fit of 2.75. In addition, the RMSEA, RMR, CFI, NFI, GFI, and AGFI indicators took the values of 0.62, 0.037, 95.3, 0.93, 0.85, 0.82, respectively. The χ^2 df^{-1}, RMSEA, RMR, CFI values were in a perfect fit; NFI, GFI, and the AGFI values were also found to be at an acceptable level of fit. The obtained fit indices data are given in Table 4. When these data are examined, it was found that the fit between the established model and the data was at a good level, the construct validity of the scale was high, and the four-factor model structure was supported.

Table 4. Parameters of the Confirmatory Factor Analysis of the Scale.

Fit Indices	Scale	Good Fit	Acceptable Fit
χ^2 df^{-1}	2.75	$2 < \chi^2$ df$^{-1} \leqslant 3$	$3 < \chi^2$ df$^{-1} \leqslant 5$
RMSEA	0.062	$0 \leqslant$ RMSEA $\leqslant 0.05$	$0.05 <$ RMSEA $\leqslant 0.08$
SRMR	0.037	$0 <$ SRMR < 0.05	$0.05 <$ SRMR < 0.1
GFI	0.85	$0.95 \leqslant$ GFI $\leqslant$	$0.90 \leqslant$ GFI < 0.95 $0.80 <$ GFI < 0.89
AGFI	0.82	$0.90 \leqslant$ AGFI $\leqslant 1$	$0.90 \leqslant$ AGFI < 0.95 $0.80 <$ GFI < 0.89
CFI	0.953	$0.95 \leqslant$ CFI $\leqslant 1$	$0.90 \leqslant$ CFI < 0.95
NFI	0.93	$0.95 \leqslant$ NFI $\leqslant 1$	$0.90 \leqslant$ NFI < 0.95

The path analysis method was used during hypothesis testing. The standardized path coefficients of the model are given in Figure 2. The higher the standardized path coefficients, the better, and in general, loads above 0.71 are excellent, 0.63 very good, 0.55 good, 0.45 moderate, and 0.32 poor (Harrington, 2009). The standardized coefficients given in Figure 2 were obtained between 0.76 and 0.91 and were found to be perfect.

As a result of the path analysis for the hypothesis model proposed in Figure 2, the significance level of the effect of Content Design (CDe) on Intention to Use (ITU) was 0.384. It was observed that the significance level of the effect of General Design Considerations (GDC) on Intention to Use (ITU) was 0.012, and the significance level of the Effect of Learnability (LEA) on Intention to Use (ITU) was below 0.05. As a result of this finding, we can state that General Design Considerations and Learnability have a significant effect on Intention to Use, while the Content Design dimension does not have a statistically significant effect. As a result of the research, the H2 and H3 hypotheses were accepted, while the H1 hypothesis was rejected.

Discussion

The first stage of interface designs is to increase the usability level by considering the expectations of users and thereby encouraging users to utilize the interface. The first step that will increase the intention of users to use the designed product is the high usability of the interface. Therefore, the concept of usability is of great importance. Considering this importance, the usability of the EBA, which is the most important education platform, was measured with the 'Scale of the Usability of Online Learning Platform' within the scope of HCI. When the dimensions of the scale are examined, it is seen that the Content Design dimension aims to present content to users in the best manner by enriching it with visual and auditory design. The General Design Considerations dimension refers to the basic design features of websites, such as color harmony, text features, ease of navigation within sites, and access to information. In designs that are prepared, how easily a target user can do what they need to do when they encounter the system and how quickly they learn to use the interface are measured through the learnability dimension. The study was carried out with 452 high school students selected via random sampling throughout the province of Antalya.

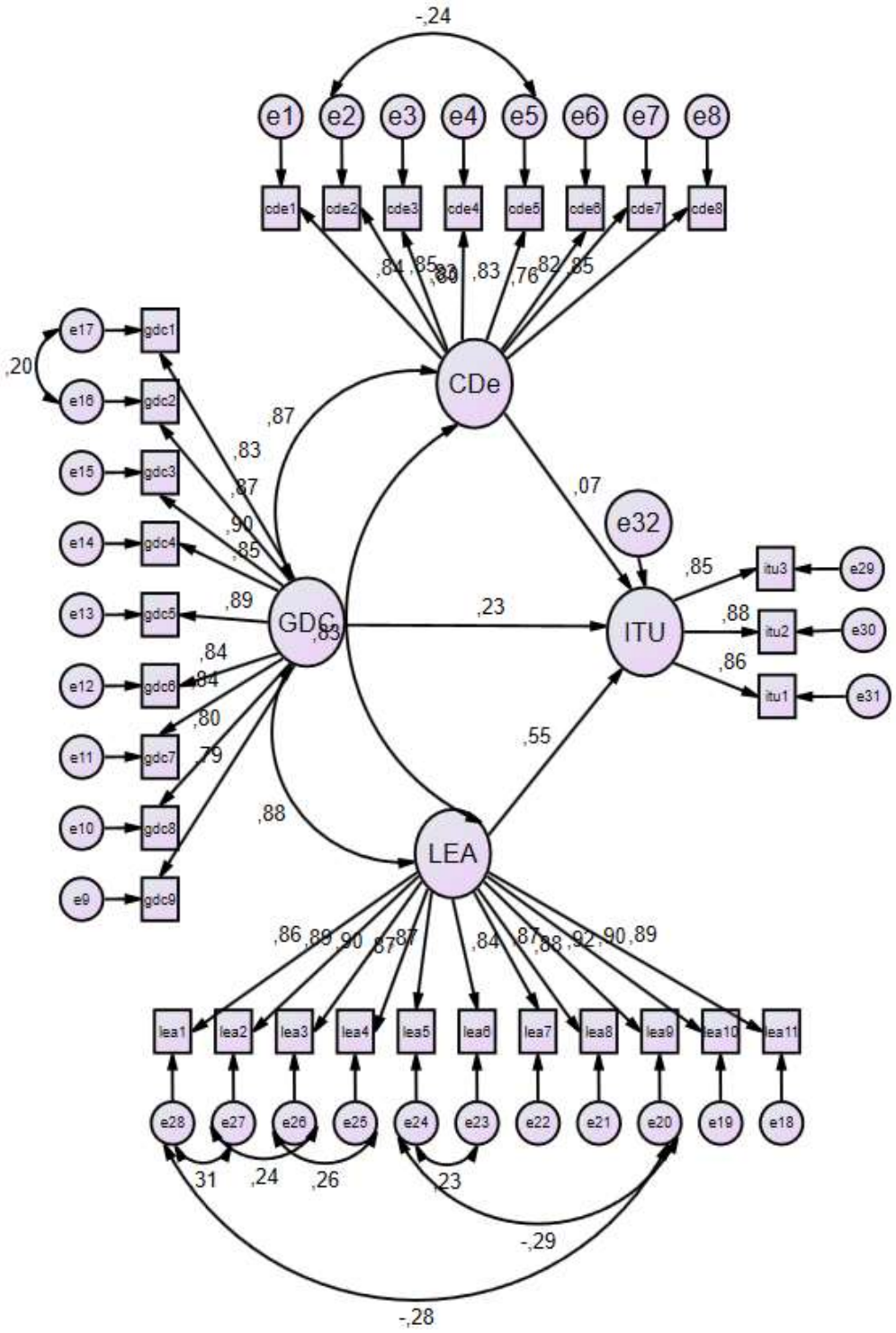

Figure 2. Path Analysis of the model.

By analyzing the data obtained from the 31-item scale applied to the students online, the participants' intentions to use the EBA were examined from the perspective of the Content Design, General Design Considerations, and Learnability dimensions. In addition, within the framework of these dimensions, the opinions of the users regarding the intention to use were revealed statistically. In particular, it can be said that the high scores given to the items 'I can edit the dimensions of the texts on the portal as I want', 'I can download the contents of the portal and use it later on my own environment', 'The navigation elements on the portal allow me to navigate the site easily', which are under the general design considerations dimension, directly affect usability and usage intention.

In addition to the e-learning services and content offered with the EBA platform within the scope of the study, the design features such as the presentation and planning of the content, the home page design, the

design of the pages and navigation areas, the ease of use of the portal and its learnability and memorability significantly affect the usability of the EBA. The main purpose of this study is to determine the effect of the usability of the designed interface of the EBA on the intention of use of the target user group, with a comprehensive evaluation of the content design, general design considerations, and learnability dimensions.

Considering the study in terms of the first hypothesis, it was observed that the content design of the online education platform did not have a significant effect on the students' intention to use it. However, in their research, Çetin and Günay (2011) concluded that the use of more visual and auditory elements, such as games, experiments, interactive activities, and animations in the design of the content, increased the students' desire to use and thus their satisfaction in using it. That the findings of the first hypothesis of this study do not overlap with the findings of other studies in the literature can be explained by the fact that students were obliged to use the online platform due to the pandemic. It should also be considered that students may not have been objective in evaluating the content design of a system they were obliged to use while answering the survey questions.

In the second hypothesis of the study, the effect of General Design Considerations on Intention to Use was evaluated and a statistically significant effect was observed. Hebebci and Alan (2017) evaluated the 'School Website Administration Panel' project with a guide-based usability approach in their study 'Usability Evaluation of the School Website Management Panel (MebWeb) System: Design Guides Based Usability'. In line with the information obtained through the given analysis, they concluded that although the entire project had a usable structure, the compatibility problem, the indeterminacy of the links, the opening of some links in a new window, the absence of a functional search engine such as detailed search and filtering affected usability. In the study titled 'Evaluation of Web-Based Educational Multimedia in terms of Usability with Eye Tracking Technique' by Bayram and Yeni (2011), usability factors were evaluated for the effective design and use of web-based educational multimedia packages targeting education and classes. According to the data obtained, the large number of concentrations in the general design of the interface and the scattering of the concentration areas showed that the participants experienced difficulty in finding the task, and it was stated that this situation negatively affected the usability of the page, and suggestions were given about the general design of the page. Işık, Karakış, and Güler (2011) analyzed the usability of the site using the WAMMI usability questionnaire with 90 participants in their study titled 'Usability Analysis of the Gazi University Informatics Institute Web page'. In addition, the researchers performed the design and performance analysis of the website with the 'HTML Toolbox' and 'Web Page Analyzer' tools. As a result, it was reported that the number and size of images in the general design of the interface were too high, that they needed to be reduced and that spelling errors should be corrected. Turan and Canal (2011), in their study titled 'Learning Management System Usability Analysis The Example of Gazi English Language School', examined the usability of the learning management system used by the Gazi University English Language School with the help of 'Website Usability Principles'. The study was conducted with 108 students at the Gazi University English Language School. As a result of the study, it was concluded that the general design level of the instructional management system, such as 'Ease of Navigation', 'Design', 'Ease of Access', 'Ease of Use', and 'General Usability' was 'Average' and suggestions were made for development and revision to increase the usability of the system. These studies supported our study and showed that general design considerations in interface design affect usability, which in turn has an effect on user intent. This means that the general design considerations of an online learning platform should be considered as outlined in the ISO-9241 standards, without focusing on a specific area such as content design.

In the third hypothesis of the study, the effect of Learnability on Intention to Use was evaluated and a statistically significant effect was observed. In the study titled 'Usability Analysis of Web-Based Exam Automation System' by Karahoca, Karahoca, and Günoğlu (2009), the evaluation of the web-based exam automation system developed by high school students in terms of usability and satisfaction levels within the scope of learnability, controllability, and design factors were discussed. After data analysis, Karahoca et al. (2009) determined that there is a positive and strong relationship between the learnability factor of usability and the controllability factor. Their study also supports our study. The efficacy and high efficiency of the designed interfaces increases learnability and positively affects the Intention to Use. Moreover, users prefer interfaces that are easy to learn.

As a result, in our study, the usability of the EBA platform, which is the most comprehensive and active e-learning environment in our country and on which education and training continued during the pandemic period since March 2020, has been comprehensively discussed and the dimensions affecting the Intention to Use have been evaluated. In our study, it was determined that the General Design of the interface and

Learnability dimensions had a significant effect on the high school students' intention to use the EBA. Considering the goals and expectations of users in interface designs will increase usability, which directly affects the intention to use the interface.

It is possible to collect the limitations of the study under the headings of outcome validity and construct validity. Within the scope of the validity of the results, it would be appropriate to provide information about the method preferred in this study. In this study, the effects of structural equation modeling and the general design aspects of usability, content design and learnability dimensions on intention to use were examined. However, as can be seen in the findings section, it was observed that, despite being at reasonable levels, the fit indices of the structural equation model were not high due to the structural equation model being affected by the sample size (Hu & Bentler, 1995). Increasing the number of samples will solve this problem despite the sample achieved for this study having been deemed sufficient in a limited time frame.

The sample type can be mentioned within the scope of the limitations of the construct validity of the study. High school students were chosen as the sample group in the study. Although this group was preferred due to its easy accessibility and higher level of cognition compared to other K12 groups, it would be appropriate to include samples from primary schools, secondary schools and even universities in the study.

After this stage, it may be advisable for researchers to question the usability of preferred online learning platforms in different countries using the questionnaire employed in this study. In addition, the dimensions can be reconsidered by repeating the study when the use of the EBA platform is not mandatory. In this way, the findings can be compared and the views of different countries on usability can be examined in terms of the dimensions of the survey. In addition, considering that usability and intention to use are important in terms of general design and learnability, it can be suggested to pay attention to these dimensions in designs.

Conclusion

Although there is a widespread use of the EBA platform in Türkiye, it is understood from the 'Related Studies' section that there is insufficient work on its usability. Most especially in this study, the EBA platform is handled by blending the usability dimensions of ISO standards with Nielsen's (1993) learnability dimension. In this direction, it is possible to say that the students give importance to issues such as navigating the platform, the visibility of the page, the hierarchical order of the links; therefore, they find usability high when these issues are taken into consideration. This conclusion was reached from the relationship between the intention to use and usability. This result offers clues in terms of usability, especially for the designers of the platform.

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