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Adaptation of the Social Presence Scale into Turkish: A Validity and Reliability Study

Yalın Kılıç TÜREL[1], Mustafa ALPSÜLÜN *[2]

* *Corresponding musalp@harran.edu.tr*
[1]*Fırat University, Türkiye*
[2]*Harran University, Türkiye*

Abstract

This study aims to adapt the Social Presence Scale (SPS), developed by Kizilcec et al. (2015), into Turkish to measure perceptions of social presence in online learning environments. Social presence refers to individuals' ability to perceive the physical or psychological presence of others in a digital environment, which plays a significant role in fostering interaction, motivation, and engagement in learning processes. The study evaluates the validity and reliability of the Turkish version of the scale and its applicability in the Turkish context.The research was conducted with 221 associate degree students enrolled in a distance education program at a public university. The validity of the scale was tested using confirmatory factor analysis (CFA), confirming its single-factor structure. Fit indices ($\chi^2/df = 2.33$, RMSEA = 0.065, CFI = 1.0) indicate a high level of model fit. Reliability analysis revealed a Cronbach's alpha value of 0.918, demonstrating a high level of internal consistency.The findings indicate that the Turkish version of the SPS is a valid and reliable instrument for measuring social presence in online learning contexts. This scale will serve as a valuable tool for evaluating social presence perceptions and their impact on learning processes.

Keywords: Social Presence Perception, Instructor presence, Validity and Reliability, Scale Adaptation

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Sosyal Varlık Ölçeğinin Türkçeye Uyarlanması: Geçerlik ve Güvenirlik Çalışması

Özet

Bu çalışma, çevrimiçi öğrenme ortamlarında sosyal varlık algısını ölçmek için Kizilcec ve arkadaşları (2015) tarafından geliştirilen Sosyal Varlık Ölçeği'nin (SVÖ) Türkçeye uyarlanmasını amaçlamaktadır. Sosyal varlık, bireylerin çevrimiçi bir ortamda diğer bireylerin fiziksel veya psikolojik varlığını algılama düzeyiyle ilişkilidir ve öğrenme süreçlerindeki etkileşim, motivasyon ve katılım gibi önemli değişkenler üzerinde etkili olduğu bilinmektedir. Çalışmada, ölçeğin Türkçe versiyonunun geçerlik ve güvenirlik analizleri gerçekleştirilmiş ve Türkiye bağlamında kullanımına uygunluğu değerlendirilmiştir.Araştırma, bir devlet üniversitesinde uzaktan eğitim programlarında öğrenim gören 221 ön lisans öğrencisi üzerinde yürütülmüştür. Ölçeğin geçerlik testi doğrulayıcı faktör analizi (DFA) ile yapılmış ve tek faktörlü yapısı doğrulanmıştır. Uyum indeksleri ($\chi^2/df = 2.33$, RMSEA = 0.065, CFI = 1.0), model uyumunun yüksek olduğunu göstermektedir. Güvenirlik analizi kapsamında Cronbach Alfa katsayısı 0.918 olarak hesaplanmış ve ölçeğin iç tutarlılığının oldukça yüksek olduğu ortaya konulmuştur.Elde edilen bulgular, SVÖ'nün Türkçeye uyarlanmış versiyonunun geçerli ve güvenilir bir ölçüm aracı olduğunu göstermektedir. Bu ölçek, özellikle çevrimiçi öğrenme ortamlarında sosyal varlık algısını değerlendirme ve bu algının öğrenme süreçleri üzerindeki etkilerini inceleme konusunda önemli bir araç sağlayacaktır.

Anahtar Kelimeler: Sosyal Varlık Algısı, Eğitmen Varlığı, Geçerlik ve Güvenirlik, Ölçek Uyarlama

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1. Introduction

In recent years, the proliferation of online education platforms has enabled educational processes to take place independently of spatial and temporal limitations and has radically transformed individuals' learning experiences. This transformation has been supported not only by technological tools but also by the design of learning environments that foster social interactions among learners. Social interaction, which plays a vital role in the success of online learning environments, increases learners' participation, motivation, and satisfaction in the learning process and also contributes positively to learning outcomes (Richardson & Swan, 2019). In this context, learners' perception of the presence of others in an online setting and their ability to establish a sense of connection play a critical role in understanding and improving the quality of educational processes. In the literature, this phenomenon is referred to as social presence.

Social presence refers to the degree to which individuals perceive the physical or psychological presence of others in a communication environment and the social bonds they form through this perception (Gunawardena ,1995). It serves several functions, such as reducing learners' sense of isolation and enhancing their interactions with instructors and peers, making it a significant variable in determining the quality of online learning environments (Tu & McIsaac, 2002). Studies have shown that a high level of social presence perception enhances learners' satisfaction, motivation, and engagement with course content (Song et al., 2015). However, the impact of social presence perception is not limited to these factors; it also contributes to learners' cognitive processes and their ability to concentrate on lessons (Gu et al., 2024).

Given the importance of social presence, it becomes essential to measure this construct accurately and reliably across different educational contexts. The Social Presence Scale (SPS), developed by Kizilcec et al. (2015), was designed to measure learners' perceptions of social presence in online learning environments. The scale specifically focuses on evaluating the impact of instructor visibility in online video-based courses.

Instructor visibility—whether constant or strategically timed—has been identified as an important factor influencing learners' perception of social presence. The literature frequently highlights the positive effects of the instructor's visible presence on student motivation and interaction in video lectures (Ng & Przybyłek, 2021). However, these effects do not always

directly translate into improved learning performance. For instance, Ng and Przybyłek (2021) found that while instructor visibility increases motivation and the perception of social presence, its influence on learning outcomes remains limited. Similarly, Gu et al. (2024) reported that instructor visibility contributes to the learning process by enhancing students' visual attention.

These findings suggest that social presence is a strong predictor of learners' connection with the instructor and classroom participation, yet its impact on learning outcomes may vary based on contextual and individual differences.

Considering the growing importance of online education in Turkey and other non-English-speaking contexts, the adaptation of the SPS into Turkish is of particular importance. As online learning becomes more prevalent in Turkish higher education, there is a clear need for validated tools that can measure psychological constructs like social presence within local cultural and linguistic frameworks. Adapting the SPS into Turkish will enable researchers and practitioners to assess learners' perceptions more accurately and help improve the design and evaluation of online learning environments in Turkey.

Furthermore, a valid and reliable Turkish version of the SPS will facilitate experimental and descriptive studies, promote cross-cultural comparisons, and provide valuable insights into how social presence correlates with motivation, satisfaction, and learning outcomes in Turkish-speaking populations.

Social presence plays a crucial role in shaping learners' emotional, cognitive, and behavioral engagement in online learning environments. The development and adaptation of valid measurement tools such as the SPS are vital to enhancing online learning practices and designing socially rich digital learning spaces. Thus, adapting the SPS into Turkish and analyzing its psychometric properties constitutes a critical step toward promoting effective online education in Turkish contexts.

2. Method

2.1. Participants

In this study, the convenience sampling method was preferred in determining the participants. Convenience sampling is a method that ensures that individuals who are suitable for the purposes of the study and easily accessible are included in the sample (Büyüköztürk, 2017).

Within the scope of adapting the SPS to Turkish, after the completion of the translation and language equivalence process, data were collected from associate degree students studying in distance education programs at a state university in order to perform the validity and reliability tests of the scale. In this process, the data of a total of 221 students were analyzed.

During the data collection process, no information that could reveal personal or identity information was requested from the participants. Throughout the study, great importance was given to participant confidentiality within the framework of ethical rules. Participation in the study was based entirely on a voluntary basis and the participants were informed about the process. All stages of the study were carried out in accordance with scientific and ethical principles. This approach aimed to ensure both the scientific validity and ethical integrity of the study. Accordingly, the demographic data of the participants are given in Table 1.

Table 1.

Demographic Data of Participants

Variable	Category	f	%
Gender	Female	130	58.8
	Male	91	41.2
Age	18 or below	7	3.2
	19-23	174	78.7
	24-28	26	11.8
	29-33	2	0.9
	34 and above	12	5.4
Device Used	Computer	33	14.9
	Phone	185	83.7
	Tablet	3	1.4

2.2. Instrument and Application

SPS, was developed by Kizilcec et al. (2015) to assess participants' perception of social presence in online learning environments. The scale consists of five items in total and aims to measure the extent to which participants establish social interaction and feel "there" during the online learning process. Each item is evaluated with a five-point Likert scale (ranging from 1 = "Strongly Disagree" to 5 = "Strongly Agree"). This scale was developed to examine the effects of social presence perception on the learning process in online education and has a single-factor structure. The original version of the scale was calculated as Cronbach's Alpha = 0.72 in reliability analyses and it was stated that it exhibited sufficient internal consistency. In addition, the validity of the scale was examined with confirmatory factor analysis and it was concluded that it was a suitable tool for measuring social presence.

In the adaptation process to Turkish, the study was initiated after obtaining the necessary permissions from the researchers who developed the scale. The original scale was translated into Turkish by the researchers and both the original and Turkish versions were evaluated by four field expert faculty members in terms of language and content suitability. In the language equivalence study, the original English form was first applied to 18 English teacher candidates who were fluent in English and Turkish, and then the Turkish version was applied two weeks later. The obtained data were evaluated with Pearson product-moment correlation analysis and a high level positive relationship was found between the original English form and the Turkish form of SPS ($r = 0.912$, $p < 0.01$). In the next stage of the adaptation process, the scale translated into Turkish was applied to 221 students for validity and reliability analyses.

2.3. Data Analysis

Data were analyzed using confirmatory factor analysis (CFA) using IBM SPSS AMOS software (version 21.0). CFA was used for validity testing, and Cronbach alpha coefficients, which calculate internal consistency coefficients, were used for reliability testing. Confirmatory factor analysis during scale adaptation is a statistical method that is used to test the adapted scale and is sufficient as long as no new items are added to the scale or items are removed from the scale as a result of adaptation (Büyüköztürk et al., 2017; Tabachnick et al., 2013). Therefore, it was not deemed necessary to perform exploratory factor analysis (EFA) during the Turkish adaptation process of SPS. In addition, the original version of the scale was developed by Kizilcec et al. (2015) and its factor structure was previously evaluated within the scope of validity and reliability analyses. CFA is accepted as a sufficient and appropriate statistical method in the adaptation process to another language (Büyüköztürk et al., 2017; Tabachnick et al., 2013).

Before data analysis, the assumptions required for CFA were tested with IBM SPSS software. The first assumption required for the application of CFA is sufficient sample size. There are different approaches to sample size in the literature. While Guilford (1954) states that sufficient sample size should be more than 200, Hair et al. (2010) state that at least 5 participants are required for each item. In addition, MacCallaum et al. (1999) emphasize that at least 10 participants are sufficient for each item. Since SPS contains a total of 5 items, sufficient sample sizes should be 200, 25 and 50, respectively, according to these approaches. A total of 221

participants' data were analyzed within the scope of the study, and this shows that the sufficient sample size condition was met.

3. Results

The findings obtained according to the data analysis results are explained in order, firstly the findings related to validity, then the findings related to reliability, in line with the purposes of the study.

3.1. Validity

For the validity test, confirmatory factor analysis was performed with IBM SPSS AMOS software 21st version. For the Turkish scale's estimation model, chi-square ($\chi 2$) and the root mean square error of approximation (RMSEA), standardized root mean square error (SRMR), goodness of fit index (GFI), comparative fit index (CFI) and Tucker-Lewis index (TLI) were used. The analysis results obtained are presented in Table 2 in detail.

Table 2.

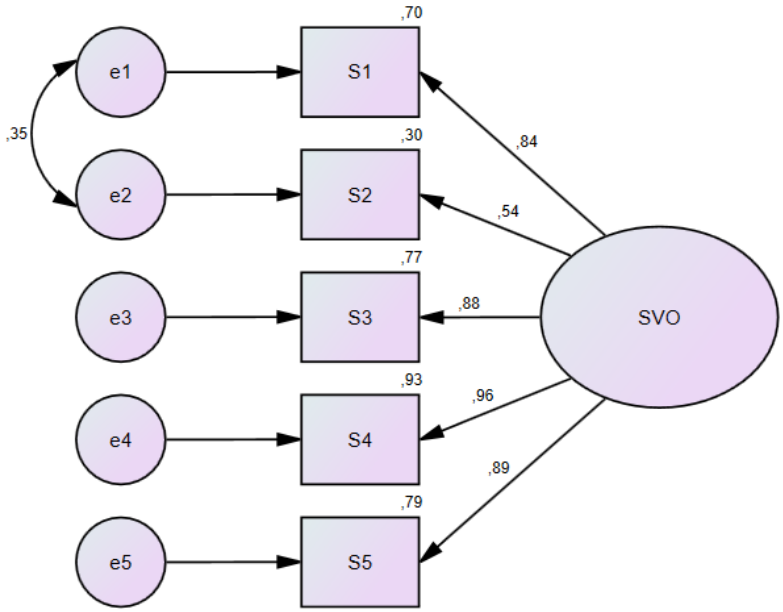
Fit Indices Criteria for CFA and Fit Indices of the Social Presence Scale

Fit Index Values	Excellent Value	Acceptable Value	Adjusted Scale
χ^2/df	≤3	≤5	2.33
RMSEA	≤.05	≤.08	.065
SRMR	≤.05	≤.08	.028
TLI	≥.95	≥.90	.94
CFI	≥.95	≥.90	1.0
GFI	≥.95	≥.90	.99
NFI	≥.95	≥.90	.99

As a result of the adapted SPS's CFA analysis, the $\chi 2$/df value was found to be 2.33, which is below the acceptable limit of 5. The RMSEA value was determined as .065, which is below the acceptable upper limit of .08, and shows that the scale has a good fit. The SRMR value was .028, which is below the perfect value of .05, which indicates that the fit is quite high. When the other fit values of the scale are examined, the TLI value was determined as .94, which is quite close to the acceptable value. The CFI value was calculated as 1.0, which falls into the perfect fit category. The GFI value was .99 and the NFI value was .99; these values reveal that the general structure of the scale has a very strong fit. Therefore, the model and factors obtained in line with the CFA results of the adapted scale were confirmed to be the same as the original scale, and the validity of the adapted scale was ensured (Çokluk et al. 2010; Tabachnick et al., 2013).

Figure 1.

Social Asset Scale CFA Path Diagram



When the item-structure parameters are examined in Figure 1, it is seen that the standardized factor loadings related to the dimension of the relevant model vary between 0.54 and 0.96. It was determined that the factor loadings were statistically significant according to the t-value test (Tabachnick and Fidell, 2001). The item-total correlation values are between 0.30 and 0.93. The value of .30 stated by Büyüköztürk et al. (2020) is accepted as a sufficient criterion for item-total correlation. When this criterion is taken into consideration, it was concluded that the scale items exhibited a strong fit with each other, and the internal consistency of the scale was high. Therefore, the scale was finalized without removing any items and a consistent structure was provided among the items.

3.2. Reliability

For the reliability test of the SPS adapted to Turkish, internal reliability was examined with Cronbach alpha coefficient values. The findings are given in Table 3.

Table 3.

Reliability Values of the Social Presence Scale

Faktoc	Cronbach's Alpha Coefficient
Social Presence	0.918

Cronbach alpha coefficient for the entire scale was found to be 0.918. The reliability of the scale adapted to Turkish was ensured. As a result, the Social Presence Scale was found to be valid and reliable, and it can be said that it is an acceptable and appropriate scale.

4. Discussion and Conclusion

The findings obtained during the adaptation of the Social Presence Scale (SPS) into Turkish demonstrate that the scale preserves its original structure and functions as a valid and reliable measurement tool. The confirmatory factor analysis (CFA) supported the one-factor structure of the original scale and yielded acceptable fit indices ($\chi^2/df = 2.33$, RMSEA = 0.065, CFI = 1.0). These values are in line with the psychometric standards recommended in the literature (Hair et al., 2010; Tabachnick et al., 2013). In addition, the high internal consistency coefficient (α = .918) provides further evidence of the scale's reliability. In this respect, it can be concluded that the Turkish version of the SPS is a robust instrument for reliably measuring perceptions of social presence.

One of the major contributions of this study is that it introduces a culturally and linguistically adapted tool for assessing social presence in Turkish online learning environments. In an era when online education is rapidly expanding in Türkiye, especially in higher education, the availability of contextually appropriate instruments has become increasingly critical. The fact that the scale could be adapted without adding or removing any items from its original version also supports the cross-cultural validity of the social presence construct.

Social presence is widely recognized as a core variable influencing the quality of online learning environments. Numerous studies have shown that social presence enhances learners' satisfaction, motivation, and engagement (Richardson & Swan, 2019; Song et al., 2015). More recent studies have also emphasized that social presence not only affects emotional engagement but contributes to learners' cognitive processes, such as sustained attention and focus. For instance, Gu et al. (2024) found that learners with a stronger perception of social presence exhibited greater levels of attentional focus during learning activities. In this context, the measurement of social presence contributes to a more holistic evaluation of both social and cognitive dimensions of online learning.

The visibility of the instructor in online video lectures has emerged as a particularly influential factor in shaping perceptions of social presence. Ng and Przybyłek (2021) reported that the

presence of the instructor on screen increased students' motivation and sense of connection, although these improvements did not always translate directly into measurable learning outcomes. Similarly, Kizilcec et al. (2015) emphasized that instructor visibility plays a critical role in enhancing students' feelings of connection with the instructor, while Gu et al. (2024) demonstrated that it improves learners' visual attention. These findings suggest that the SPS can be a particularly useful instrument in experimental studies exploring instructor visibility in online video-based courses.

In the Turkish context, the SPS could be employed in studies comparing synchronous and asynchronous learning environments to examine how social presence varies across different modes of delivery. In addition, it may be used to evaluate the effects of different video design strategies—such as constant, intermittent, or learner-controlled instructor visibility—on learners' perception of social presence. Given the growing interest in user-controlled learning environments, this presents a valuable avenue for future research. Moreover, the SPS can be used in combination with eye-tracking methods to investigate how learners visually respond to social cues and how these responses relate to their social presence perceptions. Such multimodal research approaches could deepen our understanding of the behavioral and cognitive mechanisms underlying learner engagement in online settings.

The scale can also inform the design of socially enriched online learning environments by helping identify which visual and verbal cues (e.g., facial expressions, gestures, instructor feedback) most effectively foster presence and engagement. Furthermore, since social presence is closely linked with satisfaction and motivation, SPS data can support institutional efforts to improve teaching quality by evaluating student perceptions across various course designs. In this way, empirical, data-driven improvements to instructional strategies in Türkiye can be realized.

Ultimately, this study represents not only the adaptation of a measurement tool but also a critical step toward the scientific investigation of social presence in Turkish online learning environments. The Turkish version of the SPS provides both researchers and practitioners with a reliable instrument for designing more socially engaging learning experiences and lays the groundwork for future empirical and applied research in the local context.

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