| Research Article / Araştırma Makalesi|

A Study on the Reliability and Validity of the Social Media Leadership Scale in Education Organizations Sample

Sosyal Medya Liderliği Ölçeğinin Eğitim Örgütleri Örnekleminde Geçerlik ve Güvenirlik Çalışması

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Abstract

Purpose: In this study, it is aimed to develop a Likert-type scale that can measure the status of managers and employees working in organizations in the context of social media leadership in a sample of educational organizations.

Design/Methodology/Approach: The study was conducted on teachers working in schools affiliated with the Ministry of National Education during the 2022–2023 academic year. Expert opinions were sought to ensure the construct validity of the scale. The content validity rates of the items were determined, and the content validity index of the scale was calculated as 0.88. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were conducted to test the validity of the scale. KMO and Bartlett tests were used to determine the suitability of the obtained data for factor analysis. The EFA revealed that the scale had a 5-factor structure, which was then confirmed by the CFA. The CFA results were supported by acceptable and excellent fit values. The conformity and validity of the scale and the correlation between the factors were calculated. The internal consistency reliability coefficient was used to determine the reliability of the scale. After the aforementioned procedures, the Social Media Leadership Scale (SMLLS) was developed. The SMLLS consists of 24 items with 5 factors: guidance, innovation, ethical principles, sensitivity, and awareness. The lowest score on the scale is 24, and the highest score is 120.

Findings: The SMLS is a measurement tool developed to determine the leadership levels of social media users. The findings regarding the validity and reliability of the scale indicate that it has sufficient psychometric properties to determine the leadership levels of social media users.

Highlights: This scale can be used to assess the current status of teachers and administrators working at various levels within educational institutions in the context of social media leadership.

Öz

Çalışmanın amacı: Bu araştırmada örgütlerde görev yapan yöneticilerin ve iş görenlerin sosyal medya liderliği bağlamındaki durumlarını ölçebilecek likert tipi bir ölçeğin eğitim örgütleri örnekleminde geliştirilmesi amaçlanmıştır.

Materyal ve Yöntem: Ölçek geliştirme çalışması 2022-2023 eğitim öğretim yılında Milli Eğitim Bakanlığına bağlı okullarda görev yapan öğretmenler üzerinde gerçekleştirilmiştir. Ölçeğin kapsam geçerliğinin sağlanması amacıyla uzman görüşlerine başvurulmuştur. Bu değerlendirmenin ardından maddelerin kapsam geçerlik oranları belirlenmiş ve ölçeğin kapsam geçerlik indeksi .88 olarak hesaplanmıştır. Ölçeğin geçerliği için Açımlayıcı Faktör Analizi (AFA) ve Doğrulayıcı Faktör Analizi (DFA) gerçekleştirilmiştir. Elde edilen verilerin faktör analizi açısından uygunluğunun tespit edilmesi amacıyla KMO ve Bartlett testleriyle sınanmıştır. AFA ile ölçeğin 5 faktörlü bir yapıda olduğu belirlenmiştir. Sonrasında AFA ile ortaya çıkan 5 faktörlü yapı DFA ile doğrulanmıştır. DFA sonuçlarının uygunluğu ve yeterliği kabul edilebilir ve mükemmel uyum değerleriyle desteklenmiştir. Ölçeğin uyum geçerliği, faktörler arasındaki korelasyon hesaplanmıştır. Ölçeğin güvenilirliği ise iç tutarlılık güvenirlik katsayısı hesaplanarak belirlenmiştir. Söz konusu işlemlerin ardından yönlendirme, yenilikçilik, etik ilkeler, duyarlılık ve farkındalık olmak üzere 5 faktörlü ve 24 maddeden oluşan Sosyal Medya Liderliği Ölçeği (SMLÖ) geliştirilmiştir. Ölçekteki en düşük puan 24, en yüksek puan ise 120'dir.

Bulgular: SMLÖ sosyal medya kullanıcılarının sosyal medyadaki liderlik düzeylerini belirlemek amacıyla geliştirilmiş bir ölçme aracıdır. Ölçeğin geçerliğine ve güvenirliğine dair elde edilen bulgular, bu ölçeğin sosyal medya kullanıcılarının liderlik düzeylerini belirleme konusunda yeterli psikometrik özelliklere sahip olduğunu göstermektedir.

Önemli Vurgular: Bu ölçek eğitim örgütlerinde farklı kademelerde çalışan öğretmenlerin ve yöneticilerin sosyal medya liderliği bağlamındaki mevcut durumlarını ortaya koymak için kullanılabilir.

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INTRODUCTION

"Social media" refers to online platforms that enable individuals to share their thoughts, exchange experiences, and build connections through various forms of content, such as messages or photos (Eraslan, 2020). The rise of social media, including social networking sites, has become popular with the advancement of Web 2.0 technology in the 2000s, allowing businesses to conduct operations, such as public relations, marketing, and advertising, on the internet (Güçdemir, 2017). Organizations can benefit from social media strategies to gain insights from their stakeholders. Real-time communication can speed up decision-making for leaders by helping them quickly obtain relevant information. Companies can use social media platforms to promote products and services, interact with customers, and foster connections with employees (Kaur et al., 2015). Many organizations also strive to boost employee motivation and engagement using social media platforms. Additionally, social media can serve as a means of internal communication within organizations (Schiff, 2014).

Social media allows employees to freely share their work experiences within an organization, as well as discover new opportunities in their chosen industry (Chesbrough, 2011). Managers can gather information on employee attitudes toward the organization and their work based on employees' online posts (Kaur et al., 2015). Furthermore, organizations that employ social media strategies can gain a competitive edge in effectively engaging with stakeholders. Real-time communication allows decision-makers to quickly collect pertinent information and incorporate it into their decision-making process (Jucan et al., 2013).

The utilization of social media platforms by organizations presents both advantages and potential drawbacks that can result in shifts in managerial practices. The implementation of social media tools that facilitate interaction and networking has brought about modifications in leadership styles within organizations. For instance, a study by Haider et al. (2016) in China discovered that social media has increased the likelihood of public officials adopting transformational leadership behaviors. Furthermore, Carboni and Maxwell (2015) observed that numerous non-profit organizations have adapted their leadership approach to encompass effective engagement on social media platforms. Pallikara (2021) also disclosed that amid the COVID-19 pandemic, leaders have adjusted their communication style to effectively engage with their followers.

As noted by Haslam et al. (2011), effective leaders play a crucial role in motivating and empowering followers to take proactive measures and assume responsibility in response to evolving social circumstances. The success of this transition hinges on how followers perceive the leader within their group (Steffens et al., 2014). The social identity approach provides insight into the attitudes of followers during this process, suggesting that leaders can convert individual efforts into collective action by fostering a shared sense of social identity (Reicher et al., 2005). Therefore, it is expected that leaders perceived by their followers as part of their group within organizations will have greater influence. Additionally, according to the social identity approach, leaders are involved in clarifying and shaping followers' understanding of the organization by establishing its standards and objectives (Haslam et al., 2011). Moreover, various leadership theories and methods, including transformational leadership, situational leadership, and leader-member exchange (LMX), highlight the importance of establishing relationships and connecting with followers. Therefore, leadership is a process centered on building connections with individuals (Bass & Bass, 2009). From this viewpoint, it can be argued that effective communication between leaders and their followers via social media is crucial for those in leadership positions within organizations.

The current body of literature demonstrates a notable surge in research focusing on leaders' utilization of social media across various fields in recent years. These fields encompass business and management (Fei, 2024), healthcare management (Naidoo et al., 2018), sociology (Yates & Lockley, 2018), public relations (Luo et al., 2015), and education (Bal et al., 2015). Nevertheless, it is crucial to acknowledge that the concept of social media leadership remains inadequately addressed in existing literature, with no extensive developmental study on this subject. In this context, the present study seeks to elucidate the dimensions of social media leadership within educational institutions. To achieve this objective, an initial discussion on the conceptual underpinnings of social media leadership is warranted.

Social Media Leadership

In the past two decades, the use and significance of social media have significantly increased. For instance, as of 2015, around 65% of American adults were reported to be using social media platforms for information exchange, marking a nearly tenfold increase within the last decade (Perrin, 2015). Furthermore, the emergence of social media applications in recent years has altered face-to-face interactions toward online relationships. Consequently, the ability to make offline friends has become a factor in achieving success in life (Palalic et al., 2022). Some studies have indicated that expressing emotions and thoughts through online platforms contributes to the formation of psychological groups and the development of associated norms, resulting in collective action (Bliuc et al., 2007; Foster, 2019). Notably, certain social media platforms such as Instagram and TikTok have replaced the option of making online friends with a "following" feature, leading to some users amassing more followers than others. This has caused these individuals to be viewed as opinion leaders (Casalo et al., 2020). Consequently, organizations and communities have become more involved in social media platforms, allowing them to carry out administrative processes more efficiently and rapidly while also maintaining and strengthening communication with their followers (McCorkindale & Distaso, 2014). However, it is crucial for leaders directing the communication processes of organizations and groups to acknowledge their significant responsibility in this context.

In recent research, it has been found that various types of leaders, including religious, business, and educational leaders, are increasingly interested in using social media (Matthews et al., 2022). This trend has led to a growing focus on how leaders can effectively use social media in their leadership approaches. Studies have highlighted the significance of leaders' proficient use of social media platforms. These platforms can help leaders in numerous ways, including motivating followers, engaging in conversations, communicating with stakeholders, and managing their public image (Ahlquist, 2014; Barnes & Hersh, 2012; Christopoulos, 2016; Davis et al., 2014; Gruber et al., 2015; Kaplan & Haenlein, 2010). Furthermore, research has suggested that leaders should utilize social media as a tool for direct and sincere communication with their followers, protecting their reputation, building a positive public image, and mobilizing supporters (Alghawi et al., 2014; Chandler & Munday, 2011; Jiang et al., 2017; Luo et al., 2015; Peltier, 2021).

Social media interaction has both positive and negative aspects. While it can connect people and spread information, it also has a dark side. Social media can put individuals, communities, companies, and even society at risk. Cyberbullying, addictive use, trolling, fake news, and privacy breaches are some examples of the negative impact of social media according to Baccarella et al. (2018). Leaders need to be mindful of this dark side of social media when managing their organizations or communicating with their audiences.

The concept of social media leadership has gained prominence, especially in significant social movements such as the Arab Spring (Uysal et al., 2021). However, research on this topic often focuses on the relationship between social media and leadership (Asghar et al., 2023; Billington & Billington, 2012; Chen et al., 2021; Heavey et al., 2020). This gap in the literature has motivated the undertaking of this study. The dimensions of the social media scale developed within the scope of this research are outlined in Figure 1.
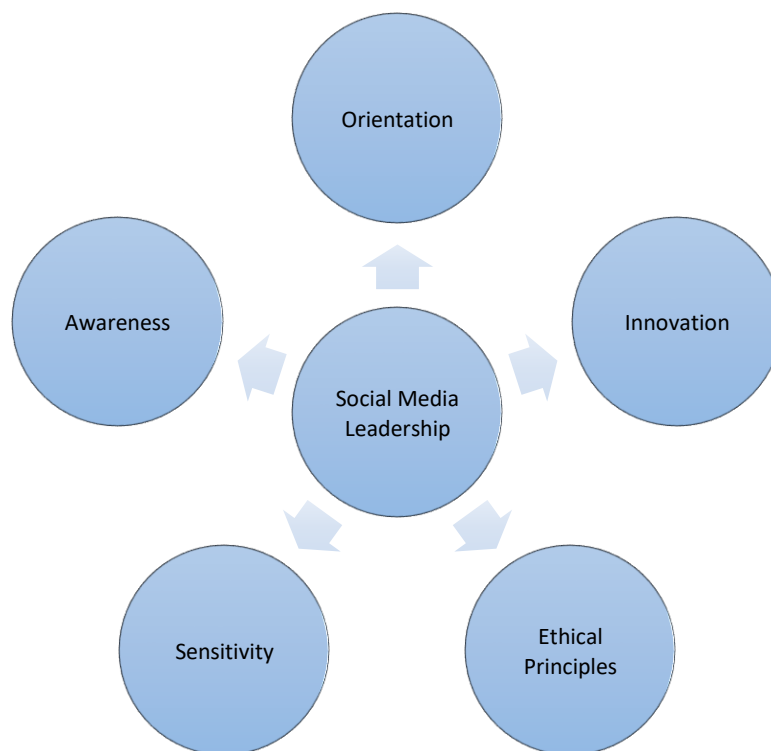

Figure 1. Dimensions of social media leadership

As per Figure 1, social media leadership comprises five dimensions: orientation, innovation, ethical principles, sensitivity, and awareness. These dimensions were developed based on the fundamental qualities of leadership (Erçetin, 2000). Therefore, a social media leader should possess traits that guide their followers (Dukhaykh, 2021; Goleman, 2018; Lalancette & Raynauld, 2017; Lindholm et al., 2020). A social media leader serves as an example to their followers, keeps them informed, and influences their thoughts and behaviors. Moreover, a social media leader should demonstrate innovativeness (Bance & Briones, 2023; Dargan & Shucksmith, 2008; Newman et al., 2017; Rehmani et al., 2023). This entails closely following platform innovations, utilizing new features and applications, expanding their network through new social media platforms, making simultaneous posts across various applications, striving for effective social media usage, and seeking professional support as needed. Additionally, social media leaders are highly mindful of ethical considerations (Krishnan, 2023; Middlebrooks et al., 2009). In this regard, they should be cautious about their language use, refrain from claiming others' content as their own, and abstain from following accounts that share illegal content. Furthermore, social media leaders should also display sensitivity (Akdevelioğlu & Kara, 2020; Gruda et al., 2021; Shore, 2006).

In the realm of social media, influential figures often impart their perspectives to their followers, providing both inspiration and valuable information during tumultuous periods. Remaining abreast of accurate information, current events, and emerging trends holds significant importance (Martínez-Córcole, 2018; Yue et al., 2023; Yousefinaghani et al., 2022). Consequently, these social media figures perceive the platform as a means to bolster individuals' social capital, granting them heightened influence and recognition in the physical realm, and consider it pivotal in shaping public opinion effectively. Within this framework, the present study seeks to scrutinize the psychometric properties of the social media leadership scale within educational institutions. The study will address the following sub-issues:

1. Does the social media leadership scale validly measure the leadership characteristics of social media users in a sample of educational organizations?

2. Does the social media leadership scale reliably measure the leadership characteristics of social media users in a sample of educational organizations?

METHOD

This study aims to develop the Social Media Leadership Scale (SMLS) in educational organizations, as outlined in the research conducted by Gliner et al. in 2016. The methodology section of the research presents the stages of the scale development process and details the characteristics of the research sample.

Research Sample

The study sample includes teachers working in schools affiliated with the Ministry of National Education during the 2022-2023 academic year. This sample consisted of randomly selected and accessible teachers. In this context, 322 teachers were reached for Exploratory Factor Analysis and 340 teachers for Confirmatory Factor Analysis. Information about the first and second samples used in this research is provided in Table 1.

Table 1. Information on the Research Sample

Sample	Gender	Frequency(f)	Percent (%)
	Female	199	%61,8
First Sample	Male	123	%38,2
	Total	322	%100
	Female	231	%67,9
Second Sample	Male	109	%32,1
	Total	340	%100

When analyzing Table 1, it can be observed that the first sample of the research comprised 322 teachers, with 61.8% being female and 38.2% being male. Additionally, the second sample consisted of 340 teachers, with 67.9% being female and 32.1% being male.

Scale Development Process

The process of scale development follows a set of standard steps outlined by AERA, APA, & NCME (2014), DeVellis & Thorpe (2022), Malhotra (2006), and Simms (2008). Accordingly, the scale development process was executed by adhering to the following steps.

Identifying the Characteristics of the Construct to be Measured: In order to identify all the attributes of the construct to be measured, a review of national and international literature was conducted using keywords such as "social media," "social media leadership," and "social media leadership scale." While many sources related to social media were found, there were not enough sources specifically related to the concepts of social media leadership and social media leadership scale. Therefore, in determining the characteristics of the construct to be measured, the dynamics of social media were blended with the specific characteristics of the concept of leadership.

Creation of the Item Pool: An item pool consisting of 44 items was created to assess the social media leadership of employees within organizations after identifying all the features of the construct to be measured. Care was taken to ensure that the items were concise, clear, and unambiguous.

Submission of the Item Pool to Expert Opinion: Prior to seeking expert opinion, the researchers conducted an analysis of 44 items in the item pool. Following this analysis, they made the decision to consolidate certain items that assessed similar traits, ultimately reducing the item pool to 42 items. This consolidation was necessary as two of the combined items measured scenarios that could be viewed as opposing each other in the Orientation dimension. Additionally, two other items were merged due to their proximity in the ethical principles sub-dimension of social media leadership. Opinions from six leadership and communication experts, a measurement and evaluation expert, and a Turkish language and literature expert were sought. The experts evaluated

the items as "measures what is desired," "relevant but unnecessary," and "does not measure what is desired," to calculate the content validity ratios (CVR) and the content validity index (CVI). After removing 5 items with a CVR value less than .75, the CVI was calculated as .88, indicating good content validity. According to Batdı (2013), a CVI value greater than the CVI indicates good content validity. Hence, the remaining 37 items in the item pool were considered to have significant content validity.

Pretesting the Measurement Tool: Following expert advice, 10 teachers personally pretested 37 items from the item pool. During this process, the answering behaviors of the participants were examined, and no problems were identified. The average time taken by each respondent was calculated to be 3 minutes.

Application of the Measurement Instrument to the Sample: After the pretest, 37 items were administered to 322 teachers for exploratory factor analysis (EFA). According to Çokluk et al. (2012), scale development studies should be conducted with a minimum of 300 participants. In this regard, it is evident that the sample size is sufficient for factor analyses. The items in the scale were rated on a five-point Likert scale as follows: (1) Strongly Disagree, (2) Disagree, (3) Undecided, (4) Agree, (5) Strongly Agree.

Analyzing the Data

The Microsoft Excel program was used to calculate the CSR and CGI values based on expert opinions of the items in the item pool. Additionally, an exploratory factor analysis (EFA) was conducted using the SPSS 26 package, and confirmatory factor analysis (CFA) was performed using the AMOS package.

Research Ethics

For the data collection process carried out during the scale development, ethics committee permission for the research was granted by the Bayburt University Ethics Committee Senate in a meeting dated June 20, 2023, numbered 229.

FINDINGS

Findings Related to the Validity of the Scale

In the scope of the research, EFA and CFA methods were used to examine the construct validity of the SMLS.

Findings Related to Exploratory Factor Analysis

Before conducting the exploratory factor analysis (EFA), Kaiser-Meyer-Olkin (KMO) test, which assesses the sampling adequacy, and Bartlett's test of sphericity, used to determine the suitability of the data for factor analysis, were performed (Akdağ, 2011). According to the results of these tests (KMO = .872, Bartlett's Test of Sphericity = 5302.497, df = 666, p = .000), it was established that the data were suitable for factor analysis (Büyüköztürk, 2014; Şencan, 2005). Subsequently, exploratory factor analysis (EFA) was initiated, and the obtained factors were subjected to axis rotation. Varimax, a common orthogonal rotation technique, was used in this study to reveal which items had a higher correlation with the factors (Büyüköztürk, 2014, p. 136; Özdamar, 1999, p. 247). After subsequent exploratory factor analyses, 13 items that did not meet the criteria were eliminated, and the remaining 24 items were reanalyzed. Additionally, the scree plot graph was analyzed to confirm the number of factors on the scale.
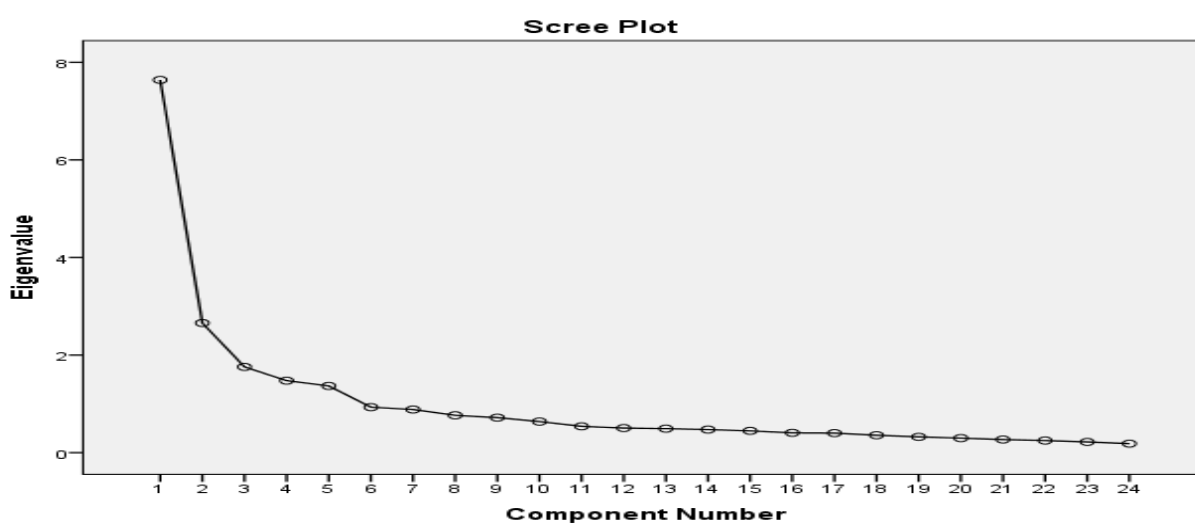

Figure 2. Secree Plot Graph of SMLS

The findings from Figure 2 indicated a horizontal shift in the line's slope after the 6th point. Upon counting the point intervals until that point, it was discovered that the scale had five factors. A content analysis was conducted on the distribution of items among the factors, resulting in the following names: orientation (comprised of 8 items: 7, 8, 9, 10, 13, 14, 15, 18), innovation (comprised of 6 items: 23, 24, 25, 26, 27, 29), ethical principles (comprised of 4 items: 33, 34, 35, 37), sensitivity (comprised of 3

items: 2, 5, 6), and awareness (comprised of 3 items: 1, 3, 4). Following the exploratory factor analysis (EFA), the sub-dimensions of the 24-item SMLS and the factor loadings of the items are presented in Table 2.

Table 2. Information on the Sub-Dimensions of the SMLS (N=322)

Items	Communalities	Orientation	Innovation	Ethical Principles	Sensitivity	Awareness
14	0,680	0,805				
10	0,682	0,799				
13	0,654	0,778				
8	0,690	0,764				
9	0,665	0,762				
7	0,647	0,747				
15	0,546	0,685				
18	0,554	0,578				
25	0,672		0,781			
24	0,661		0,738			
29	0,584		0,717			
26	0,559		0,672			
27	0,690		0,671			
23	0,582		0,666			
35	0,719			0,840		
34	0,689			0,823		
33	0,498			0,687		
7	0,494			0,547		
6	0,480				0,813	
5	0,597				0,714	
2	0,463				0,629	
3	0,709					0,818
1	0,671					0,783
4	0,480					0,576
KMO=0,872						
Bartlett Sphericity Test= 5302,497; p= .000						
Eigenvalue		7,639	2,657	1,758	1,476	1,367
Variance Explanation Ratio = (%)62,072 (Total)		20,862	15,434	9,557	8,588	7,631
Cronbach Alpha= 0,893 (Total)		0,913	0,865	0,736	0,661	0,653

Note: Factor loadings below .30 are not shown here.

Based on the findings in Table 2, it was observed that the item factor loadings ranged between 0.576 and 0.840. The exploratory factor analysis (EFA) revealed that the scale comprised a total of 24 items and had a 5-factor structure. Furthermore, it was found that the total explained variance level was 62.072%. Kline (1994) suggested that a total variance explanation of 40% or higher is an important indicator for the construct validity of the scale. Consequently, it can be concluded that the scale demonstrated good construct validity.

Table 3. Correlation Matrix Between Factors

	Orientation	Innovation	Ethical Principles	Sensitivity	Awareness
Orientation	1	,524**	,234**	,253**	,401**
Innovation		1	,060	,301**	,479**
Ethical Principles			1	,300**	,249**
Sensitivity				1	,378**
Awareness					1

In the analyses conducted during the research process, the relationship between the sub-dimensions of the scale was examined, and the correlation coefficients between the factors are presented in Table 3. Upon analyzing the table, it is evident that there is no relationship between the dimensions of ethical principles and innovativeness, but there is a relationship between the other dimensions. Consequently, it can be concluded that the factors have a positive and significant relationship with each other, except for the relationship between these two dimensions.

Findings Related to Confirmatory Factor Analysis

Due to the potential of obtaining misleading findings, it is recommended by researchers to use different samples for EFA and CFA (Çokluk et al., 2012; Henson & Roberts, 2006). Accordingly, CFA was conducted to test the five-factor and 24-item structure of the SMLS, utilizing data from a new sample comprising 316 participants. The t values for explaining the observed variables as latent variables were found to be significant at the .01 level for the 5-factor model (Çokluk et al., 2012), suggesting that there were no serious issues in the tested model. Table 4 presents a comparison of the goodness-of-fit values obtained before and after the model modification.

Table 4. CFA Fit Indices of the SMLS (N=340)

Goodness of fit values	Perfect	Acceptable	Finding before modification	Finding after modification
X^2/sd	0-2,5	2,5-3	2.802	2.081
RMSEA	≤ 0,05	≤ 0,08	.076	.059
RMR	≤ 0,05	≤ 0,08	.066	.060
SRMR	≤ 0,05	≤ 0,08	.070	.057
NFI	≥ 0,95	≥ 0,90	.82	.87
CFI	≥ 0,95	≥ 0,90	.84	.92
IFI	≥ 0,95	≥ 0,90	.87	.93
GFI	≥ 0,90	≥ 0,85	.84	.89
AGFI	≥ 0,90	≥ 0,85	.81	.86

When Table 4 is examined, it is seen that the NFI value is .87. Hooper et al. (2008) stated that NFI values up to .80 are acceptable. In this respect, the values presented in the table regarding the goodness of fit are described as "excellent" and "acceptable" according to the generally accepted criteria in the relevant literature (Çokluk et al., 2012; Seçer, 2013; Şimşek, 2007). This is also shown in the path diagram in Figure 3.
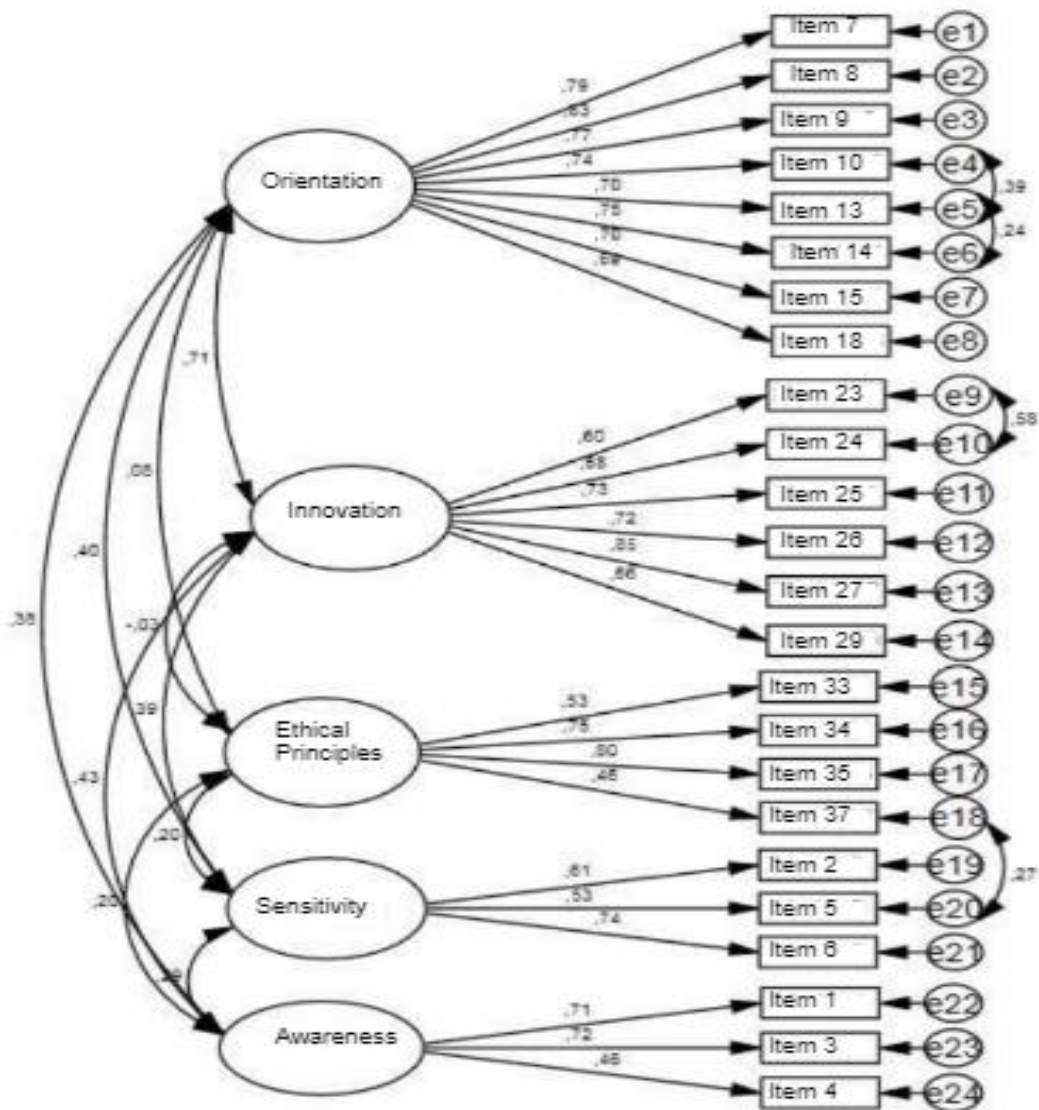
Figure 3. Path Diagram of SMLS

When examining Figure 3, it is observed that the factor loadings of the SMLS model range between .46 and .85.

Findings Related to Reliability

Based on the data obtained in the pilot applications, the reliability of the 5-factor model after both EFA and CFA was tested by calculating the Cronbach's Alpha value. The Cronbach's Alpha reliability coefficients for the internal consistency of the data from the scale after EFA were calculated as 0.91 for the orientation factor, 0.87 for the innovation factor, 0.73 for the ethical principles factor, 0.66 for the sensitivity factor, and finally 0.65 for the awareness factor. Additionally, the reliability coefficient for the overall scale was calculated at 0.893.

After CFA, Cronbach's Alpha reliability coefficients were calculated as 0.90 for the orientation factor, 0.89 for the innovation factor, 0.72 for the ethical principles factor, 0.78 for the sensitivity factor, and finally 0.75 for the awareness factor. Additionally, the reliability coefficient for the overall scale was calculated at 0.898. Scales with reliability values of .70 and above are considered to have sufficient reliability in scale development processes (Büyüköztürk, 2014; Seçer, 2013). Therefore, considering the values obtained as a result of the analyses, it can be concluded that the scale is reliable.

CONCLUSION AND RECOMMENDATIONS

The concept of social media, which was first used in the literature in 1994, has evolved into one of the most significant applications of the Internet over time (Aichner et al., 2021). With adults in OECD countries spending an average of 4-6 hours on online platforms (Ortiz-Ospina, 2019), the profound impact of social media in people's lives is more apparent. According to some researchers, social media, by facilitating the communication of users from diverse backgrounds (Kapoor et al., 2018), is reshaping group interaction and the individual and collective behaviors of people worldwide (Dhir et al., 2018; Tateno et al., 2019). The influential power of social media has underscored the necessity of establishing the concept of "social media leadership" on a scientific basis. Hence, this study aimed to address the gap in the literature by developing the Social Media Leadership Scale

(SMLS). The scale consists of 5 factors and 24 items, namely orientation, innovation, ethical principles, sensitivity, and awareness, with a score range from 24 to 120. The content validity of the scale was ensured through expert opinions, and content validity ratios (CVR) of the items and the content validity index (CVI) of the scale were calculated. Moreover, the Kaiser-Meyer-Olkin (KMO) and Bartlett's tests were employed to assess data suitability for factor analysis. The exploratory factor analysis (EFA) confirmed the 5-factor structure of the scale. Subsequently, the 5-factor structure was validated through confirmatory factor analysis (CFA), which yielded acceptable and excellent fit values. The reliability of the scale was established through the calculation of the internal consistency reliability coefficient.

SMLS is a measurement tool developed to assess the leadership levels of social media users. The scale's validity and reliability findings suggest that it possesses adequate psychometric properties to evaluate the leadership levels of social media users. Hence, this scale can be used to assess the current status of teachers and administrators working at various levels within educational institutions in the context of social media leadership.

Declaration of Conflicting Interests

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Statements of publication ethics

We hereby declare that the study has not unethical issues and that research and publication ethics have been observed carefully.

Researchers' contribution rate

The first author contributed to writing the scale items, formulating the problem statement of the article, and collecting the data. The second author performed the data analysis, while both authors collaborated on writing the discussion and recommendations section.

Ethics Committee Approval Information

Ethical committee approval for this study was obtained from the Ethics Committee of Bayburt University (Number of Decisions:229; Date: 26.03.2023).

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Appendix 1: Social Media Leadership Scale (SMLS)

Row	Factor	Items	1	2	3	4	5
1	Awareness	I think that social media is an important tool for expanding people's social circles.					
3		I believe that using social media will increase people's power in terms of real-life recognition.					
4		I think that social media should be used effectively to form public opinion.					
2	Sensitivity	I believe that social media should be used to serve a specific purpose.					
5		I believe that the people I follow on social media should have certain characteristics.					
6		I support the planned use of social media.					
7	Orientation	My followers take me as an example on social media.					
8		My social media posts have an impact on my followers.					
9		My followers share my posts on my social media accounts.					
10		The opinions I express on social media are supported by my followers.					
13		My followers defend the ideas I present in my social media posts.					
14		My social media posts encourage my followers to think differently.					
15		My social media posts have an impact on my followers' happiness.					
18		My social media posts get a lot of attention from my followers.					
23	Innovation	I closely follow innovations in social media applications.					
24		I pay attention to using newly added features in social media applications.					
25		I expand my network by joining new social media platforms.					
26		I share my opinions simultaneously on all social media accounts I use.					
27		I make efforts to use social media applications more effectively.					
29		I try to use new social media applications, at least as actively as my other social media accounts.					
33	Ethical Principles	I am careful not to share the content of other people's posts with users as my own opinion.					
34		I prefer not to like accounts that share information and documents with questionable accuracy.					
35		I prefer not to follow accounts that share information and documents of questionable accuracy.					
37		I avoid behaviors that may violate the privacy of people's private lives on my social media accounts.					

1: Strongly Disagree, 2: Disagree, 3: Undecided, 4: Agree, 5: Strongly Agree

Appendix 2: Turkish Version of Social Media Leadership Scale (SMLS)

Sıra	Boyut	Maddeler	1	2	3	4	5
1	Farkındalık	Sosyal medyanın kişilerin sosyal çevrelerini genişletmede önemli bir araç olduğunu düşünürüm.					
3		Sosyal medya kullanmanın gerçek hayatta kişilere tanınırlık açısından güç katacağına inanırım.					
4		Sosyal medyanın kamuoyu oluşturmada etkili bir şekilde kullanılması gerektiğini düşünürüm.					
2	Duyarlılık	Sosyal medyanın belirli bir amaca hizmet etmek amacıyla kullanılması gerektiğini düşünürüm.					
5		Sosyal medyada takip ettiğim kişilerin belirli özelliklere sahip olmaları gerektiğine inanırım.					
6		Sosyal medyanın planlı bir şekilde kullanılması gerektiğini savunurum.					
7	Yönlendirme	Sosyal medyada takipçilerim beni örnek alır.					
8		Sosyal medyadaki paylaşımlarım takipçilerimi etkiler.					
9		Sosyal medya hesaplarımdaki paylaşımlarım takipçilerim tarafından paylaşılır.					
10		Sosyal medyada dile getirdiğim görüşler, takipçilerim tarafından desteklenir.					
13		Sosyal medya paylaşımlarımda ileri sürdüğüm fikirler takipçilerim tarafından savunulur.					
14		Sosyal medya paylaşımlarım takipçilerimin farklı düşünmesine katkı sunar.					
15		Sosyal medya paylaşımlarım takipçilerimin mutlulukları üzerinde etkili olur.					
18		Sosyal medyadaki paylaşımlarım takipçilerimden yoğun bir etkileşim alır.					
23	Yenilikçilik	Sosyal medya uygulamalarındaki yenilikleri yakından takip ederim.					
24		Sosyal medya uygulamalarına yeni eklenen özellikleri kullanmaya özen gösteririm.					
25		Yeni sosyal medya uygulamalarına üye olarak ağımı geliştiririm.					
26		Görüşlerimi kullandığım tüm sosyal medya hesaplarından eş zamanlı olarak paylaşırım.					
27		Sosyal medya uygulamalarını daha etkili bir şekilde kullanmak için çaba gösteririm.					
29		Yeni çıkan sosyal medya uygulamalarını da en az diğer sosyal medya hesaplarım kadar aktif kullanmaya çalışırım.					
33	Etik İlkeler	Başkalarının paylaşımlarındaki içerikleri kendi görüşlerim olarak kullanıcılarla paylaşmamaya dikkat ederim.					
34		Doğruluğu şüpheli olan bilgi ve belgeleri paylaşan hesapları beğenmemeyi tercih ederim.					
35		Doğruluğu şüpheli olan bilgi ve belgeleri paylaşan hesapları takip etmemeyi tercih ederim.					
37		Sosyal medya hesaplarımda kişilerin özel hayatlarının gizliliğini ihlal edebilecek davranışlardan uzak dururum.					

1: Kesinlikle Katılmıyorum, 2: Katılmıyorum, 3: Kararsızım, 4: Katılıyorum, 5: Kesinlikle Katılıyorum