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An Examination of Adult Lifelong Learners' Individual Innovativeness and Their Perceptions of Social Network-Based Learning [1]

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Research Article

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Adults, Lifelong learning, Social network, Individual innovativeness, Social network-based learning

Abstract

This study aimed to examine adult learners' perceptions of social network–based learning, their levels of individual innovativeness, and the relationships among these factors. For this purpose, a quantitative research method with a correlational survey design was employed. The research sample consisted of adults enrolled in Public Education Centers in Yalova province during the 2023–2024 academic year. Participants were selected using a non-random purposive sampling method, with 363 adults aged 18–61 participating in the study. The data were collected using the Individual Innovativeness Scale and the Social Network–Based Learning Perception Scale. The results indicate that participants fall into the early majority of the innovation adoption curve, with generally low levels of individual innovativeness. Most participants' perceptions of social network–based learning are moderate or above moderate. Adults' perceptions of social network–based learning vary by age, duration of social network use, and number of friends on social networks, but not by gender or education level. A positive relationship was found between adults' innovativeness and their perceptions of social network–based learning.

Yaşam Boyu Öğrenen Yetişkinlerin Bireysel Yenilikçilikleri ile Sosyal Ağlara Dayalı Öğrenme Algılarının İncelenmesi

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Özet

Bu araştırmada, yetişkin öğrenenlerin sosyal ağlara dayalı öğrenme algıları ile bireysel yenilikçilikleri ve bunlar arasındaki ilişkilerin incelenmesi amaçlanmıştır. Araştırmada nicel araştırma yöntemlerinden ilişkisel tarama deseni kullanılmıştır. Araştırma örneklemini, 2023 – 2024 eğitim öğretim yılında, Yalova iline bağlı ilçelerdeki Halk Eğitimi Merkezlerinde eğitim almakta olan yetişkinler oluşturmaktadır. Katılımcılar seçkisiz olmayan amaçlı örneklem türlerinden ölçüt örneklem yöntemiyle belirlenmiştir. Araştırmaya 18-61 yaş üstü 363 yetişkin katılmıştır. Araştırma verileri Bireysel Yenilikçilik Ölçeği ve Sosyal Ağlara Dayalı Öğrenme Algısı ölçekleri ile toplanmıştır. Araştırma sonuçlarına göre, katılımcılar yeniliklere sorgulayıcı bir şekilde yaklaşmaktadırlar. Katılımcıların yenilikçilik düzeyleri düşüktür. Katılımcıların çoğunluğunun sosyal ağlara dayalı öğrenme algıları orta ve ortanın üzerindedir. Yetişkinlerin sosyal ağlara dayalı öğrenmeye yönelik algılarında, cinsiyet ve eğitim düzeyi değişkenleri dışındaki, yaş, sosyal ağ kullanım süresi ve sosyal ağlardaki arkadaş sayısı değişkenlerine göre farklılık vardır. Yetişkinlerin bireysel yenilikçilikleri ile sosyal ağlara dayalı öğrenme algıları arasında pozitif yönlü bir ilişki tespit edilmiştir.

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1. Introduction

Thanks to Web 2.0 and the emergence of social networks, millions of people can now connect and interact simultaneously (Ocaña et al., 2021). Social media facilitates e-learning by enabling academic collaboration, fostering learning communities, providing access to course content, and ensuring easy instructor communication (Greenhow, 2011). Through these opportunities, individuals can pursue learning in both formal and informal settings. Technology has transformed learning into a process that can be developed in an increasingly less structured and more informal way (Pentiah, 2024). Social network-based learning is a form of learning in which social network users engage through interaction, creating and sharing information, and personalization within their networks (Kumar & Nanda, 2024). The interaction opportunities enabled by digital technologies are reshaping the field of adult learning by creating new possibilities. This learning method helps make adult education more dynamic, accessible, and personalized by offering opportunities. Researchers argue that experiential, flexible, and interactive learning is the most effective approach for adult learners (Collins, 2021; Nørgård, 2021; Tweedell, 2000). Flexibility is important in adult education. To achieve this, new educational pathways and formats are needed (Nørgård, 2021). Due to its ability to facilitate easy and active lifelong learning, interest in social media-based lifelong learning has steadily grown in recent years (Huang et al., 2025).

How these platforms should be used for educational purposes remains a subject of ongoing debate (Kadakia et al., 2024; Micán et al., 2024; Trang, 2023). When examining the literature, it is observed that most of the research on social media/social networks and adults has been conducted with university students. Empirical findings regarding university students' use of social media for educational purposes are contradictory. While some research findings indicate that social networking sites are predominantly used by students for non-academic purposes (Abdelraheem, 2013; Ahmed & Qazi, 2011; Liu, 2010), other studies have found the opposite (Al-Sharqi & Hashim, 2016; Figueras-Maz et al., 2021; Mohorjy et al., 2015; Moghavvemi et al., 2018). From a gender perspective, females use social media more for learning than males (Al-Sharqi & Hashim, 2016; Mazman & Usluel, 2011; Mohorjy et al., 2015). Socializing and information-seeking motivate young adults (18- 33+) to use social networking sites (Narasimhamurthy, 2014).

One of the theories explaining users' adoption behaviors toward such innovative environments is Rogers' Diffusion of Innovations Theory (DIT) (Rogers, 1995, 2003). The theory refers to the degree to which an individual adopts an innovation earlier or later than others as "innovativeness." The theory explains individual innovativeness as the individual's willingness to embrace new ideas, adopt innovations, use them, and benefit from them. Furthermore, according to Rogers (1995), individuals' perceived characteristics of innovation (relative advantage, compatibility, complexity, trialability, observability) help explain variations in adoption rates. Empirical evidence supports the views of the theory. According to the theory, these characteristics play a crucial role in the persuasion stage of attitude development toward innovation. During the persuasion stage, the individual evaluates the information from the previous stage and adopts a positive or negative attitude toward innovation (Rogers, 1995). Regarding other theories, the Technology Acceptance Model (TAM) (Davis et al., 1989), and the Theory of Reasoned Action (Fishbein & Ajzen, 1977) suggest that attitude determines behavioral intention and that perceptions regarding the characteristics of technology are also fundamental determinants of attitude. These features of technology significantly affect individuals' intention of using digital technologies for lifelong learning (Agudo-Peregrina et al., 2014; Liao et al., 2010; Liao & Liu, 2012). According to the Technology Acceptance Model (TAM), two of the features proposed by the DIT (perceived benefit and ease of use) determine behavioral intention. Also, the use of technology by older adults has been associated with factors such as benefit, ease of use, and self-efficacy (Zhang & Boot, 2023). Research on motivation theories supports these results. Social cognition research has confirmed that perceived ease of use significantly affects the intention of elderly adults to adopt technology (Ma et al., 2021). Similarly, the theory of social learning asserts that the self-efficacy conceptually overlaps with ease of use (Rahmawati, 2019).

More and more adults are adopting technology (Vogels, 2019). Research indicates that the COVID-19 pandemic led to the adoption of new technologies by older adults (Haase et al., 2021). New technologies enrich lifelong learning opportunities for adults. The awareness of adult lifelong learners, who are likely to be innovative due to their openness to learning, about new learning opportunities is among the topics worth investigating. Understanding adult learners' perceptions of learning in creative environments is essential for guiding future initiatives. In particular, educational institutions are trying to understand the use of such innovative environments and their role in content sharing and interaction, thereby managing the process (Kukulska-Hulme & Shield, 2008; Nihalani & Mayrath, 2010). Due to the opportunities it provides for adult learning, social media and its potential as a means of learning (Osgerby & Rush, 2015) are among the subjects worth researching (Moghavvemi et al., 2018). This study examines the perceptions of adults who engage in lifelong learning in Public Education Centers (PECs) regarding learning through social networks and their individual innovativeness.

In this context, this study aimed to identify the perceptions of social network-based learning among adult lifelong learners, their individual innovativeness levels, and the relationships among these factors. To this end, the study seeks to answer the following questions:

1. How are adults distributed according to categories and levels of individual innovativeness?

2. At what level are adults' perceptions of social network-based learning?

3. Is there a significant difference in adults' perceptions of social network-based learning regarding gender, age, education level, duration of social media use, and number of friends on social media?

3.1. Is there a significant difference in adults' perceptions of social network-based learning (interaction-based learning, ease of use, sharing, and personalization) according to gender?

3.2. Is there a significant difference in adults' perceptions of social network-based learning (interaction-based learning, ease of use, sharing, and personalization) according to age?

3.3. Is there a significant difference in adults' perceptions of social network-based learning (interaction-based learning, ease of use, sharing, and personalization) according to educational level?

3.4. Is there a significant difference in adults' perceptions of social network-based learning (interaction-based learning, ease of use, sharing, and personalization) according to the duration of social media use?

3.5. Is there a significant difference in adults' perceptions of social network-based learning (interaction-based learning, ease of use, sharing, and personalization) according to the number of friends on social networks?

4. Is there a significant difference in adults' perceptions of interaction-based learning, ease of use, sharing, and personalization according to gender, age, education level, duration of social media use, and number of friends on social media?

5. Is there a significant relationship between adults' perceptions of social network-based learning and their individual innovativeness levels?

6. Is there a significant relationship between adults' perceptions of social network-based learning and the dimensions of the scale (interaction-based learning, ease of use, sharing, and personalization), and their individual innovativeness levels and the dimensions of the scale (resistance to change, opinion leadership, openness to experience, and risk taking)?

1.1. Related Literature and Theoretical Background

This section briefly introduces the theory of innovation diffusion, which serves as the basis of our study, and the relevant research results we will draw on in discussing our findings**.**

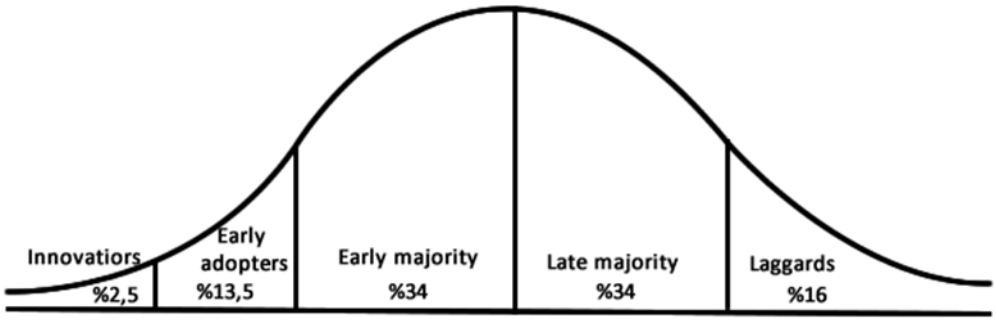
1.1.1. Diffusion of Innovations Theory (DIT)

Everett Rogers' Diffusion of Innovations Theory explains how innovations are adopted and spread. Rogers presents the diffusion of innovations through four key elements. One is innovation, which refers to a new idea and examines its characteristics. The others are communication channels, where information about the innovation is shared; time, which refers to the fact that innovation occurs over a specific period rather than as a one-time event; and the social system, which examines the individuals and factors influencing the adoption and acceptance of the innovation (Rogers, 1995). Rogers stated that initially, only a few people would adopt the innovation, then the adoption rate would increase, and eventually it would slow down (Orr, 2003).

According to Rogers (2003), innovativeness refers to an individual's tendency to adopt new ideas relatively early compared to other system members. Innovativeness is also a personal characteristic. Those with this characteristic adopt a product earlier and more efficiently than other consumers (Rogers, 2003). Individual innovativeness encompasses an individual's willingness to adopt new ideas, implement them, use them, and benefit from them (Manbaki, 2023; Rogers, 2003). According to Rogers (1995, 2003), those who adopt new technology are classified into five categories based on the time of acceptance of the latest technology (Figure 1). Innovators (visionary, willing to try new ideas and take risks) make up 2.5% of the social system and are the first to adopt innovations. Early adopters (those who guide and inform others about innovations) make up 13.5% of the social system. The early majority group (those who approach innovations cautiously) makes up 34% of the social system and is the ones who adopt innovations after innovators and early adopters. The late majority group (those who are hesitant to accept innovation and are skeptical) makes up 34% of the social system and is defined as individuals who are doubtful and cautious about innovations. Finally, laggards (those who wait for others to test innovations, approach change with a cautious or

negative perspective, and adopt innovations later than others) make up 16% of the social system and are the last to adopt innovations.

Figure 1 Innovativeness Categories (Rogers, 1995)



1.1.2. Studies on Individual Innovativeness

According to Everett Rogers' "Diffusion of Innovations" theory, the rates and methods by which individuals adopt innovations vary based on various factors (Rogers, 2003). Individual innovativeness is influenced by personal factors such as personality traits, education level, social status, and risk-taking tendencies, while it is also significantly affected by organizational and environmental factors (Patterson et al., 2009). Individual innovativeness strongly drives personal and professional development (Ali, 2019). Innovative individuals tend to be more flexible and comfortable in situations of uncertainty and risk, showing a tendency to adopt new technologies and ideas rapidly.

In Turkey, studies on individual innovativeness have been conducted with teachers and pre-service teachers. However, the study findings are contradictory. Some studies show that teachers are in the "early majority" category and are innovative at a low level (Kayasandık, 2017; Uras, 2000). In contrast to these findings, there are also studies showing that teachers are in the "early adopters" category (Gökbulut, 2021) and their level of innovation is high (Yıldırım, 2021). There are different results in the literature regarding the innovativeness levels of pre-service teachers. Some studies have shown that pre-service teachers' innovativeness characteristics fall under the "early majority" category (Akça & Şakar, 2017; Kert & Tekdal, 2012; Özgür, 2013). Other studies, however, have shown that pre-service teachers are "highly innovative" (Kılıçer, 2011; Özgür, 2013; Öztürk & Summak, 2014). Different from this finding, Yılmaz (2013) found that more than half of pre-service teachers were at the level of "low innovation". In the literature, no studies have examined the individual innovativeness of adults participating in non-formal education.

Innovativeness has been studied as a determinant in the selection of new technologies and services, with empirical evidence showing that innovativeness predicts technology usage (Aldahdouh et al., 2020; Hee-Young et al., 2023; Sitar-Taut & Mican, 2021; Twum et al., 2022). Innovativeness also positively affects perceived ease of use and perceived benefit. If adults have high innovativeness, their perceptions of ease of use regarding social networking sites are also high, enhancing their learning attitudes and usage (Lewis et al., 2003; Saparudin et al., 2024).

1.1.3. Studies on Social Network-Based Learning

In some studies, conducted with university students, participants expressed the view that social media should be integrated into the learning process (Mohorjy et al., 2015). In other studies, the students were worried about this issue because they were unsure whether they could learn in such learning environments (Figueras-Maz et al., 2021; Sadowski et al., 2017; Yenen, 2020). Students' limited experience with innovative uses of social media in teaching may have contributed to these concerns (Figueras-Maz et al., 2021). Employees also believe that using social media for teaching purposes is less beneficial compared to using it for personal and professional purposes (Manca & Ranieri, 2016). In some studies, conducted with pre-service teachers, their social network-based learning perceptions are at a medium level (Akgül, 2022), while in other studies, they are at a high level (Yenen, 2020).

The literature has examined the relationship between adopting innovations and various variables. According to some studies examining the relationship between innovation adoption behavior and gender, men tend to adopt technological innovations more than women (Aldahdouh et al., 2020; Bubou & Job, 2022; Mohorjy et al., 2015). Empirical evidence in the literature suggests no relationship between the adoption of innovations and education level (Arts et al., 2011; Im et al., 2003). Some empirical evidence from studies examining the relationship between age and innovation adoption behavior shows that younger individuals tend to adopt innovations at a higher rate than older individuals (Arts et al., 2011; Bartels & Reinders, 2011; Üstün, 2023). A negative relationship between age and technology acceptance has been reported in technology acceptance research (e.g., Chong, 2013; Escobar-Rodríguez &

Bartual-Sopena, 2015; Tsai et al., 2019). The result of Hauk et al.'s (2018) meta-analysis is in parallel with the results of these studies.

The benefits, ease of use, compatibility, and flexibility of technology significantly influence individuals' intentions to use digital technologies for lifelong learning (Agudo-Peregrina et al., 2014; Liao et al., 2011; Liao & Liu, 2012). Social cognition theorists have confirmed that among older adults, observational learning has a significant impact on their intentions to adopt technology and on their perceptions of ease of use (Ma et al., 2021). According to the DIT, it is suggested that older adults are less likely to adopt new technologies unless they see clear benefits from using them (Rogers, 2010). Technology acceptance models such as the Unified Technology Acceptance and Use Theory (UTAUT) and the Senior Technology Acceptance Model (STAM) identify usability and utility as important constructs that influence user acceptance, and identify age as a moderator of these constructs (Wildenbos et al., 2018). Adults' use of social media as a learning platform is influenced by factors such as technology acceptance, cost-effectiveness of technology, interaction, and compatibility (Ahmad et al., 2017; Bonsón et al., 2014; Lee et al., 2003; Siemens & Weller, 2011). The use of technology by older adults is related to factors such as benefits, ease of use, and self-efficacy (Zhang & Boot, 2023). Zhou et al. (2020) found in their study with adults (ages 25-48) that attitude has a direct impact on using YouTube as a learning resource, while as an environmental factor, the sociability of YouTube is influential on attitude.

LaRose et al. (2001) suggested that the experience of using a technology is a significant predictor of individuals' intention to continue using that technology. Some studies conducted with older adults have shown that early use of technology predicts later use (Mitzner et al., 2019; Tsai et al., 2019; Zhang & Boot, 2023; Zhou et al., 2020). There is empirical evidence that habits, like usage experience, positively influence the acceptance and use of technology (Zwain, 2019), as well as its adoption (Osei et al., 2022; Strzelecki, 2024), while other studies have stated that habits do not have a direct effect on behavioral intention (Twum et al., 2022).

2. Method

In this study, the correlational research design, one of the quantitative research methods, was employed. This design aims to determine whether there is a relationship between two or more variables and, if so, the extent of this relationship (Büyüköztürk et al., 2018). In the study, the relationship between social network-based learning perceptions and individual innovativeness levels in adult education was examined using the correlational research design.

2.1. Sample

The study population consisted of adults attending Public Education Centers (PECs) affiliated with the Yalova Provincial Directorate of National Education in the 2023-2024 academic year. The study sample comprised 363 adults receiving education at PECs in Yalova province and its districts. Since Yalova is a province that receives migration from various cities in Turkey, it can be stated that it represents the demographic characteristics of adults in Turkey. Participants were selected using the criterion sampling method, a type of non-random purposive sampling. The criteria considered for determining the sample included active participation in courses at PECs under the Yalova Provincial Directorate of National Education and being an adult aged 18 and above. Criterion sampling is a sampling method used in research to conduct in-depth studies on individuals, events, or situations with specific characteristics (Büyüköztürk et al., 2018). The demographic characteristics of the adults participating in the study are provided in Table 1.

Table 1. *Demographic Characteristics of Participating Adults*

Demographic Variable	*Category*	*f*	*%*
Gender	Female	315	86.8
	Male	48	13.2
	Total	363	100
Age (years)	18-24	23	6.3
	25-30	24	6.6
	31-40	81	22.3
	41-50	97	26.7
	51-60	85	23.4
	61 and older	53	14.6
	Total	363	100
Education Level	No formal education	7	1.9
	Primary school	46	12.7
	Middle school	29	8.0
	High school	147	40.5
	Undergraduate	120	33.1
	Graduate	14	3.9
	Total	363	100

As seen in Table 1, it is observed that 86.8% of the adults participating in the study are female, while 13.2% are male. Accordingly, there are more female adults than male adults. When looking at the age ranges of the adults, it is observed that 6.3% are between 18-24, 6.6% are between 25-30, 22.3% are between 31-40, 26.7% are between 41-50, 23.4% are between 51-60, and 14.6% are 61 years and older. According to this, adults aged 31-60 are the ones who mostly attend the courses. When looking at the education levels of the adults, it is observed that 1.9% have no formal education, 12.7% are elementary school graduates, 8% are middle school graduates, 40.5% are high school graduates, 33.1% hold a bachelor's degree, and 3.9% have a graduate degree. Based on these data, adults with high school and university degrees are the ones who mostly attend Public Education Centers (PECs).

2.2. Data Collection Tools

The study data were collected through the "Social Networks-Based Learning Perception Scale" (SNB) developed by Yokuş and Yelken (2019), the "Individual Innovativeness Scale" (IIS) adapted into Turkish by Kılıçer and Odabaşı (2010), and the personal information form developed by the researchers. The researchers developed the personal information form to collect data on the adults' gender, age, education level, duration of social media use, and number of friends on their social networks.

2.2.1. Social Networks-Based Learning Perception Scale (SNB)

The scale developed by Yokuş and Yelken (2019) consists of 20 items. It is a 7-point Likert scale. The scale contains five items (1, 2, 3, 4, 5) in the "Interaction-based Learning" dimension, four items (6, 7, 8, 9) in the "Ease of Use" dimension, five items (10, 11, 12, 13, 14) in the "Sharing" dimension, and six items (15, 16, 17, 18, 19, 20) in the "Personalization" dimension. The scale's Cronbach alpha reliability coefficient was calculated as $\alpha = .90$. The recalculated reliability value of the scale was $\alpha = 0.96$. The Cronbach's alpha values for the dimensions of the scale were as follows: "Interaction-based Learning" $\alpha = 0.87$, "Ease of Use" $\alpha = 0.91$, "Sharing" $\alpha = 0.91$, and "Personalization" $\alpha = 0.93$.

The total score obtained from the Social Networks-Based Learning Perception Scale ranges from a minimum of 20 to a maximum of 140. According to the scale scoring, an arithmetic mean between 20-60 points is interpreted as low level, 61-100 points as moderate level, and 101-140 points as high level (Yokuş & Yelken, 2019).

2.2.2. Individual Innovativeness Scale (IIS)

The scale developed to evaluate individuals' innovativeness levels is the "Individual Innovativeness Scale" (IIS), initially developed in 1977 by H. Thomas Hurt, Katherine Joseph, and Chester D. Cook (Hurt et al., 1977). The original language of the scale is English. The Individual Innovativeness Scale was adapted into Turkish by Kılıçer and Odabaşı (2010). As a result of the validity and reliability studies of the scale, it was found to exhibit a 20-item, four-factor structure. The factor structures were valid, the internal consistency coefficient was 0.82, and the test-retest reliability was 0.87. Eight items of the scale are in the "Resistance to Change" dimension (4, 6, 7, 10, 13, 15, 17, 20), five items are in the "Opinion Leadership" dimension (1, 8, 9, 11, 12), five items are in the "Openness to Experience" dimension (2, 3, 5, 14, 18), and two items are in the "Risk Taking" dimension (16, 19). The scale consists of 12 positive items (1, 2, 3, 5, 8, 9, 11, 12, 14, 16, 18, 19) and eight negative items (4, 6, 7, 10, 13, 15, 17, 20). The scale items are based on a 5-point Likert structure with the following options: "Strongly Agree," "Agree," "Neutral," "Disagree," and "Strongly Disagree."

The innovativeness score is calculated by subtracting the total points obtained from the negative items from the total points obtained from the positive items and then adding 42 points to the result. When determining the categories of individual innovativeness, those scoring above 80 points on the scale are classified as 'innovators'; those scoring between 69 and 80 points are classified as 'early adopters'; those scoring between 57 and 68 points are classified as 'early majority'; those scoring between 46 and 56 points are classified as 'late majority'; and those scoring below 46 points are classified as 'laggards' (Hurt et al., 1977; cited by Kılıçer, 2011). When determining individual innovativeness levels, if the innovativeness score is greater than 68, the individual is classified as a "high-level innovator." If the score is between 68 and 64, the individual is considered a "moderate-level innovator." If the score is less than 64, the individual is categorized as a "low-level innovator". (Hurt et al., 1977; cited by Kılıçer, 2011).

The recalculated Cronbach alpha reliability value of the scale was found to be $\alpha = 0.77$. The Cronbach alpha values for the dimensions of the scale were as follows: "Resistance to Change" $\alpha = 0.80$, "Opinion Leadership" $\alpha = 0.76$, "Openness to Experience" $\alpha = 0.82$, and "Risk Taking" $\alpha = 0.83$

2.3. Data Analysis

The study data were analyzed using the SPSS 21.0 program. Percentage and frequency distributions were analyzed to determine the demographic characteristics of the adults participating in the study. Before examining the relationships between the study variables, the normality of the data obtained from both scales (Social Networks-Based Learning Perception Scale and Individual Innovativeness Scale) was tested using the Kolmogorov-Smirnov test. The normality analysis test results of the scales are provided in Table 2.

Table 2. *Kolmogorov-Smirnov Normality Test Results*

	Kolmogorov-Smirnov			*Skewness*		*Kurtosis*	
	Statistic	*df*	*p*	*Skewness*	*Std.Error*	*Kurtosis*	*Std.Error*
SNB	0.101	363	0.000*	-0.591	0.128	-0.103	0.255
IIS	0.101	363	0.000*	-0.660	0.128	3.553	0.255

*$p < 0.05$

As seen in Table 2, according to the normality test results, the significance level of both scales was found to be $p = 0.000$. Since this value is $p < 0.05$, it can be interpreted that the data obtained from both scales do not show a normal distribution. As shown in Table 2, the values for the Social Networks-Based Learning Perception Scale were found to be skewness = -0.591 and kurtosis = -0.103, while the values for the Individual Innovativeness Scale were skewness = -0.660 and kurtosis = 3.553. Tabachnick and Fidell (2015) state that a normal distribution occurs when skewness and kurtosis values fall within the range of -1.5 to +1.5. Accordingly, it is understood that the data from both scales do not exhibit a normal distribution. For this reason, within the scope of the research questions, the Mann-Whitney U test was used for the analysis of two-variable data, and the Kruskal-Wallis H test was used for data with more than two variables. In cases where differences were detected as a result of the Kruskal-Wallis H test, the Mann-Whitney U test

was applied among all groups to determine between which groups the differences occurred. In the study, the data obtained from the scales were analyzed using Spearman's Rank Correlation to reveal the relationships between social network-based learning perceptions and individual innovativeness. In the Kruskal-Wallis test, effect size was calculated using eta-squared (η^2). Effect size indicates the degree to which the independent variable affects the dependent variable. The obtained eta-squared value is interpreted as small if it is between 0.01 and 0.06, medium if it is between 0.06 and 0.14, and large if it is greater than 0.14.

2.4. Ethics Committee Approval Information

This research was deemed ethically appropriate by the Ethics Committee for Social and Human Sciences of Bursa Uludağ University with the decision dated 18 December 2023 and numbered 2023-12.

3. Results

In this section of the study, the findings obtained from the analyses conducted on the research questions are presented.

3.1. RQ1. How are adults distributed according to categories and levels of individual innovativeness?

The findings related to the first research question of the study are provided in Table 3 and Table 4.

Table 3. The Distribution of Adults' Individual Innovativeness Categories

Individual Innovativeness Category	f	%
Innovators	15	4.13
Early adopters	53	14.6
Early majority	200	55.1
Late majority	82	22.59
Laggards	13	3.58
Total	363	100

The distribution of adult learners according to their individual innovativeness categories is provided in Table 3. Based on these findings, it can be said that more than half (55.1%) of adult learners are in the "early majority" individual innovativeness category. This is followed by "late majority" (22.59%), "early adopters" (14.6%), "innovators" (4.13%), and "laggards" (3.58%), respectively.

The distribution of adult learners according to their individual innovativeness levels is provided in Table 4. Accordingly, it can be stated that over half of adult learners (58.68%) are classified as "low-level innovators." This is followed by those who are classified as "high-level innovators" (22.04%) and "medium-level innovators" (19.28%).

Table 4. *The Distribution of Adults' Individual Innovativeness Levels*

Individual Innovativeness Level	*f*	*%*
High-level innovator	80	22.04
Medium-level innovator	70	19.28
Low-level innovator	213	58.68
Total	363	100

3.2. RQ2. At what level are adults' perceptions of social network-based learning?

The findings related to the second research question of the study are provided in Table 5.

Table 5. *Descriptive Statistics for the Social Networks-Based Learning Perception Scale*

SNB Level	*f*	*%*
High-level	147	40.50
Medium-level	162	44.63
Low-level	54	14.87
Total	363	100

As seen in Table 5, the majority of adults' social network-based learning perceptions are at the following levels: medium (44.63%), high (40.50%), and low (14.87%). Therefore, it can be stated that the majority of adults have perceptions of social network-based learning at a medium and above-average level.

3.3. RQ3. Is there a significant difference in adults' perceptions of social network-based learning regarding gender, age, education level, duration of social media use, and number of friends on social media?

RQ4. Is there a significant difference in adults' perceptions of interaction-based learning, ease of use, sharing, and personalization according to gender, age, education level, duration of social media use, and number of friends on social media?

Findings on these research questions are provided in Table 6, Table 7, Table 9, Table 10, Table 11, Table 12 and Table 13.

3.3.1. Social Network-Based Perception and Gender

In Table 6, the Mann-Whitney U test results showing whether adults' social network-based learning perceptions differ based on gender are presented.

Tablet 6. *The Differentiation of Social Network-Based Learning Perceptions by Gender*

Dimensions/Scale	*Gender*	*N*	*Mean Rank*	*Sum of Ranks*	*U*	*p*
Interaction-based Learning (IBL)	Female	315	177.84	56018.50	6248.5	0.053
	Male	48	209.32	10047.50		
Ease of Use (EOU)	Female	315	180.72	56925.50	7155.5	0.549
	Male	48	190.43	9140.50		
Sharing (S)	Female	315	178.04	56082.00	6312	0.065
	Male	48	208.00	9984.00		
Personalization(P)	Female	315	181.37	57132.50	7362.5	0.770
	Male	48	186.11	8933.50		
SNB Scale	Female	315	178.94	56367.50	6597.5	0.155
	Male	48	202.05	9698.50		

As seen in Table 6, there is no statistically significant difference between the perceptions of female and male adults ($U = 6597.5$, $p > 0.05$). As a result, it can be concluded that gender does not have a significant effect on social network-based learning perceptions. The results also show that there is no statistically significant difference between the perceptions of female and male adults in terms of the dimensions of the scale, namely interaction-based learning (IBL), ease of use (EOU), sharing (S), and personalization (P) ($U_{ibl} = 6248.5$; $U_{eou} = 7155.5$; $U_s = 6312$; $U_p = 7362.5$, $p > 0.05$). Therefore, it can be concluded that gender does not have a significant effect on social network-based learning perceptions in terms of the dimensions of the scale used in the study.

3.3.2. Social Network-Based Perceptions and Age Range

The Kruskal-Wallis test results showing the relationship between adults' social network-based learning perceptions and the age variable are provided in Table 7.

Table 7. *The Differentiation of Social Network-Based Learning Perceptions by Age*

Dimensions/Scale	*Age Range (years)*	*N*	*Mean Rank*	*df*	X^2	*p*	η^2
Interaction-based Learning (IBL)	18-24	23	225.09	5	13.961	0.016*	0.038
	25-30	24	229.35				
	31-40	81	182.62				
	41-50	97	174.15				
	51-60	85	184.55				
	61 and older	53	151.18				
Ease of Use (EOU)	18-24	23	218.76	5	10.969	0.052	
	25-30	24	202.90				
	31-40	81	188.75				
	41-50	97	180.88				
	51-60	85	184.30				
	61 and older	53	144.62				
Sharing (S)	18-24	23	226.48	5	22.574	0.000*	0.062
	25-30	24	226.31				
	31-40	81	181.85				
	41-50	97	182.14				
	51-60	85	190.48				
	61 and older	53	129.01				
Personalization(P)	18-24	23	219.72	5	15.870	0.007*	0.043
	25-30	24	236.27				
	31-40	81	178.35				
	41-50	97	178.72				
	51-60	85	185.90				
	61 and older	53	146.38				
SNB Scale	18-24	23	225.26	5	17.779	0.003*	0.049
	25-30	24	231.25				
	31-40	81	183.88				
	41-50	97	177.53				
	51-60	85	185.56				
	61 and older	53	140.54				

*$p < 0.05$

As seen in Table 7, there is a statistically significant difference in the mean levels of adults' social network-based learning perceptions across different age groups (X2(5) = 17.779, $p < 0.05$). This difference has an effect size value of $\eta^2 = 0.049$. The effect size values indicate that the effect is at a "small effect" level for the overall scale. When the findings are evaluated according to the dimensions of the scale, a statistically significant difference in the mean perception levels of adults was observed for the dimensions of interaction-based learning, sharing, and personalization (X2 ibl (5) = 10.969; X2s(5) = 22.574; X2p(5) = 15.870, $p < 0.05$). However, there was no statistically significant difference for the ease of use dimension (X2 eou (5) = 10.969, $p < 0.05$). When the findings are evaluated together, it can be said that the age of adults has an impact on their social network-based learning perceptions, particularly in the dimensions of interaction-based learning, sharing, and personalization.

The results of the Mann-Whitney U test conducted to determine which age groups show differences are provided in Table 8.

Table 8. *The Differentiation of Social Network-Based Learning Perceptions by Age Groups*

Age	*N*	*Mean Rank*	*Sum of Ranks*	*U*	*p*
18 - 24	23	49.93	1148.50	346.5	0.003*
61 and older	53	33.54	1777.50		
25 - 30	24	76.63	1839.00	789	0.015*
41 - 50	97	57.13	5542.00		
25 - 30	24	51.75	1242.00	330	0.001*
61 and older	53	33.23	1761.00		
31 - 40	81	73.33	5939.50	1674	0.032*
61 and older	53	58.59	3105.50		
41 - 50	97	81.76	7930.50	1963	0.017*
61 and older	53	64.05	3394.50		
51 - 60	85	75.96	6457.00	1703	0.016*
61 and older	53	59.13	3134.00		

*$p < 0.05$

As seen in Table 8, after conducting multiple comparisons using the Mann-Whitney U test, significant differences were found between the following age groups: 18-24 and 61 and older ($U = 346.5$, $p < 0.05$); 25-30 and 41-50 ($U = 789$, $p < 0.05$); 25-30 and 61 and older ($U = 330$, $p < 0.05$); 31-40 and 61 and older ($U = 1674$, $p < 0.05$); 41-50 and 61 and older ($U = 1963$, $p < 0.05$); and 51-60 and 61 and older ($U = 1703$, $p < 0.05$) ($p < 0.05$).

3.3.3. Social Network-Based Perceptions and Education Level

The Kruskal-Wallis test results regarding the relationship between adults' social network-based learning perceptions and education level are provided in Table 9.

Table 9. *The Differentiation of Social Network-Based Learning Perceptions by Education Level.*

Dimensions/Scale	*Education Level*	*N*	*Mean Rank*	*df*	X^2	*p*
Interaction-based Learning(IBL)	No formal education	7	144.93	5	3.956	0.556
	Primary school	46	157.89			
	Middle school	29	162.29			
	High school	147	185.16			
	Undergraduate	120	192.32			
	Graduate	14	198.89			
Ease of Use (EOU)	No formal education	7	143.21	5	7.611	0.179
	Primary school	46	173.68			
	Middle school	29	170.47			
	High school	147	179.09			
	Undergraduate	120	189.67			
	Graduate	14	217.46			
Sharing (S)	No formal education	7	132.00	5	6.693	0.244
	Primary school	46	155.22			
	Middle school	29	163.74			
	High school	147	184.79			
	Undergraduate	120	195.17			
	Graduate	14	190.64			
Personalization (P)	No formal education	7	156.64	5	4.897	0.429
	Primary school	46	164.21			
	Middle school	29	155.33			
	High school	147	185.58			
	Undergraduate	120	190.55			
	Graduate	14	197.46			
SNB Scale	No formal education	7	225.26	5	5.985	0.308
	Primary school	46	231.25			
	Middle school	29	183.88			
	High school	147	177.53			
	Undergraduate	120	185.56			
	Graduate	14	140.54			

As shown in Table 9, based on ranking, adults' perceptions of social network-based learning increase as their education level increases. However, there is no statistically significant difference in the mean scores of participants' social network-based learning perception levels based on education level ($X2 = 5.985$, $p > 0.05$).

When the findings are evaluated according to the dimensions of the scale, no statistically significant difference was observed in the mean scores of adults' social network-based learning perception levels across all dimensions of the scale based on education level. Specifically, for the dimensions, the results are as follows: (X2 ibl (5) = 3.956, X2 eou (5) = 7.611, X2s (5) = 6.693, X2p (5) = 4.897, p>0.05).

3.3.4. Social Network-Based Learning Perceptions and Social Network Usage Duration

The Kruskal-Wallis test results regarding the relationship between participants' social network-based learning perceptions and social network usage duration are provided in Table 10.

Table 10. The Differentiation of Social Network-Based Learning Perceptions by Social Network Usage Duration

Dimensions /Scale	*Social Network Usage Duration*	*N*	*Mean Rank*	*df*	X^2	*p*	η^2
Interaction-based Learning (IBL)	Not used	16	133.38	3	18.497	0.000*	0.051
	Less than 1 hour per day	129	160.63				
	1-3 hours per day	176	190.88				
	More than 3 hours per day	42	228.96				
Ease of Use (EOU)	Not used	16	137.06	3	12.787	0.005*	0.035
	Less than 1 hour per day	129	163.81				
	1-3 hours per day	176	191.20				
	More than 3 hours per day	42	216.44				
Sharing (S)	Not used	16	128.34	3	23.951	0.000*	0.066
	Less than 1 hour per day	129	154.08				
	1-3 hours per day	176	197.25				
	More than 3 hours per day	42	224.30				
Personalization (P)	Not used	16	111.84	3	19.399	0.000*	0.053
	Less than 1 hour per day	129	162.71				
	1-3 hours per day	176	193.20				
	More than 3 hours per day	42	221.02				
SNB Scale	Not used	16	225.26	3	23.492	0.000*	0.064
	Less than 1 hour per day	129	231.25				
	1-3 hours per day	176	183.88				
	More than 3 hours per day	42	177.53				

*p<0.05

As seen in Table 10, there is a statistically significant difference in the mean scores of adults' social network-based learning perception levels based on social network usage duration (X2 = 23.492, p < 0.05). This difference has an effect size of $\eta^2 = 0.064$. The effect size value is at a "medium effect" level for the overall scale. A significant difference was found in all dimensions of the scale based on daily social network usage duration, as follows: (X2 ibl (3) = 18.497, X2 eou (3) = 12.787, X2s (3) = 23.951, X2p (3) = 19.399, p < 0.05)

The results of the Mann-Whitney U test conducted to determine which pairs of groups differ in terms of adults' social network-based learning perceptions based on social network usage duration are provided in Table 11.

Table 11. *The Differentiation Between Social Network-Based Learning Perceptions and Social Network Usage Duration*

Social Network Usage Duration	*N*	*Mean Rank*	*Sum of Ranks*	*U*	*p*
Not used	16	55.69	891.00	755	0.002*
1-3 hours per day	176	100.21	17637.00		
Not used	16	18.38	294.00	158	0.002*
More than 3 hours per day	42	33.74	1417.00		
Less than 1 hour per day	129	134.70	17376.00	8991	0.002*
1-3 hours per day	176	166.41	29289.00		
Less than 1 hour per day	129	78.57	10136.00	1751	0.001*
More than 3 hours per day	42	108.81	4570.00		
1-3 hours per day	176	105.21	18517.50	2941.5	0.04*
More than 3 hours per day	42	127.46	5353.50		

*p<0.05

As seen in Table 11, the results of the multiple comparisons conducted using the Mann-Whitney U test show that there is a significant difference between the following groups: those who do not use social networks at all and those who use them for 1-3 hours per day ($U = 755$, $p < 0.05$); those who do not use social networks at all and those who use them for more than 3 hours per day ($U = 158$, $p < 0.05$); those who use social networks for less than 1 hour per day and those who use them for 1-3 hours per day ($U = 8991$, $p < 0.05$); those who use social networks for less than 1 hour per day and those who use them for more than 3 hours per day ($U = 1751$, $p < 0.05$); and those who use social networks for 1-3 hours per day and those who use them for more than 3 hours per day ($U = 2941.5$, $p < 0.05$).

3.3.5. Social Network-Based Learning Perceptions and Number of Friends on Social Networks

The Kruskal-Wallis test results regarding the relationship between adults' social network-based learning perceptions and the number of friends on social networks are provided in Table 12.

Table 12. *The Differentiation of Social Network-Based Learning Perceptions by the Number of Friends on Social Networks*

Dimensions/Scale	*Number of Friends*	*N*	*Mean Rank*	*df*	X^2	*p*	η^2
Interaction-based Learning (IBL)	No friends	16	179.75	5	10.016	0.075	
	1-150	188	192.70				
	151-300	75	162.90				
	301-450	40	237.54				
	451-600	14	194.82				
	601 and more	30	133.38				
Ease of Use (EOU)	No friends	16	175.09	5	13.133	0.022*	0.036
	1-150	188	202.91				
	151-300	75	158.26				
	301-450	40	224.54				
	451-600	14	208.80				
	601 and more	30	137.06				
Sharing (S)	No friends	16	172.51	5	17.953	0.003*	0.055
	1-150	188	198.53				
	151-300	75	165.06				
	301-450	40	242.25				
	451-600	14	223.27				
	601 and more	30	128.34				
Personalization (P)	No friends	16	177.87	5	15.884	0.007*	0.044
	1-150	188	202.23				
	151-300	75	159.85				
	301-450	40	227.11				
	451-600	14	203.20				
	601 and more	30	111.84				
SNB Scale	No friends	16	176.09	5	17.605	0.003*	0.048
	1-150	188	200.49				
	151-300	75	161.03				
	301-450	40	244.39				
	451-600	14	207.10				
	601 and more	30	115.59				

*$p < 0.05$

As seen in Table 12, there is a statistically significant difference in participants' social network-based learning perceptions based on the number of friends on social networks ($X^2 = 17.605$, $p < 0.05$). This difference has an effect size of $\eta^2 = 0.048$. The effect size values indicate that the effect is at a "small effect" level for the overall scale. There is a significant difference in all of the scale's dimensions based on the number of friends on social networks, as follows: ($X^2_{ibl\,(5)} = 10.016$, $X^2_{eou\,(5)} = 13.133$, $X^2_{s\,(5)} = 17.953$, $X^2_{p(5)} = 15.884$, $p < 0.05$). When the mean rank scores were examined,

it was observed that participants with 301–450 friends on social networks attained the highest values across the overall scale and all dimensions. In contrast, the group with 601 or more friends was found to have the lowest mean rank scores.

The results of the Mann-Whitney U test conducted to determine which pairs of groups differ in terms of adults' social network-based learning perceptions based on the number of friends on social networks are provided in Table 13.

Table 13. *The Differentiation between Social Network-Based Learning Perceptions and the Number of Friends on Social Networks*

Friends on Social Networks	*N*	*Mean Rank*	*Sum of Ranks*	*U*	*p*
No friends	16	70.13	1122.00	986	0.022*
1-150	188	105.26	19788.00		
No friends	16	28.56	457.00	321	0.004*
151-300	75	49.72	3729.00		
No friends	16	10.41	166.50	30.5	0.001*
451-600	14	21.32	298.50		
No friends	16	15.81	253.00	117	0.005*
601 and more	30	27.60	828.00		
1-150	188	98.77	18568.50	802.5	0.015*
451-600	14	138.18	1934.50		

As seen in Table 13, the results of the multiple comparisons made using the Mann-Whitney U test show that there is a significant difference between the following groups: those with no friends on social networks and those with 1-150 friends ($U = 986$, $p < 0.05$); those with no friends and those with 151-300 friends ($U = 321$, $p < 0.05$); those with no friends and those with 451-600 friends ($U = 30.5$, $p < 0.05$); those with no friends and those with 601 or more friends ($U = 117$, $p < 0.05$); those with 1-150 friends and those with 451-600 friends ($U = 802.5$, $p < 0.05$); and those with 301-450 friends and those with 451-600 friends ($U = 164.5$, $p < 0.05$).

3.4. RQ5. Is there a significant relationship between adults' perceptions of social network-based learning and their individual innovativeness levels?

RQ6. Is there a significant relationship between adults' perceptions of social network-based learning and the dimensions of the scale (interaction-based learning, ease of use, sharing, personalization), and their individual innovativeness levels and the dimensions of the scale (resistance to change, opinion leadership, openness to experience, risk taking)?

Based on the fifth and sixth research questions of the study, the results of the Spearman Rank Correlation analysis are provided in Table 14.

Table 14. *Spearman Rank Correlation Results for the Relationship Between Social Network-Based Learning Perceptions and Individual Innovativeness*

Variables		*SNB Scale*	*IIS Scale*	*IBL*	*EOU*	*S*	*P*	*RTC*	*OL*	*OPE*	*RT*
SNB Scale	r	1.000	.307	.857	.900	.906	.919	-.026	.308	.364	.293
	p	.	.000**	.000**	.000**	.000**	.000**	.618	.000**	.000**	.000**
	N	363	363	363	363	363	363	363	363	363	363
IIS Scale	r	.307	1.000	.302	.242	.258	.251	-.586	.661	.633	.508
	p	.000**	.	.000**	.000**	.000**	.000**	.000**	.000**	.000**	.000**
	N	363	363	363	363	363	363	363	363	363	363
SNB Scale	r	.857	.302	1.000	.716	.664	.686	-.098	.239	.274	.306
1. Interaction-based Learning (IBL)	p	.000**	.000**	.	.000**	.000**	.000**	.063	.000**	.000**	.000**
	N	363	363	363	363	363	363	363	363	363	363
2. Ease of Use (EOU)	r	.900	.242	.716	1.000	.820	.795	.015	.266	.348	.207
	p	.000**	.000**	.000**	.	.000**	.000**	.770	.000**	.000**	.000**
	N	363	363	363	363	363	363	363	363	363	363
3. Sharing (S)	r	.906	.258	.664	.820	1.000	.829	.008	.280	.340	.262
	p	.000**	.000**	.000**	.000**	.	.000**	.875	.000**	.000**	.000**
	N	363	363	363	363	363	363	363	363	363	363
4. Personalization (P)	r	.919	.251	.686	.795	.829	1.000	.019	.301	.351	.252
	p	.000**	.000**	.000**	.000**	.000**	.	.723	.000**	.000**	.000**
	N	363	363	363	363	363	363	363	363	363	363
IIS Scale	r	-.026	-.586	-.098	.015	.008	.019	1.000	.028	.061	-.103
1. Resistance to Change (RTC)	p	.618	.000**	.063	.770	.875	.723	.	.599	.250	.049*
	N	363	363	363	363	363	363	363	363	363	363
2. Opinion Leadership (OL)	r	.308	.661	.239	.266	.280	.301	.028	1.000	.651	.318
	p	.000**	.000**	.000**	.000**	.000**	.000**	.599	.	.000**	.000**
	N	363	363	363	363	363	363	363	363	363	363
3. Openness to Experience (OTE)	r	.364	.633	.274	.348	.340	.351	.061	.651	1.000	.380
	p	.000**	.000**	.000**	.000**	.000**	.000**	.250	.000**	.	.000**
	N	363	363	363	363	363	363	363	363	363	363

4. Risk Taking (RT)	r	.293	.508	.306	.207	.262	.252	-.103	.318	.380	1.000
	p	.000**	.000**	.000**	.000**	.000**	.000**	.049*	.000**	.000**	.
	N	363	363	363	363	363	363	363	363	363	363

**p < 0.01 *p < 0.05

As shown in Table 14, there is a positive, moderate, and statistically significant relationship between adults' social network-based learning perceptions and their individual innovativeness levels (r = 0.307, p < 0.01). Therefore, it can be stated that as adults' individual innovativeness levels increase, their social network-based learning perceptions also increase, and as their individual innovativeness levels decrease, their social network-based learning perceptions decrease.

As shown in Table 14, the Spearman rank correlation process shows that there are positive significant relationships between the IIS and all dimensions of the SNB (IBL r = 0.302; p < 0.01, EOU r = 0.242; p < 0.01, S r = 0.258; p < 0.01, P r = 0.251; p < 0.01). The Spearman rank correlation process shows that there is no relationship between the SNB and the RTC dimension of the IIS, while there are positive significant relationships with the other dimensions of the scale (OL r = 0.308; p < 0.01, OTE r = 0.364; p < 0.01, RT r = 0.293; p < 0.01). Finally, the Spearman rank correlation process shows that there are positive significant relationships between all dimensions of both scales (except for the RTC dimension of the IIS) (p < 0.01).

4. Conclusion, Discussion and Recommendations

This study examined the relationship between perceptions of social network-based learning and individual innovativeness among adult lifelong learners in Turkey. Regarding the first research question, adults fall into the "early majority" category according to the individual innovativeness categories. The early majority group is not very willing to take risks. This is the group that is knowledgeable about innovations but approaches innovations more cautiously than innovators or early adopters (Rogers, 2010). However, when the innovativeness categories are examined, the adoption time of this group occurs earlier than the average for the social system, like innovators and early adopters. Rogers (1995) considers those in this group to be early adopters. Early adopters also have a more positive attitude towards change than late adopters. In addition, individuals in this category can sometimes take on the role of opinion leaders (Rogers, 1995).

According to the results of the second research question, most adults have moderate to above-average perceptions of social network-based learning. This study finding is similar to other study findings (Akgül, 2022; Yenen, 2020). Based on this conclusion, it can be said that despite adults approaching innovations as the late majority, they are aware of social network-based learning. Perceptions, like attitudes, form a prerequisite for a person to take action in a specific direction (İnceoğlu, 2000). According to Gardner (1990), individuals' lack of complete understanding of innovation is the biggest obstacle to innovative initiatives. From this perspective, social networks appear to have the potential to support adult lifelong learning. The study conducted by Zhou et al. (2020) with adults aged 25-48 supports this conclusion. This study revealed that attitude directly affects the use of YouTube as a learning source (Zhou et al., 2020). On the other hand, while some studies have shown that university students express positive views on integrating social media into learning processes (Mohorjy et al., 2015), other studies have raised concerns and reservations about its educational use (Figueras-Maz et al., 2021; Sadowski et al., 2017).

There is no gender difference in adults' perceptions of learning based on social networks. The imbalance in participant numbers by gender may have influenced this result. Unlike the results of this study, some studies examining the relationship between innovation adoption and gender find that men adopt technological innovations more readily than women (Aldahdouh et al., 2020; Bubou & Job, 2022). In this study, although adults' perceptions of learning through social networks increased with education level, this did not lead to a significant difference. Additionally, no differences were found across the scale's dimensions (interaction-based learning, ease of use, sharing, and personalization) for either variable. In contrast to the findings of this study, Lee et al. (2003) demonstrated that education level affects the perception of ease of use of innovation (Lee et al., 2003). Some findings indicating no relationship between innovation adoption and education level are similar to those of this study (Arts et al., 2011; Im et al., 2003). According to 2024 data from the Turkish Statistical Institute (TÜİK), the internet usage rate was 92.2% among men and 85.4% among women in the 16-74 age group. Although internet usage rates increased with higher education levels, the percentage of women engaging in learning activities over the internet (14.1%) was higher than that of men (13.7%) (TÜİK, 2024). According to these data, it is seen that women are also interested in learning on

social networks, regardless of their level of education. Moreover, the labor market is rapidly transforming due to technological innovations and economic changes. This transformation forces individuals to engage in lifelong learning, regardless of their level of education. Furthermore, the use of social networks may have a greater effect on perceptions than the level of education. All of these reasons may have contributed to the lack of difference in adults' perceptions of learning on social networks, neither by gender nor by education level.

The analyses conducted in this study indicate that, consistent with the literature, age, duration of social network use, and the number of friends on social networks influence adults' perceptions. There is a difference between the perceptions of learning among adults over 61 years of age and those of adults in all age groups under 61. Rogers (1995) suggested that the decline in social communication in older age prevents the elderly from recognizing new technology. Additionally, age is important in shaping attitudes toward technological innovations for adults aged 65 and above.

Studies examining the relationship between age and both innovation adoption behavior (Arts et al., 2011; Bartels & Reinders, 2011; Üstün, 2023) and technology acceptance (Escobar-Rodríguez & Bartual-Sopena, 2015; Hauk et al., 2018; Tsai et al., 2019) have found a negative relationship between the two. On the other hand, the communication challenges posed by the COVID-19 pandemic increased elderly adults' awareness of technological solutions. In this context, the epidemic was effective in the technology adoption of older adults (Haase et al., 2021). According to a study in Turkey, middle-aged individuals (60-74) accepted the use of technology as a requirement of their era. Age caused a difference in the dimensions of the scale, except for the "ease of use" dimension, where no difference was observed. Middle-aged individuals use the internet effectively through smartphones for business, entertainment, learning and communication (Dağlı, 2018). Therefore, in terms of technology, it may be useful to consider the spirit of the time when evaluating middle-aged adults. Age led to a difference in the subscales of the scale except "ease of use", but did not lead to a difference in this dimension. Adults across all age groups believe they can learn better on social networks due to easy access to information, resources, and subject-matter experts, as well as the ease of following and participating. According to this result, adults across all age groups care about the ease of learning through social networks and other technologies. This supports both the opinions of technology acceptance theories (Ma et al., 2021; Rahmawati, 2019) and the results of research with older adults (Zhang & Boot, 2023). Research on motivation theories also supports these results. Social cognition theorists have confirmed that perceived ease of use significantly influences elderly adults' intention to adopt technology (Ma et al., 2021). Similarly, the theory of social learning asserts that self-efficacy conceptually overlaps with ease of use (Rahmawati, 2019).

According to the research results, whether adults use social networks or not and the duration of their use affect their perceptions. This effect is valid for all dimensions of the scale used in this study. This result supports the DIT's "trialability" feature. According to the DIT, innovations that can be tried are adopted faster than those that cannot be tried (Rogers, 1995). Some studies conducted with older adults have shown that early use of technology predicts later use (Forquer et al., 2014; Mitzner et al., 2019; Tsai et al., 2019; Zhang & Boot, 2023). In the study by Zhou et al. (2020), relatedness and tool-related experience mediated the effect on the use of YouTube for learning purposes. This result shows that policymakers should support adults in using the internet. In particular, supporting older adults in lifelong learning will also contribute to their mental well-being during this period.

This study found that adults' perceptions of learning through social networks differ according to the number of friends they have. In addition to whether adults have friends on social networks, the number of friends they have also affects their perceptions. According to the DIT, communication channels play a critical role in increasing the awareness of innovations; in this process, individuals are affected by people with similar characteristics on social networks and model them (Rogers, 1995). The research findings support this theory. Depending on the number of friends, adults' perceptions differ according to personalization, ease of use, and sharing. In the study, having several friends between 301 and 450 appears critical for interaction quality. When the number of friends on the network exceeds these thresholds, the average ranking values decrease. According to Self-Determination Theory (SDT), sociality is one of the basic needs of human nature (Ryan & Deci, 2000). This need may affect adults' awareness of learning based on social networks. Researchers argue that interactive learning is the most effective approach for adult students (Collins, 2021; Nørgård, 2021; Tweedell, 2000). However, having too many friends can adversely affect the perception of learning on social networks by increasing the burden of information and interaction. Research indicates that excessive social media use distracts from learning, leading to lower learning outcomes and increased burnout (Tyrväinen et al., 2025; Timung et al., 2024). Having too many friends weakens the quality of meaningful social ties (Dunbar, 2016).

According to the DIT, individual innovativeness affects the adoption of innovations. This study shows that adults' individual innovativeness and perceptions of learning through social networks move in the same direction. When the value of one variable increases, the other's value increases as well. The relationship level of the variables is moderate.

According to the study's results, a causal relationship cannot be inferred, while other variables that affect the results can. According to the results, age, time spent on social networks, and the number of friends affect adults' perceptions. These and similar variables may also have affected the outcome. Finally, perceptions of social network-based learning and all dimensions were found to be related to all dimensions of individual innovativeness (opinion leadership, openness to experience, and risk-taking), except for resistance to change.

The study was conducted with adults who were trained in PECs. The participants' ages (18-61+) span a wide range. The results of this study support both the theories on the topic and the empirical evidence from other studies. Adults approach innovations as early majority adopters and are aware of social network-based learning. From this perspective, adults' perceptions can support the use of social networks for lifelong learning. The results of this study can provide valuable insights for researchers and practitioners working in the field of lifelong learning. Considering that perceptions influence attitudes and behavioral intentions, practitioners can benefit from social networks when designing adult learning processes focusing on lifelong learning.

The study has some limitations. The first of these limitations arises from the sample size, although it is assumed that the city where the study was conducted represents the population's diversity. This may impact the generalizability of the study findings. Therefore, the study questions can be addressed and examined with larger samples. The second limitation of this study is that the data were collected through self-reporting. A diversity of measurement methods can be incorporated into future studies conducted on similar topics. To explore this topic in greater depth, future studies may employ research methods appropriate to their specific purposes.

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Geniş Özet

Giriş

Sosyal ağlara dayalı öğrenme, bireylerin sosyal medya üzerinden etkileşim kurarak bilgiyi paylaşmaları ve kişiselleştirmeleri yoluyla gerçekleşen bir öğrenme biçimidir (Kumar ve Nanda, 2024). Bu yöntem, yetişkin eğitimine esneklik ve erişilebilirlik kazandırarak yaşam boyu öğrenmeyi desteklemektedir (Ala vd., 2022; Huang vd., 2024). Ancak sosyal medyanın eğitimde nasıl daha etkili kullanılabileceği hâlâ tartışma konusudur (Trang, 2023; Micán vd., 2024).

Rogers'ın Yeniliklerin Yayılımı Kuramı, bireylerin yeni teknolojileri benimseme sürecini açıklamak için sıkça kullanılmaktadır (Rogers, 1995; 2003). Benzer şekilde, TAM, Gerekçeli Eylem Teorisi ve Planlı Davranış Teorisi de teknolojiye yönelik tutumun, davranışsal niyeti etkilediğini vurgular. Araştırmalar bireysel yenilikçiliğin teknoloji kullanımını etkilediğini göstermektedir (Simarmata ve Hia, 2020; Sitar-Taut ve Mican, 2021; Twum vd., 2022).

Yetişkinlerin bu tür dijital öğrenme ortamlarına yönelik algıları, eğitim kurumlarının içerik ve etkileşim süreçlerini yönetmelerine katkı sağlar (Kukulska-Hulme ve Shield, 2008; Nihalani ve Mayrath, 2010). Yetişkin eğitimiyle ilgili çalışmaların sınırlı olması bu alanda yeni araştırmaların gerekliliğini ortaya koymaktadır (Åkerfeldt vd., 2024). Bu çalışma, farklı yaş gruplarını kapsayarak sosyal medya temelli öğrenmenin yaşam boyu öğrenmedeki yerini incelemesi açısından önem taşımaktadır.

Bu araştırmada, yaşam boyu öğrenen yetişkinlerin sosyal ağlara dayalı öğrenme algıları ile bireysel yenilikçilik düzeyleri ve bunlar arasındaki ilişkiler tespit edilmeye çalışılmıştır. Bu kapsamda araştırmada aşağıdaki sorulara cevap aranmaktadır:

1. Yetişkinler bireysel yenilikçilik kategorilerine ve yenilikçilik düzeylerine göre nasıl bir dağılım göstermektedir?

2. Yetişkinlerin sosyal ağa dayalı öğrenmeye ilişkin algıları hangi düzeydedir?

3. Yetişkinlerin sosyal ağa dayalı öğrenme algıları cinsiyet, yaş, eğitim düzeyi, sosyal medya kullanım süresi ve sosyal medyadaki arkadaş sayısına göre anlamlı bir farklılık göstermekte midir?

3.1. Yetişkinlerin sosyal ağa dayalı öğrenme algıları (etkileşim temelli öğrenme, kullanım kolaylığı, paylaşım ve kişiselleştirme) cinsiyete göre anlamlı bir farklılık göstermekte midir?

3.2. Yetişkinlerin sosyal ağa dayalı öğrenme algıları (etkileşim temelli öğrenme, kullanım kolaylığı, paylaşım ve kişiselleştirme) yaşa göre anlamlı bir farklılık göstermekte midir?

3.3. Yetişkinlerin sosyal ağa dayalı öğrenme algıları (etkileşim temelli öğrenme, kullanım kolaylığı, paylaşım ve kişiselleştirme) eğitim düzeyine göre anlamlı bir farklılık göstermekte midir?

3.4. Yetişkinlerin sosyal ağa dayalı öğrenme algıları (etkileşim temelli öğrenme, kullanım kolaylığı, paylaşım ve kişiselleştirme) sosyal ağları kullanma ve kullanmama süresine göre anlamlı bir farklılık göstermekte midir?

3.5. Yetişkinlerin sosyal ağa dayalı öğrenme algıları (etkileşim temelli öğrenme, kullanım kolaylığı, paylaşım ve kişiselleştirme) sosyal ağlardaki arkadaş sayısı açısından anlamlı bir farklılık göstermekte midir?

4. Yetişkinlerin etkileşim temelli öğrenme, kullanım kolaylığı, paylaşım ve kişiselleştirmeye ilişkin algıları cinsiyet, yaş, eğitim düzeyi, sosyal medya kullanım süresi ve sosyal medyadaki arkadaş sayısına göre anlamlı bir farklılık göstermekte midir?

5. Yetişkinlerin sosyal ağa dayalı öğrenme algıları ile bireysel yenilikçilik düzeyleri arasında anlamlı bir ilişki var mıdır?

6. Yetişkinlerin sosyal ağa dayalı öğrenme algıları ve ölçeğin alt boyutları (etkileşim temelli öğrenme, kullanım kolaylığı, paylaşım ve kişiselleştirme) ile bireysel yenilikçilik düzeyleri ve ölçeğin alt boyutları (değişime direnç, fikir liderliği, deneyime açıklık ve risk alma) arasında anlamlı bir ilişki var mıdır?

Yöntem

Bu araştırmada, nicel araştırma yöntemlerinden ilişkisel tarama deseni kullanılmıştır. İlişkisel tarama deseni, iki veya daha fazla değişken arasındaki ilişkiyi ve bu ilişkinin derecesini belirlemeyi amaçlar (Büyüköztürk vd., 2018). Araştırmada, yetişkin eğitiminde sosyal ağlara dayalı öğrenme algısı ile bireysel yenilikçilik düzeyleri arasındaki ilişki incelenmiştir.

Araştırmanın evrenini, 2023-2024 eğitim-öğretim yılında Yalova İl Millî Eğitim Müdürlüğü'ne bağlı Halk Eğitim Merkezleri'nde (HEM) eğitim alan yetişkinler oluştururken, örneklemi bunlar arasından ulaşılan 363 yetişkin oluşturmaktadır. Katılımcılar, amaçlı örneklem yöntemlerinden ölçüt örnekleme kullanılarak seçilmiştir. Ölçütler,

kurslara aktif katılım ve 18 yaş üstü olma olarak belirlenmiştir. Katılımcıların %86,8'i kadın, %13,2'si erkektir. Yaş dağılımı incelendiğinde, %6,3'ü 18-24, %26,7'si 41-50 ve %23,4'ü 51-60 yaş aralığındadır. Eğitim düzeylerine göre, %40,5'i lise ve %33,1'i lisans mezunudur.

Araştırma verileri, Yokuş ve Yelken (2019) tarafından geliştirilen "Sosyal Ağlara Dayalı Öğrenme Algısı (SAD) Ölçeği", Kılıçer ve Odabaşı (2010) tarafından Türkçeye uyarlanan "Bireysel Yenilikçilik Ölçeği (BYÖ)" ve katılımcıların demografik bilgilerini içeren araştırmacılar tarafından hazırlanmış kişisel bilgi formu kullanılarak toplanmıştır. Bireysel Yenlikçilik Ölçeği (Innovativeness Scale-IS) 1977 yılında Hurt, Joseph ve Cook tarafından geliştirilmiştir (Hurt vd., 1977).

Sosyal Ağlara Dayalı Öğrenme Algısı (SAD) Ölçeği'nin yeniden hesaplanan güvenilirlik değeri Cronbach α= 0,96'dır. Ölçeğin alt boyutlarının Croanbach alpha değerleri sırasıyla "Etkileşime Dayalı Öğrenme" α= 0,87, "Kullanım Kolaylığı" α= 0,91, "Paylaşım" α= 0,91, "Kişiselleştirme" α= 0,93'tür.

Dört faktörlü yapıya sahip olan Bireysel Yenilikçilik (BY) Ölçeği'nin yeniden hesaplanan ölçek güvenilirlik değeri Cronbach α= 0,77 olarak bulunmuştur. Ölçeğin alt boyutlarının Croanbach alpha değerleri sırasıyla "Değişime Direnç" için α= 0,80, "Fikir Önderliği" için α= 0,76, "Deneyime Açıklık" için α= 0,82, "Risk Alma" için ise α= 0,83 bulunmuştur.

Araştırma verileri SPSS 21.0 programı ile analiz edilmiştir. Katılımcıların demografik özellikleri yüzde ve frekans dağılımlarıyla incelenmiştir. Ölçek verilerinin normal dağılım gösterip göstermediği Kolmogorov-Smirnov testiyle belirlenmiş ve normal dağılmadığı tespit edilmiştir. Bu nedenle, iki grup karşılaştırmalarında Mann–Whitney U, ikiden fazla grup karşılaştırmalarında ise Kruskal–Wallis H testi kullanılmıştır. Kruskal–Wallis testinde anlamlı farklılık tespit edilen durumlarda gruplar arası farklar Mann–Whitney U testi ile belirlenmiştir. Sosyal ağlara dayalı öğrenme algısı ile bireysel yenilikçilik arasındaki ilişki ise Spearman Sıra Farkları Korelasyonu ile analiz edilmiştir. Ayrıca Kruskal–Wallis testinde etki büyüklüğü (η^2) hesaplanarak bağımsız değişkenin etkisi değerlendirilmiştir.

Bulgular

Araştırmada yetişkinlerin bireysel yenilikçilik kategorileri incelendiğinde, çoğunluğun "sorgulayıcı" kategorisinde yer aldığı görülmüştür. Bunu "kuşkucular", "öncüler", "yenilikçiler" ve "gelenekçiler" takip etmektedir. Araştırma bulgularına göre, yetişkin bireylerin bireysel yenilikçilik kategorilerinde en yüksek oran %55,1 ile "sorgulayıcı" kategorisinde yer almaktadır. Bunu sırasıyla kuşkucu (%22,59), öncü (%14,6), yenilikçi (%4,13) ve gelenekçi (%3,58) kategorileri izlemektedir. Yenilikçilik düzeyine göre ise bireylerin %58,68'inin düşük, %22,04'ünün yüksek ve %19,28'inin orta düzeyde yenilikçi olduğu belirlenmiştir.

Yetişkinlerin çoğunluğunun sosyal ağlara dayalı öğrenme algıları sırasıyla orta (%44,63) ve yüksek (%40,50) ve düşük (%14,87) düzeydedir. Cinsiyet değişkenine göre kadın ve erkek yetişkinler arasında sosyal ağlara dayalı öğrenme algısında anlamlı bir fark tespit edilmemiştir (U=6597,5, p>0,05). Ölçeğin alt boyutlarına göre de kadın yetişkinlerin algıları ile erkek yetişkinlerin algıları arasında istatistiksel olarak anlamlı bir fark gözlenmemiştir ($U_{edö}$=6248,5; U_{kk}=7155,5; U_{P}=6312; U_{k}=7362,5, p>0,05). Yaş gruplarına göre yetişkinlerin sosyal ağlara dayalı öğrenme algı düzeyi ortalamaları arasında istatiksel olarak anlamlı bir fark gözlenmiştir ($X^2_{(5)}$ =17,779, p<0,05). Bulgular ölçeğin alt boyutlarına göre değerlendirildiğinde; kullanım kolaylığı boyutu dışında ($X^2_{kk(5)}$ = 10,969, p<0,05) sırasıyla etkileşime dayalı öğrenme, paylaşım ve kişiselleştirme boyutlarına göre de ($X^2_{edö\ (5)}$ = 10.969; $X^2_{p(5)}$ = 22,574; $X^2_{k(5)}$= 15,870, p<0,05) yetişkinlerin algı düzeyi ortalamaları arasında istatiksel olarak anlamlı bir fark gözlenmiştir. Yapılan çoklu karşılaştırmalar sonunda farkın 18-24 ile 61 ve üstü yaşları arasında (U=346,5, p <0,05); 25-30 ile 41-50 yaşları arasında (U=789, p<0,05); 25-30 ile 61 ve üstü yaşları arasında (U= 330, p <0.05); 31-40 ile 61 ve üstü yaşları arasında (U=1674, p<0,05); 41-50 ile 61 ve üstü yaşları arasında (U=1963, p<0,05) ve 51-60 ile 61 ve üstü yaşları arasında (U=1703, p<0,05) olduğu ortaya çıkmıştır (p<0,05).

Eğitim düzeyine göre katılımcıların sosyal ağlara dayalı öğrenme algı düzeyi ortalamaları arasında istatiksel olarak anlamlı bir fark ortaya çıkmamıştır (X^2=5,985, p>0,05). Bulgular ölçeğin alt boyutlarına göre değerlendirildiğinde, eğitim düzeyine göre ölçeğin tüm alt boyutlarında sırasıyla ($X^2_{edö(5)}$ = 3,956, $X^2_{kk(5)}$ = 7,611, $X^2_{p(5)}$) = 6,693, $X^2_{k(5)}$ = 4,897, p>0,05) yetişkinlerin sosyal ağlara dayalı öğrenme algı düzeyi ortalamaları arasında istatiksel olarak anlamlı bir fark gözlenmemiştir.

Sosyal ağ kullanma süresine göre yetişkinlerin sosyal ağlara dayalı öğrenme algı düzeyi ortalamaları arasında istatiksel olarak anlamlı bir fark ortaya çıkmıştır (X^2=23,492, p<0,05). Bu farkın etki büyüklüğü hesaplanmış ve η2=0,064 olarak bulunmuştur. Etki büyüklüğü değerinin, ölçek geneli için "orta etki" düzeyinde olduğu görülmüştür. Bulgular birlikte değerlendirildiğinde yetişkinlerin sosyal ağ kullanma süresinin, sosyal ağlara dayalı öğrenme algıları üzerinde etkili bir değişken olduğu ifade edilebilir. Bulgular ölçeğin alt boyutlarına göre değerlendirildiğinde, günde kullanılan sosyal ağ süresine göre ölçeğin tüm alt boyutlarında sırasıyla ($X^2_{edö(3)}$ = 18,497, $X^2_{kk(3)}$ = 12,787, $X^2_{p(3)}$ = 23,951, $X^2_{k(3)}$ = 19,399, p<0,05) anlamlı fark çıkmıştır. Yapılan çoklu karşılaştırmalar sonucunda hiç kullanmayanlar ile günde 1-3 saat kullananlar arasında (U=755, p<0,05), hiç kullanmayanlar ile günde 3 saatten fazla kullananlar arasında (U=158,

p<0,05), günde 1 saatten az kullananlar ile günde 1-3 saat kullananlar arasında (U=8991, p<0,05), günde 1 saatten az kullananlar ile günde 3 saatten fazla kullananlar arasında (U=1751, p<0,05) ve günde 1-3 saat kullananlar ile günde 3 saatten fazla kullananlar arasında (U=2941,5, p<0,05) olduğu ortaya çıkmıştır.

Sosyal ağdaki arkadaş sayısına göre katılımcıların sosyal ağlara dayalı öğrenme algılarında istatistiksel olarak anlamlı fark bulunmuştur (X^2=17.605, p<0,05). Etki büyüklüğü η^2=0,048 olup, bu değerin "küçük etki" düzeyinde olduğu görülmüştür. Bu sonuç, sosyal ağdaki arkadaş sayısının öğrenme algısı üzerinde etkili olduğunu göstermektedir. Ölçeğin alt boyutları incelendiğinde, arkadaş sayısına göre tüm alt boyutlarda anlamlı fark saptanmıştır ($X^2_{edö}$=10,016; X^2_{kk}=13,133; X^2_p=17,953; X^2_k=15,884; p<0,05). Çoklu karşılaştırmalarda farkın; arkadaşı olmayan bireyler ile 1–150 (U=986), 151–300 (U=321), 451–600 (U=30,5) ve 601+ (U=117) arkadaşı olanlar arasında; ayrıca 1–150 ile 451–600 (U=802,5) ve 301–450 ile 451–600 (U=164,5) arasında anlamlı olduğu görülmüştür (p<0,05). Yetişkinlerin sosyal ağlara dayalı öğrenme algıları ile bireysel yenilikçilik düzeyleri arasında pozitif yönde ve orta düzeyde anlamlı bir ilişki olduğu ortaya çıkmıştır (r = 0,307; p<0,01). Buna göre, yetişkinlerin bireysel yenilikçilik düzeyleri arttıkça sosyal ağlara dayalı öğrenme algılarının arttığı, bireysel yenilikçilik düzeyleri azaldıkça sosyal ağlara dayalı öğrenme algılarının azaldığı söylenebilir.

Sosyal ağlara dayalı öğrenme algısı ve ölçek alt boyutları ile bireysel yenilikçilik ve ölçek alt boyutları arasındaki Spearman Sıra Farkları Korelasyon işlemi sonuçlarına bakıldığında bireysel yenilikçiliğin alt boyutu olan "değişime direnç" dışındaki tüm alt boyutlar arasında anlamlı bir farklılaşma olduğu görülmektedir (p<0,05). Alt boyutlar arasındaki farklılaşmaların çoğunluğunun r değerinin 0 ila 1 arasında bir değer olması sebebiyle pozitif yönde bir ilişki olduğu ortaya çıkmıştır.

Sonuç, Tartışma ve Öneriler

Bu araştırma, Türkiye'de yaşam boyu öğrenen yetişkinlerin sosyal ağlara dayalı öğrenme algıları ile bireysel yenilikçilik düzeyleri arasındaki ilişkiyi incelemektedir. Araştırma sonuçlarına göre, bireylerin büyük çoğunluğu "sorgulayıcı" yenilikçilik kategorisinde yer almakta ve genel olarak düşük düzeyde yenilikçi olarak değerlendirilmektedir. Bu durum, bireylerin yeniliklere temkinli yaklaştığını göstermektedir (Rogers, 1995; 2003). Bu bulgular, daha önce öğretmenler ve öğretmen adaylarıyla yapılan çalışmalarla da paralellik göstermektedir (Kayasandık, 2017; Kılıç, 2015; Uras, 2000; Akça ve Şakar, 2017; Kılıçer, 2011; Kert ve Tekdal, 2012; Özgür, 2013).

Yetişkinlerin sosyal ağlara dayalı öğrenme algıları ise genel olarak orta ve ortanın üzerinde bulunmuştur. Bu durum, daha önceki araştırmalarla da benzerlik göstermektedir (Akgül, 2022; Yenen, 2020). Yeniliklere kuşkuyla yaklaşmalarına rağmen, bireylerin sosyal ağlarla öğrenmeye dair olumlu bir farkındalık geliştirdiği görülmektedir. İnceoğlu (2000) tutumların davranış üzerinde belirleyici olduğunu belirtirken, Gardner (1990) yenilikleri anlamamanın yenilikçilik önünde engel oluşturduğunu ifade etmektedir. Sosyal ağlar bu bağlamda yaşam boyu öğrenme süreçleri için önemli bir potansiyel taşımaktadır. Zhou ve diğerlerinin (2020) çalışması da bu görüşü desteklemekte ve sosyal medya kullanımında tutumun etkili olduğunu göstermektedir.

Cinsiyet ve eğitim düzeyine göre sosyal ağlara dayalı öğrenme algılarında anlamlı bir farklılık tespit edilmemiştir. Bu sonuç bazı araştırmalarla örtüşse de (Arts vd., 2011; Im vd., 2003), eğitim ve cinsiyetin teknoloji kullanımını etkilediğini savunan çalışmalarla çelişmektedir (Lee vd., 2003; Aldahdouh vd., 2020; Bubou ve Job, 2022; Demirsoy, 2005). TÜİK (2024) verilerine göre internet kullanımı erkeklerde daha yaygın olsa da internetten öğrenme faaliyeti gerçekleştiren kadın oranı erkeklerden fazladır.

Araştırmada yaş faktörünün öğrenme algısı üzerinde etkili olduğu görülmüştür. Yaş arttıkça sosyal ağlara dayalı öğrenme algısında azalma gözlemlenmiştir (Rogers, 1983; Escobar-Rodríguez ve Bartual-Sopena, 2015; Hauk vd., 2018; Tsai vd., 2019; Üstün, 2023). Ancak sosyal ağların kullanım kolaylığı açısından yaşa bağlı bir fark tespit edilmemiştir.

Sosyal medya kullanım süresi de öğrenme algısını etkileyen önemli bir değişkendir. Tüm alt boyutlarda bu etki belirgin şekilde görülmüştür (Forquer vd., 2014; Mitzner vd., 2019; Zhang ve Boot, 2023). Ayrıca sosyal ağlardaki arkadaş sayısına göre de öğrenme algısında farklılıklar saptanmıştır; bu fark özellikle "etkileşime dayalı öğrenme" dışındaki boyutlarda anlamlıdır.

Araştırmanın önemli bir sonucu da bireysel yenilikçilik ile sosyal ağlara dayalı öğrenme algısı arasında pozitif bir ilişki bulunmasıdır. Yenilikçilik düzeyi arttıkça öğrenme algısı da yükselmektedir (Cho vd., 2023; Simarmata ve Hia, 2020; Sitar-Taut ve Mican, 2021; Strzelecki, 2023). Yenilikçiliğin alt boyutları olan fikir önderliği, deneyime açıklık ve risk alma da öğrenme algısının tüm boyutlarıyla ilişkilidir (Lio vd., 2015; Saparudin vd., 2024; Lewis vd., 2003). Bu durum, bireysel yenilikçiliğin öğrenme tutumu ve niyetleri üzerinde belirleyici olduğunu göstermektedir.

Bu çalışma, geniş yaş aralığındaki yetişkinlerle yürütülmesi nedeniyle benzer araştırmalardan ayrılmakta ve hem kuramsal hem de ampirik bilgileri desteklemektedir. Yetişkinlerin sosyal ağlara dayalı öğrenme algılarının olumlu

olması, bu araçların yaşam boyu öğrenmede kullanılma potansiyelini ortaya koymaktadır. Uygulayıcılar bu bulguları dikkate alarak yetişkin eğitiminde sosyal ağlardan daha etkin şekilde faydalanabilir.

Gelecekte yapılacak araştırmalarda örneklem çeşitliliği artırılabilir ve farklı veri toplama yöntemleri kullanılabilir. Yetişkin eğitimi alanında kısıtlı çalışmalar bulunmaktadır. Bu konuda daha kapsamlı ele alınması amacıyla, yeni çalışmanın doğasına uygun farklı araştırma yöntemleri uygulanabilir.

Declaration of Publication Ethics

This study was reviewed by the Bursa Uludağ University Social and Human Sciences Scientific Research and Publication Ethics Committee, December 18, 2023 and numbered 2023-12 was issued. This research, from planning and implementation to data collection and analysis, follows the "Publication Ethics Guidelines for Higher Education Institutions". All rules specified in the process were followed. None of the actions mentioned under the title of "Actions Contrary to Scientific Research and Publication Ethics", which is the second part of the directive, has been carried out. During the writing process of this research, scientific, ethical, and citation rules were followed. No falsification was made of the collected data. This study has not been submitted for evaluation to any other academic publication environment.

Declaration of Contribution of Researchers

The authors of the study contributed equally to all processes of the research.

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