AJIT-e Academic Journal of Information Technology
10.5824/ajite.2026.02.004.x

2026 • Spring – Bahar • Volume – Cilt: 17 • Issue – Sayı: 2

The Impact of Usability and UX on Consumers of E-Commerce Mobile Applications*

Ayşe Gülenay Özen, *Marmara University, Department of Management Information Systems, Faculty of Business Administration, aysegulenayozen@gmail.com, 0009-0003-3739-1885*

İlkim Ecem Emre, *Marmara University, Department of Management Information Systems, Faculty of Business Administration, Asst. Prof., ecem.emre@marmara.edu.tr, 0000-0001-9507-8967*

ABSTRACT

Driven by the growth of e-commerce and technological and marketing innovations, businesses and consumers alike have embraced e-commerce over traditional commerce. However, the usability and user experience of mobile e-commerce applications have a significant influence on consumer preference. An online survey was used to collect data for this study. Participants volunteered to take part in the study and gave their consent. The data obtained was analyzed using Python programming language to evaluate the applications. Based on the study' s findings, the applications were analyzed in terms of simplicity, technical support requirements, usage frequency, and the most frequently used applications to determine correlations between these factors. Nevertheless, the findings' generalizability is restricted by the fact that the majority of the sample consisted of students aged 19-24, which implies that the results may not be directly applicable to other age groups or the working population. The results of this study may be valuable for the development of e-commerce mobile applications.

Keywords : User Experience, Usability, E-Commerce, Mobile Applications, Human-Computer Interaction

E-Ticaret Mobil Uygulamalarının Kullanılabilirliği ve Kullanıcı Deneyiminin Tüketiciler Üzerindeki Etkisi

ÖZ

E-ticaretin büyümesi ve teknolojik ve pazarlama yeniliklerinin etkisiyle, işletmeler ve tüketiciler geleneksel ticaret yerine e-ticareti benimsemiştir. Ancak, mobil e-ticaret uygulamalarının kullanılabilirliği ve kullanıcı deneyimi, tüketicilerin tercihleri üzerinde önemli bir etkiye sahiptir. Bu çalışma için veri toplamak amacıyla çevrimiçi bir anket kullanılmıştır. Katılımcılar çalışmaya gönüllü olarak katılmış ve onay vermişlerdir. Elde edilen veriler, uygulamaları değerlendirmek amacıyla Python

* *This study was conducted as part of an undergraduate graduation project.*

This article is licensed by Attribution-ShareAlike 4.0 International (CC BY-SA 4.0).

Araştırma Makalesi / Research Article
Date Received: 14.10.2025
Publishing Date: 31.05.2026

10.5824/ajite.2026.02.004.x

programlama dili kullanılarak analiz edilmiştir. Çalışmanın bulgularına dayanarak uygulamalar basitlik, teknik destek gereksinimleri, kullanım sıklığı ve en sık kullanılan uygulamalar açısından analiz edilerek bu faktörler arasındaki ilişkiler belirlenmiştir. Bununla birlikte, örneklemin büyük çoğunluğunun 19-24 yaş aralığında bulunan ve öğrenci bireylerden oluşması bulguların genellenebilirliğini kısıtlamakta ve sonuçların farklı yaş grupları veya çalışan nüfus için doğrudan geçerli olmayabileceğini göstermektedir. Bu çalışmanın sonuçları, e-ticaret mobil uygulamalarının geliştirilmesi için değerli olabilir.

Anahtar Kelimeler : Kullanıcı Deneyimi, Kullanılabilirlik, E-Ticaret, Mobil Uygulamalar, İnsan-Bilgisayar Etkileşimi

INTRODUCTION

Over the past few decades, especially since the 1990s, the internet and mobile applications have become widespread, integral parts of people's lives. Society has shifted markedly towards mobile applications in the post-pandemic period, prompting a paradigm shift in shopping behavior (Saeed, 2023). From a Turkish perspective, the interest in e-commerce is projected to increase by 61.7% in 2024 compared to 2023, with a compound annual growth rate of 85.66% between 2019 and 2024 (Türkiye Cumhuriyeti Ticaret Bakanlığı, 2025). These growth rates indicate that e-commerce is becoming increasingly widespread, developed, and preferred over traditional commerce in Turkey.

Mobile apps allow users to perform many transactions online easily and efficiently, saving time, regardless of their location, via mobile devices. Consequently, e-commerce mobile applications are growing in popularity day by day, influencing the shopping processes that people perform online. Furthermore, it is observed that the trade volume in this sector has reached and continues to increase to trillions of dollars, both globally and in Turkey (Yıldız, 2023).

E-commerce mobile applications can be easily accessed via the internet on mobile devices such as smartphones or tablets. Consumers can use these applications to browse and purchase products and services. The usability of these applications and the user experience they provide determine every transaction consumers perform, every experience they have, and every interaction they make with products or services. Usability refers to how easily and efficiently users can use a system (Yıldız, 2023). On the other hand, user experience describes the procedures and reactions that occur when users interact with the system's products or services (Gündüz, 2019). The usability and user experience of a system, by providing comfortable and seamless navigation in mobile applications, enable users to achieve maximum efficiency and contribute to building long-term relationships by increasing customer

satisfaction. Furthermore, it is emphasized that a well-designed navigation structure plays a critical role in user retention, alongside factors such as pricing (Nuralam et al., 2024).

In e-commerce mobile applications, the arrangement of content, menus, campaigns, and buttons allows users to complete all processes efficiently and easily. The fact that users can easily access any product or service they want, add products to their carts using various integrated functions, and complete the purchase process without needing technical support shows that the mobile application is intuitive and user-friendly. The ability of users to complete this entire process efficiently, easily, and conveniently has a positive impact on user experience. Considering all these factors, it is clear that user experience and ease of use are extremely important globally, especially in e-commerce mobile applications.

When interest in e-commerce is evaluated solely from a Turkish perspective, it is seen that domestic e-commerce platforms such as Trendyol and Hepsiburada are of great importance to most users in Turkey, and the usability and user experience of these platforms have a positive effect on user satisfaction levels (Ülger & Toksarı, 2020).

This study aims to obtain in-depth conclusions regarding the usability and user experience levels of the most preferred mobile e-commerce applications in Turkey, in addition to the findings obtained from the literature. An online survey was created using the SUS and UEQ-S scales to analyze user behavior. In this respect, this study aims to fill the gap in the existing literature regarding the usability of e-commerce mobile applications and to contribute to the user experience strategies of mobile application developers.

1. CONCEPTUAL FRAMEWORK

Shopping habits of society are now being shaped by e-commerce platforms rather than traditional methods. Usability and user experience have a significant impact on users' ability to find the products they want or need when using e-commerce mobile applications. Accordingly, the usability and user experience of e-commerce mobile applications are important factors shaping user behavior and trust in these applications.

1.1. Evaluating the Relationship Between Usability and User Experience

Usability refers to the ability of users to use a website or mobile application easily and efficiently. A fundamental concept in human-computer interaction, usability involves measuring the ability of users to easily use a particular system or environment, and the degree of quality, efficiency, and satisfaction (Díaz et al., 2017). It is one of the most important quality factors for websites and systems, making it of great importance for e-commerce mobile applications (Li & Li, 2011).

User experience, on the other hand, refers to the experience users and visitors have as a result of interacting with a system or product and service on online platforms. User

10.5824/ajite.2026.02.004.x

experience enables users to navigate systems easily, efficiently, and smoothly (Kumaresh et al., 2021).

User experience and usability guarantee the extent to which users navigate systems spontaneously and are satisfied when interacting with a product or service and navigating the system easily, efficiently, and satisfactorily without difficulty.

1.2.The Role of Usability and User Experience in Purchasing Processes

Considering the roles that usability and user experience play in e-commerce mobile applications, it is evident that users also play an active role in the purchasing process. Research shows that approximately 60% of e-commerce users do not complete the purchase process after adding products to their shopping carts, and the most influential factor causing this is user experience (Andy et al., 2024). A high level of user experience creates a positive impression for an e-commerce mobile application, leading users to perceive these applications as intangible shopping companions (Arshad et al., 2021). This can be explained by the statement, "User experience is not limited to the interface; it encompasses the entire experience with the product, brand, and service." (Zhu & Hou, 2021).

1.3.Common UX and Usability Errors Affecting User Satisfaction in Mobile Apps

Numerous studies have examined common errors in mobile applications that reduce user experience levels and directly affect user satisfaction. An analysis of Hepsiburada, one of the most widely used e-commerce applications in Turkey, revealed several factors negatively impacting user experience. Results obtained using cognitive navigation methods show that Hepsiburada contains numerous errors in terms of visual, perceptual, and even psychological aspects (Yıldız, 2023). Furthermore, heuristic evaluation methods showed that the inability to see the user password in the Elo.com m-commerce application hinders user control (Aqeel, 2021). An evaluation of mobile navigation revealed that the use of icons alone in the interface due to the narrowness of mobile screens reduces the intuitiveness of applications and leads to errors such as repeated clicks being registered twice by the system, as the system assumes the click was not detected (Harrison et al., 2013).

3. MATERIALS AND METHODS

3.1. Dataset

In this study, data had been obtained from the survey conducted using the System Usability Scale (SUS) (Brooke, 1995) and User Experience Survey Scale (UEQ-S) (Schrepp et al., 2017). This survey was designed to assess the efficiency with which users can interact with e-commerce mobile applications, evaluating the level of satisfaction experienced during these interactions. The survey consisted of a total of 26 questions, including demographic data and

items from the SUS and UEQ scales. The demographic data section included questions about users' gender, year of birth, level of education, employment status, which e-commerce mobile applications they use, how often they use these applications, and for what purposes, and which factors influence their use of the applications. The main part of the survey included ten questions from the SUS and eight questions from the short version of the UEQ-S. The survey was created using Google Forms, reaching 184 e-commerce mobile application users. However, it should be noted that the majority of the sample consists of students and individuals aged between 19 and 24. Consequently, the generalizaility of the findings to other age groups or working populations may be restricted.

3.2. Scales

SUS is a survey scale developed to measure the usability of a system (Brooke, 1995). The SUS is a scale used to quickly and easily measure the usability of websites, applications, mobile phones, software, and hardware interfaces by users. Initially used in one-off tests to measure system usability, as the use of human factors became more widespread, SUS was adopted in many other contexts. It is an English-language scale consisting of 10 items. The odd-numbered items include positive statements, and the even-numbered items include negative statements. A 5-point Likert scale is used, where 1 indicates “Strongly Disagree” and 5 indicates “Strongly Agree”. Demirkol and Şeneler adapted the scale to Turkish (Demirkol, 2018). When scoring the scale, subtraction is required: 1 should be subtracted from the score of each odd-numbered item (i.e., the positive statement), and 5 should be deducted from the score of each even-numbered item (i.e., the negative statement). The total SUS score is obtained by multiplying the score by 2.5. If the score is less than 51, the system will be in the “F” category, meaning that usability should be prioritized and existing problems solved promptly. If the score is around 68, the system will be in the “C” category, meaning that it is average and can be improved. If the score is 80.3 or above, the system will be in the “A” category, meaning that users enjoy using the system and would recommend the system to others (Sauro, 2011).

The short version of the UEQ is a survey scale designed to evaluate the user experience of a system or product (Schrepp et al., 2017). The purpose of this scale is to give a numerical assessment of how users interact with a system. The User Experience Questionnaire short form (UEQ-S) is intended for use in scenarios requiring quick user input. Derived from the full version of the UEQ, it consists of eight items instead of the 26 items in the full version. The short version includes sub-dimensions for pragmatic and hedonic quality. Each item on the scale offers a seven-stage evaluation between two opposing concepts and is scored between -3 and +3 (Schrepp et al., 2017). The UEQ-S was developed in many different languages and is available on the official UEQ website. Linguistic and cultural adaptation was carried out without deviating from the original items. Furthermore, the fact that this scale measures user experience across two fundamental sub-dimensions demonstrates its applicability and reliability. These sub-dimensions relate to pragmatic and hedonic quality. Hedonic quality is

10.5824/ajite.2026.02.004.x

associated with the scale's final four items, whereas pragmatic quality is associated with its first four. The data analysis tool created by the scale's creator and made available on the website is used to perform scale analysis. The short version is analyzed using the sub-dimensions of pragmatic and hedonic quality as well as the mean values of each scale item. A "negative evaluation" is defined as a mean value less than -0.8, a "neutral evaluation" as one between -0.8 and +0.8, and a "positive evaluation" as one above +0.8.

3.3.Data Pre-processing

To ensure the accuracy of the analysis, several important steps must be taken with the data obtained from the survey. These include removing unnecessary columns from the dataset, identifying missing data, analyzing outliers, and, if applicable, reversing the scores of scale items expressed in a negative direction. Applying these steps ahead of the analysis will ensure accurate results.

Once the dataset had been loaded into the Python environment, the columns and rows were thoroughly reviewed. Upon examining the columns exhaustively, the “Timestamp” column, which indicated when users had completed the survey, was removed as it was deemed unnecessary for the analysis process. As the survey questions in the dataset had been created using Google Forms, the column names were not in a format that could easily be understood or analyzed. For this reason, the column names were adapted for analysis.

To facilitate the analysis process, the SUS responses were converted into a numerical format based on a five-point Likert scale. Responses were scaled from 1 to 5, with 1 meaning “Strongly Disagree” and 5 meaning “Strongly Agree”. In addition, the UEQ-S scale included in the survey uses a scale ranging from -3 to +3. Since the data obtained from the survey is presented in a 7-point Likert format, a linear transformation was applied to convert the 7-point scale to the UEQ-S scale (-3 to +3). In this transformation, for example, an original response of 1 corresponds to -3, 4 corresponds to 0, and 7 corresponds to +3. This transformation can be expressed as: UEQ-S score = original response − 4. As each UEQ-S item evaluates two opposing concepts, the correct coding of the opposite items in the dataset needs to be verified. To analyze the data accurately, missing data in the dataset needs to be verified. Following this step, it was determined that there was no missing data in any column of the dataset.

Outliers must be detected and removed from the dataset where necessary to ensure that the analysis is conducted correctly. In this study, outlier identification was based on response patterns observed in both the SUS and UEQ-S scales. Specifically, seven participants were found to have selected the same response option (“1”) for all items across both scales, indicating a non-differentiated response pattern. Based on this criterion, these seven participants were identified as outliers and removed from the dataset to ensure the validity of the analysis. To convert the survey data into a suitable format for analysis, categorical variables

must be converted into numerical values. For this reason, the gender, age, education status, and employment status variables were reformatted into new columns in the dataset.

4. RESULTS

4.1. Descriptive Statistics

The survey participants' gender, age, education, and work status were analyzed (Table 1), as were the e-commerce mobile applications they use, how frequently and for what reasons they use them, and the factors that users prioritize when they shop.

Table 1: Demographic Variables

Demographic Variables	**N**	**%**		**N**	**%**
	Gender		**Working status**		
Female	96	52.17	Student	100	54.35
Male	76	41.30	Working	67	36.41
Do not prefer to say	11	5.98	Not working	17	9.24
Other	1	0.54			
Frequency of use of e-commerce mobile applications			**Highest Level of Education**		
Several times a month	110	59.78	Primary school	6	3.26
Several times a week	40	21.74	High school	96	52.17
Several times a year	22	11.96	Associate degree	23	12.50
Every day	7	3.80	Bachelor's degree	52	28.26
Do not use it	5	2.72	Master's/Doctorate	7	3.80
	Age		**E-commerce mobile applications used**		
Under 18	7	3.8	Trendyol	148	80.43
19-24	125	67.93	Hepsiburada	98	53.26
25-29	40	21.74	Amazon	96	52.17
30-39	10	5.43	Çiçeksepeti	46	25
40-49	0	0	N11	18	9.78
50+	2	1.09	Other Apps	13	7.07
Purpose of using e-commerce mobile applications			**Factors found important for e-commerce applications**		
Clothing & fashion	147	79.89	Ease of use	137	74.46
Home & living products	82	44.57	Secure payment options	104	56.52
Food & grocery shopping	78	42.39	Product variety	95	51.63
Books & stationery	77	41.85	Adequacy of product search and filtering options	95	51.63
Electronics & technology	72	39.13	Product prices	88	47.83
Other	7	3.8	Ease of shipping and delivery processes	86	46.74
			Discounts, campaigns and coupon opportunities	84	45.65
			Quality of product descriptions and visuals	78	42.39
			Security of personal data	76	41.3

10.5824/ajite.2026.02.004.x

			Easy access to customer service and speed of solution	74	40.22
			Product comments and evaluations	72	39.13
			Easy return/exchange process	61	33.15

4.2. Calculation and Categorization of Scale Scores

The scores obtained from the SUS and UEQ-S scales in the survey were calculated and analyzed in terms of normal distribution. Once all the SUS scores had been calculated according to the participants' answers and classified by their grades, it was found that 43.48% of participants (n = 80) had positioned the evaluated system in the "A" category (Chart 1). A general descriptive analysis of all participants' SUS scores indicated an average score of 75.04 (SD = 18.82) and a median score of 76.25. These results indicate that the e-commerce applications evaluated in the study generally have a high level of usability and exceed the mean benchmark score of 68.

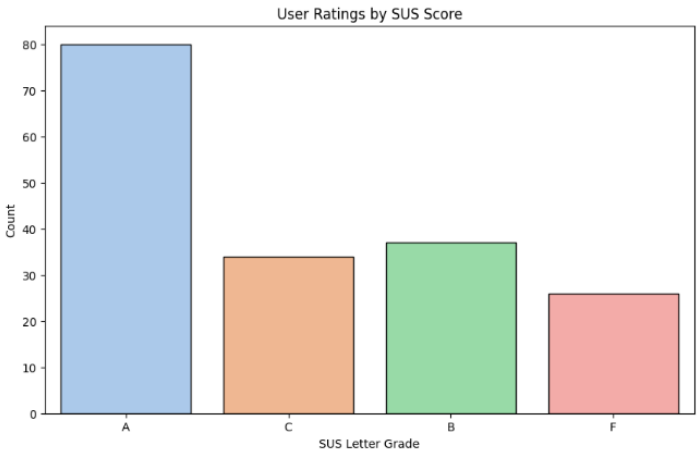

Chart 1: Bar Chart for SUS Grades

In the short version of the UEQ-S scale used to measure the user experience of e-commerce mobile applications evaluated by users, the value of the sub-dimensions of pragmatic quality was found to be 0.963, while the value of hedonic quality was found to be 0.217, and the overall value was found to be 0.590 (Chart 2).

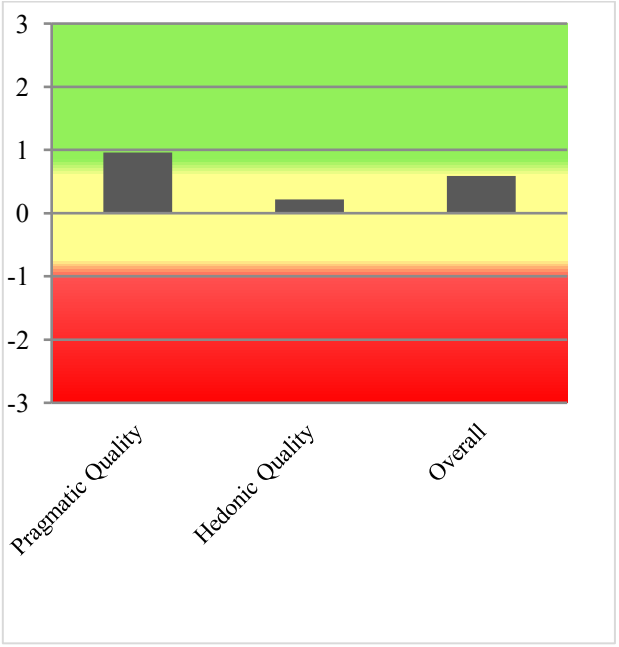

Chart 2. Chart for UEQ-S Grades

4.3.Reliability Analysis

The consistency of answers to survey questions created with a Likert scale was evaluated using the Cronbach's Alpha reliability test. As a general rule, the value should be higher than 0.70. The results of the test are presented for the SUS included in the survey and answered by participants, in addition to the two UEQ-S sub-dimensions (hedonic and pragmatic quality) in combination with the overall evaluation. According to these results, the internal consistency levels of the responses are high (Table 2).

Table 2: Reliability Analysis Results

	Cronbach's Alpha	**N**
SUS	0.7092	10
UEQ-Pragmatic Quality	0.7515	4
UEQ-Hedonic Quality	0.7143	4
UEQ-Overall	0.7729	8

4.4.Normal Distribution Analysis

Normal distribution analyses should be performed for the hypotheses based on the scores of both scales and demographic data. The normal distribution analysis was conducted using the Shapiro-Wilk test, which is better suited for small or medium-sized samples with fewer than 5,000 data points (Razali & Wah, 2011). To perform the analyses in line with the hypotheses to be tested, normal distribution analysis must be applied to the variables used in the hypotheses.

10.5824/ajite.2026.02.004.x

After calculating and grouping all scale scores, a normal distribution analysis was performed to test the hypotheses. The UEQ-S was tested using the Shapiro–Wilk test, and the p-value was found to be approximately 0.0082. As this is less than 0.05, the UEQ-S scores do not follow a normal distribution. Likewise, the p-value for the System Usability Scale was determined to be approximately 0.0000000725. The SUS scores also do not follow a normal distribution because this value is significantly less than 0.05 (Table 3).

Table 3.: Shapiro-Wilk Test Results

Group	Shapiro-Wilk Test
SUS Score	0.0082319462
UEQ-S Score	0.0000000725

4.5. Hypothesis Results

H_1: There is a positive significant relationship between the usability and user experience scores of e-commerce mobile applications.

The H_1 hypothesis was analyzed by assessing the relationship between the UEQ-S and SUS scale scores using Spearman's correlation (Table 4). Applying Spearman's correlation to the UEQ-S and SUS scale scores revealed a moderately positive significant relationship, with a correlation coefficient of approximately 0.575 and a p-value of approximately 0.000000000000000132 ($p < 0.05$). Based on these findings, it is evident that the H_1 hypothesis is supported.

Table 4. Spearman's Correlation Results for H_1

Group	Spearman's Correlation Coefficient	p-value
SUS Score – UEQ-S Score Comparison	0.575	0.000000000000000132

H_2: The most used e-commerce mobile application has higher usability and user experience scores compared to other applications.

For the analysis of the H_2 hypothesis and other applications, including the most preferred application, the association between the UEQ-S and SUS scale scores was assessed using the Mann–Whitney U test. This test was chosen because the data obtained from the scales in the normal distribution analysis applied in the previous study did not follow a normal distribution.

During the evaluation stage of this hypothesis, the most frequently used application (Trendyol, with a score of 35.24%, n = 148) and other applications were identified as variables, as were the SUS and UEQ scores of these applications. When a normal distribution test was applied to Trendyol, the result for the SUS score was 0.0000013763. As this value was below

0.05, it was determined that a normal distribution was not present. Similarly, when the normal distribution of the SUS score for the other applications was tested, the result was 0.0000892316, which was also below 0.05, indicating that a normal distribution was not present. Therefore, it was concluded that the SUS scores of both groups were not normally distributed. The SUS score of Trendyol users was significantly higher than that of users of other applications ($p < 0.05$), according to the Mann-Whitney U test, which was used because a normal distribution was not reached (Table 5).

Table 5: Average SUS Scores and Normal Distribution Values

Group	Average SUS Score	Median of SUS	SUS's Normal Distribution (p)
Trendyol	78.71	80.00	0.0000013763
Other Apps	60.47	50.00	0.0000892316

When the normal distribution test was applied, the UEQ score of Trendyol users demonstrated a skewed distribution (p-value = 0.0062749701), whereas the distribution was normal for other applications (p-value = 0.8418843796). As one group had a normal distribution and the other did not, the Mann-Whitney U test was applied, yielding a result of 0.0000030493. It was therefore determined that the UEQ score of Trendyol users was significantly higher than that of users of other applications ($p<0.05$) (Table 6).

Table 6: Average UEQ Scores and Normal Distribution Values

Group	Average UEQ Score	Median of UEQ	UEQ's Normal Distribution (p)
Trendyol	0.77	0.88	0.0062749701
Other Apps	-0.11	-0.25	0.8418843796

The SUS and UEQ scores of Trendyol application users were significantly higher than those of users of other applications, upon consideration of all these factors (Table 7).

Table 7: Comparison of Trendyol and Other Apps' SUS and UEQ Scores

Group	Mann-Whitney U Test
SUS Score Comparison	0.0000001925
UEQ Score Comparison	0.0000030493

However, it should be noted that the 'Other Applications' category is a heterogeneous group consisting of various platforms with different interface dynamics, such as Amazon, Hepsiburada, and Çiçeksepeti. Despite this heterogeneity, the grouping was maintained to observe the overall performance difference between market leader Trendyol and other sector participants. To assess the practical significance of this statistical difference, the effect size (r) was calculated. The effect size was found to be $r = 0.3830$ for the SUS score comparison and $r = 0.3439$ for the UEQ score comparison. These values represent a moderate effect size and confirm that Trendyol's advantage in usability and user experience is practically significant regardless of the diversity in the comparison group.

10.5824/ajite.2026.02.004.x

H3: Individuals who frequently use e-commerce mobile applications have higher usability and user experience scores.

The frequency of e-commerce mobile application use and the H3 hypothesis were examined using the Mann–Whitney U test, which also assessed the UEQ-S and SUS scale scores (Table 8). This test was selected because the data obtained from the scales in the normal distribution analysis previously applied did not follow a normal distribution. For the analysis, the usage frequency category was grouped as "Very Often" for the options "Every Day" and "Several Times a Week", and as "Other" for the options "Several Times a Month", "Several Times a Year", and "Never Use". The SUS and UEQ scores for each frequency group were then compared using the Mann–Whitney U test. As both the SUS and UEQ scores are much greater than 0.05, there is clearly no statistically significant relationship; therefore, the H3 hypothesis is not supported.

Table 8: Comparison of SUS and UEQ Scores of Frequent Application Users

Group	Mann-Whitney U Test
SUS Score	0.9911148659
UEQ Score	0.8104495461

H4: Applications with high visual simplicity scores require less technical support.

The relationship between the scores from the second item of the UEQ-S scale and the fourth item of the SUS scale was assessed using Spearman's correlation analysis in order to analyze the H4 hypothesis. The process involved comparing the scores obtained from the second item of the UEQ scale, which measures simplicity and complexity, with those obtained from the fourth item of the SUS scale, which measures the need for technical support (Table 9).

Table 9: Correlation Between Simplicity and Technical Support Need

Groups	Correlation Coefficient	Spearman's Correlation (p)
SUS4 – UEQ2	-0.2531104560	0.0005271217

Examining the correlation coefficient reveals a negative relationship, while examining the p-value indicates a statistically significant relationship, as the value is less than 0.05. Therefore, it can be concluded that as the visual simplicity score increases, the need for technical support decreases, corroborating the H4 hypothesis.

5. DISCUSSION

In this study, descriptive statistical methods were used to analyze the demographic characteristics and e-commerce mobile application usage habits of the participants in the survey created for conducting the analyses. The analysis revealed that the majority of

participants were female (52.17%), aged 19-24 (67.93%), high school graduates (52.17%), and unemployed students (54.35%). It was observed that the majority of participants used e-commerce mobile applications "several times a month" (59.78%), most frequently the Trendyol application (80.43%), primarily for "clothing and fashion" purposes (79.89%), and prioritized the "ease of use" factor (74.46%). After examining the demographic characteristics of the participants and conducting hypothesis analysis, significant results were obtained regarding the usability and user experience levels of e-commerce mobile applications.

According to these results, it was determined that there was a significant relationship between the usability and user experience scores, indicating that users found the e-commerce mobile applications they used to be user-friendly and assessed their user experience positively. Additionally, the usability and user experience scores of Trendyol, the most widely used e-commerce mobile application, were compared, revealing a positive correlation between the two scales. In other words, the Trendyol application was deemed usable, and the user experience was perceived as positive. Once the usability and user experience scores of frequent users of e-commerce mobile applications were compared, it was determined that there was no significant relationship between the two scores. In other words, the usability of e-commerce mobile applications and positive user experience were not related to frequent use. Finally, the hypothesis was applied to evaluate whether users needed technical support when using visually plain applications. The results of the analysis demonstrated a significant negative correlation between the visual simplicity score (the second item on the UEQ scale) and the technical support need score (the fourth item on the SUS scale). In other words, the higher an application's visual simplicity score, the less technical support users deem necessary. After analyzing the results of the SUS scale included in the survey, it was observed that the e-commerce mobile application they evaluated was rated in the "A" category in terms of SUS score, meaning that users enjoyed using the system and recommended it to their friends and family. In this context, it was proven that users could use these applications without needing any external technical support.

Given the results of Yıldız (2023), it was examined that Trendyol, the most preferred e-commerce mobile application, has minimal visual and perceptual errors compared to its competitors and offers a much better user experience. In addition, it was observed that the simplicity and ease of learning factors obtained from the study conducted by Akwukwuma et al. (2024) on the AliExpress platform were consistent with the SUS scores obtained in this study. When the results obtained from hypotheses H_1 and H_2, accepted in the study, are evaluated against the existing literature, it is confirmed that ease of navigation is an important factor for users. The literature states that ease of navigation in mobile applications provides maximum efficiency in terms of usability and user experience, and increases customer satisfaction (Nuralam et al., 2024). In this context, high pragmatic quality scores according to the UEQ-S scale confirm that users find the most preferred e-commerce mobile application functional and useful. The rejection of hypothesis H_3, consistent with Satisficing Theory, leads

10.5824/ajite.2026.02.004.x

to the finding that users settle for what they consider adequate rather than choosing perfection (Febriany & Nurwahyudi, 2025). Application users tend to overlook errors when they are familiar with applications and rate processes that exceed a certain usability threshold as adequate. Accordingly, it was observed that the intuitive interface of Trendyol, the most preferred e-commerce mobile application, is important to users regardless of frequency of use. This situation can be explained by Gündüz (2019)'s study, which found that users focus on simple and familiar structures.

CONCLUSION

The results of this study show that the success of e-commerce mobile applications stems not only from finding the right brands and products, but also from high levels of user experience and usability. Trendyol's high usability scores in the Turkish market and its approximate adherence to the user experience standards of global platforms like AliExpress and Amazon serve as evidence of this. In this context, this study is a local example of its field and aims to fill this gap in the literature.

A detailed examination of the UEQ-S sub-dimensions reveals a significant difference between pragmatic quality (0.963) and hedonic quality (0.217). This finding indicates that while users perceive e-commerce applications in the Turkish market as highly functional, efficient, and reliable, these platforms lack the elements necessary to provide an exciting or stimulating user experience. This discrepancy can be attributed to the current design priorities of major e-commerce platforms in Türkiye, which primarily focus on utilitarian values such as search efficiency, secure payment processes, and logistical reliability to build consumer trust. As a result, the user experience remains largely transaction-oriented rather than emotionally engaging. To improve hedonic quality in future releases, developers could consider integrating features that foster emotional resonance, such as enhanced personalization, gamified loyalty programs, and subtle micro-interactions.

Based on all findings, e-commerce mobile applications should prioritize efficiency over aesthetics, maintaining visual simplicity. Simplicity and ease of use should be emphasized in application design, rather than the use of features that negatively impact ease of use. Particular attention should be paid to the implementation of usability and user experience factors, which have a significant impact on users' purchasing processes. Even if the level of technical support users need is very low, application developers and companies should pay great attention to this factor during application development and updating.

This study used a sample of 177 individuals, the majority of whom were university students. Future studies are recommended to increase the sample size, include individuals with varying educational levels, and broaden the age range. It is clear that a similar study could delve deeper into this topic once all these factors are considered.

REFERENCES

Akwukwuma, V. V. N., Chete, F. O., Okpako, A. E., & Nkwor, U. M. (2024). Usability Analysis of E-Commerce Mobile Applications. *NIPES - Journal of Science and Technology Research*, *6*(3), 46–66. https://doi.org/10.5281/zenodo.13765436

Andy, Razaq, A., Erwin, & Kristin, D. M. (2024). User Interface and User Experience Optimization in E-commerce: Exploring Factors to Increase Purchase Intention. *Proceedings of 2024 10th International HCI and UX Conference in Indonesia, CHIuXiD 2024*, 1–6. https://doi.org/10.1109/CHIuXiD64022.2024.10860382

Aqeel, S. (2021). A Usability Evaluation of M-commerce Apps. *University of Sindh Journal of Information and Communication Technology (USJICT)*, (4). http://sujo.usindh.edu.pk/index.php/USJICT/

Arshad, U., Yasir, T., & Shakeel, T. (2021). Web Usability and User Experience for Pakistani E-commerce websites. *4th International Conference on Innovative Computing, ICIC 2021*. https://doi.org/10.1109/ICIC53490.2021.9693036

Brooke, J. (1995). *SUS: A quick and dirty usability scale*. https://www.researchgate.net/publication/228593520

Demirkol, D. (2018). Sistem Kullanılabilirlik Ölçeğinin Türkçeye Çevirisi: SUS-TR. *Usak University Journal of Social Sciences*, *11*(Eylül-2018), 238–253. https://doi.org/10.29217/uujss.495

Díaz, J., Rusu, C., & Collazos, C. A. (2017). Experimental validation of a set of cultural-oriented usability heuristics: e-Commerce websites evaluation. *Computer Standards and Interfaces*, *50*, 160–178. https://doi.org/10.1016/j.csi.2016.09.013

Febriany, I., & Nurwahyudi, S. P. (2025). Satisficing in UIUX Design: A Theoretical Review Towards E-Commerce Users' Behavior. *Visual Communication Journal*, (18). https://doi.org/10.31937/ultimart.v18i2.4431

Gündüz, E. (2019). *Kullanıcı Merkezli Tasarım Açısından E-Ticaret: Peştamal Pazarı Örneği* [Yüksek lisans tezi, Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü]. https://gcris.pau.edu.tr/entities/publication/c9a1cd7f-fa94-4dcd-944f-485dbe7e9b45

Harrison, R., Flood, D., & Duce, D. (2013). *Usability of Mobile Applications: Literature Review and Rationale for A New Usability Model*. https://doi.org/10.1186/2194-0827-1-1

Jeff Sauro, P. (2011, February 3). *Measuring Usability with the System Usability Scale (SUS)*. Https://Measuringu.Com/Sus/.

Kumaresh, S., Haran, R., & Jarret, M. M. (2021). Analytics of e-Commerce Platforms Based on User-Experience (UX). *Lecture Notes in Networks and Systems*, *248*, 309–318. https://doi.org/10.1007/978-981-16-3153-5_34

Li, F., & Li, Y. (2011). Usability evaluation of e-commerce on B2C websites in China. *Procedia Engineering*, *15*, 5299–5304. https://doi.org/10.1016/j.proeng.2011.08.982

Mohd Razali, N., & Bee Wah, Y. (2011). Power comparisons of Shapiro-Wilk, Kolmogorov-Smirnov, Lilliefors and Anderson-Darling tests. In *Journal of Statistical Modeling and Analytics* (Vol. 2). https://www.nrc.gov/docs/ML1714/ML17143A100.pdf

Nuralam, I. P., Yudiono, N., Fahmi, M. R. A., Yuliaji, E. S., & Hidayat, T. (2024). Perceived ease of use, perceived usefulness, and customer satisfaction as driving factors on repurchase intention: the perspective of the e-commerce market in Indonesia. *Cogent Business and Management*, *11*(1). https://doi.org/10.1080/23311975.2024.2413376

Saeed, S. (2023). A Customer-Centric View of E-Commerce Security and Privacy. *Applied Sciences (Switzerland)*, *13*(2). https://doi.org/10.3390/app13021020

Schrepp, M., Hinderks, A., & Thomaschewski, J. (2017). Design and Evaluation of a Short Version of the User Experience Questionnaire (UEQ-S). *International Journal of Interactive Multimedia and Artificial Intelligence*, *4*(6), 103. https://doi.org/10.9781/ijimai.2017.09.001

Türkiye Cumhuriyeti Ticaret Bakanlığı. (2025). *Türkiye'de E-Ticaretin Görünümü Raporu*. https://ticaret.gov.tr/duyurular/turkiyede-e-ticaretin-gorunumu-raporu-yayinlandi-06-05-2025

Ülger, Y. T., & Toksarı, M. (2020). E-ticaret Sitelerinin Kullanılabilirliği ve Başarısını Etkileyen Faktörlerin Belirlenmesi. *Giresun Üniversitesi İktisadi ve İdari Bilimler Dergisi*, *6*(2), 116–128. https://doi.org/10.46849/guiibd.823445

Yıldız, O. (2023). Kullanıcı Deneyimi Ve Etkileşim Faktörlerine Göre Hepsiburada Platformunun Tasarım Hatalarının İncelenmesi. *Ergonomi*, *6*(1), 79–95. https://doi.org/10.33439/ergonomi.1143339

Zhu, J., & Hou, H. (2021). Research on User Experience Evaluation of Mobile Applications in Government Services. *IEEE Access*, *9*, 52634–52641. https://doi.org/10.1109/ACCESS.2021.3070365