

Development and Psychometric Validation of the Soft Skills Scale for Teachers (SSS-T)

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Abstract

Soft skills support individuals emotionally, cognitively, and behaviorally. Teachers are one of the professional groups whose soft skill levels are expected to develop. This is because teachers not only improve their own soft skills but also help the development of soft skills among students. To this end, we aimed to develop a valid and reliable scale to assess teachers' soft skills. The validity and reliability of the Soft Skills Scale for Teachers were established through four separate studies. In Study I, EFA revealed that the scale consists of thirty-seven items and five factors ($n = 402$). Study II, through CFA, demonstrated that the scale's fit indices indicate a good fit ($n = 248$). In Study III, Cronbach's alpha was calculated as .91 and OR was calculated as .92; convergent validity results indicate moderate correlations ($n = 122$). Finally, Study IV involved a test-retest procedure, and the results indicated that the first and second administrations were highly correlated and found no significant differences between two administrations ($n = 57$). Collectively, these findings ensure that the scale is a valid and reliable scale for measuring the soft skills of teachers. The Soft Skills Scale for Teachers is highly important because identifying and developing the soft skills of teachers is not only an educational necessity but also a social need. Additionally, the Soft Skills Scale for Teachers offers benefits for groups such as educational institutions, educational policymakers, and teacher training institutions, which are crucial for fostering teaching quality and ensuring students' soft skills development.

Keywords:

Soft Skills, Teachers, Psychometric Properties

Introduction

Education plays an important role in raising individuals who are equipped, knowledgeable, and skilled to meet the needs of countries. Therefore, our expectations from education in the current era have changed compared to previous centuries. The search for an individual who can get high grades or make good calculations, both in professional and personal life (Rani et al., 2010), has been replaced by the search for an individual who can solve problems in business life, work independently, and take social responsibility and initiative. This is because these skills contribute to the development of innovation and



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economic performance capacity (Hendarman & Cantner, 2017; Martino & Bartolone, 2011). In other words, they increase productivity at work. These developments in the business world have contributed to setting new standards for teacher qualifications at the international level (Espina-Romero et al., 2023). In the twenty-first century, teachers are expected not only to possess technical knowledge and skills but also to foster the development of students' non-cognitive competencies such as communication, empathy, and collaboration (Tuomi, 2022; van Werven et al., 2021). This expectation highlights the importance of teachers' soft skills in supporting students' holistic development.

Soft skills are multidimensional skills encompassing individuals' cognitive, social, emotional, and behavioral competencies, such as communication, conflict resolution, leadership, empathy, problem solving, collaboration, time management, flexibility, and ethical decision-making (Heckman & Kautz, 2012). These skills are understood to contribute to individuals' effective and productive functioning in their professional and social lives.

In the educational context, soft skills are viewed as learning outcomes that support students' interpersonal skills, emotional control, and cognitive skills. For teachers, soft skills encompass the competencies of empathic communication in classroom management, creating a positive learning climate, and supporting students' social-emotional development (Jennings & Greenberg, 2009; Ince et al., 2025). Therefore, soft skills are considered a fundamental component of effective teaching and learning in education. Soft skills support individuals emotionally, cognitively, and behaviorally (Melser, 2019). While an individual's development of soft skills is a personal situation, the role of the individuals with whom he/she interacts at the soft skill level is a social situation. In this context, the teacher, who guides his students on a new path to social life, is one of the professional groups whose soft skill level is expected to develop (Shawer, 2017). Teachers who have developed soft skills can help the development of soft skills in students as well (Ju et al., 2025). Teachers are responsible for encouraging positive peer relationships among children, providing different learning experiences, and leading students (Moussaoui et al., 2025; Snoek et al., 2019). An effective teacher fulfills this responsibility by being a model for his students. It is possible for the teacher to be a model for the students by first developing awareness of his/her own soft skills. The quality of teachers directly affects the education and training process (Fernandes et al., 2021). The qualifications of the teacher include ethics, morality, different knowledge structures, interpersonal communication, problem-solving and critical thinking skills, leadership qualities, emotional control, and skills to increase academic success. When teacher qualifications are evaluated from the perspective of

Shulman's (1987) Pedagogical Content Knowledge theory, it becomes evident that an effective teacher must integrate subject matter knowledge with pedagogical awareness and professional ethics. According to Goleman's (1995) Emotional Intelligence theory, a teacher's ability to manage emotions and show empathy toward students positively influences the learning environment. When these qualities are considered within the framework of Leithwood and Jantzi's (2006) Transformational Leadership approach, it is understood that teachers are expected to transform students not only academically but also socially and emotionally. Furthermore, the OECD's (2021) report, *Teachers as Knowledge Professionals*, emphasizes that qualified teachers are professionals who integrate cognitive, emotional, and social competencies to prepare students for the future. Taken together, these theoretical frameworks suggest that teacher qualifications represent an effective integration of personal and professional competencies. Based on this information, we understand that the development of the teacher's soft skills has an impact not only on his relationship with children but also on his teaching performance.

The conceptual and methodological definition of soft skills for teachers makes it difficult to determine the level of soft skills (Fernández-Arias et al., 2021). In this context, it is understood that the focus should be on determining the soft skill level of teachers. The soft skills of teachers, who train all professional groups and contribute to the development of society, are not only an educational but also a social issue. Several cognitive ability tests and personality inventories are used to determine the soft skills of various professional groups (Raelison et al., 2020). When the studies aiming to determine teachers' soft skill levels are examined, it is seen that there are numerous scales focusing on areas such as stress management (Cao et al., 2023; Chen et al., 2022), teachers' emotional support behaviors (Anthony and DiPerna, 2019; Frenzel et al., 2016; Granziera et al., 2022; Guo et al., 2025), emotion teaching skills (Çalik & Çapa-Aydın, 2022; Hong et al., 2016), social skills (Anthony et al., 2021; Gresham et al., 2010), emotion regulation (Heydarnejad et al., 2021), interpersonal skills (Zheng, 2022), social-emotional skills (Aldrup et al., 2020; Anthony et al., 2021; Sarisoy et al., 2021). These studies appear to focus on certain aspects of soft skills. Furthermore, there is a scale developed to assess teachers' soft skills specifically in the context of COVID-19 (Al-Sa'di et al., 2023), as well as a measurement tool designed in the form of a questionnaire (Pietro & Altomari, 2019). These studies, aimed at determining some dimensions of the soft skills of teachers, have paved the way for research on soft skills. Unlike previous studies that focused on limited dimensions of soft skills, the present study adopts a holistic approach by encompassing interpersonal relationships, problem-solving, and emotional control, as well as introducing cognitive skills and

multiculturalism, dimensions that have not been included in any prior soft skills scales. Considering the educational structure of soft skills, it can be said that current scales do not provide a holistic assessment of soft skills in teachers. In this research, unlike the scale explained above, a scale was developed to determine teachers' awareness of soft skills and their level of inclusion of these skills in practice. It is thought that determining the soft skill level of teachers will guide future studies in understanding the factors that play a role in the development of children's soft skills and in determining the source of soft skill problems experienced in schools.

The Current Study

Considering teachers' professional well-being levels, studies focus on concepts such as stress management, positive emotions, emotional regulation, resilience, teacher-student relations, and soft skills for students draw attention to the importance of soft skills. However, in studies examining teachers' opinions on teaching children's affective skills, it is understood that teachers' knowledge and skills in incorporating affective skills into the learning-teaching environment are limited (Lee & Lee, 2011). Teachers play an intermediary role among generations. Therefore, the development of teachers' soft skills plays an important role in sustainable education. Based on this information, the research aims to develop a valid and reliable scale to determine teachers' soft skill levels.

Teaching is a social action. The development of the teacher's soft skills contributes to the teacher's professional productivity (Junaidi & Rosadi, 2022). In this context, various studies have been conducted on teachers' soft skills at various levels, from preschool to higher education (Fernández-Arias et al., 2021; Lee & Lee, 2011). Although the soft skills needed by children and young people change at each age, this indicates that the experiences they have had since early childhood affect all their life processes. In this context, the study worked with a large group of participants, including preschool teachers, primary school teachers, secondary school, and high school branch teachers. Acquiring soft skills at an early age prepares children for life. This suggests that determining the soft skill level of teachers and providing awareness is important for the development of soft skills in children. This is because soft skills provide information about how people learn, think, and behave (Escolà-Gascón & Gallifa, 2022). While soft skills are an integral part of education in the twenty-first century, there are limited measurement tools that address soft skills in an educational context (Escolà-Gascón and Gallifa, 2022; Jardim et al., 2022; Phuti et al., 2023). The Soft Skills Scale for Teachers is the first constructed and validated scale in national and international literature to assess the soft skill level of teachers. For this reason, it is thought that this scale, which determines the soft

skill level of teachers from different branches, will guide future research in understanding the characteristics of teachers that play a role in the development of soft skills in children and young people. Based on these, we aimed to develop a valid and reliable scale to measure teachers' soft skills. Due to this, our research question is as follows:

- Is the Soft Skills Scale for Teachers valid and reliable for measuring the soft skills level of teachers?

Method

In the development of the scale, the steps followed included defining the purpose and structure, writing the items, consulting expert opinions, conducting a pilot study, making revisions, and ensuring the validity and reliability of the scale (DeVellis, 2017). Therefore, the validity and reliability studies of the SSS-T consist of four phases. All the studies mentioned in this article adhered to scientific research and publication ethics, as approved by the Scientific Research Ethics Committee of Canakkale Onsekiz Mart University, with the decision dated 08.09.2023 and numbered 11/49.

Study I

In Study I, exploratory factor analysis (EFA) was conducted to explore the SSS-T's factor structure. In this study, the participants were administered the initial version of the scale consisting of 53 items.

Participants

Study I was conducted in the spring semester of the 2023-2024 academic year in Çanakkale.

The participants were determined using a convenience sampling technique. Teachers were contacted, informed about the purpose of the research, and invited to participate as volunteers by completing the scales. The data for the study were collected from a total of 23 schools, including two preschools (8.70%), 15 elementary schools (65.20%), three middle schools (13.05%), and three high schools (13.05%). A total of 402 teachers participated in the research for EFA, consisting of 253 females (63.93%) and 149 males (37.06%). The teachers worked in pre-schools ($n = 78$, 19.40%), primary schools ($n = 227$, 56.46%), secondary schools ($n = 54$, 13.43%), and high schools ($n = 43$, 10.70%). They had professional seniority ranging from 1 to 37 years, with an average of 21.8 years.

Measures

Sociodemographic information

A personal information form was used to obtain information about the participants' gender, age, experience and school.

Soft Skills Scale-Teacher (SSS-T)

SSS-T was developed by this study. Firstly, the item pool was developed. Then, it was to ensure content validity.

Creating an Item Pool: Studies on creating an item pool first started with a literature review on the subject. As a result of the literature review 123 items aiming to measure teachers' soft skills were created. The items were written considering the interpersonal skills, cognitive skills, and emotional control dimensions of soft skills. The item pool development process was conducted once a week over six sessions, with each session lasting approximately two to three hours. At the end of the first three sessions, items that appeared to have similar characteristics were removed, reducing the number to eighty-five items. In the following three sessions, the items were reviewed again, with certain items being revised and others being completely removed. For example, the item "I set an example for my students in problem-solving" was revised to "I ensure that my students use their problem-solving skills in the face of problems." Thus, the scale item was expressed more clearly. The item "I organize activities where my students will learn to control their impulsive behavior" was completely removed from the item pool. Because there was a similar item measuring this feature, it was deleted. A consensus was reached by the research team on all fifty-nine items remaining in the item pool.

Content Validity: Expert opinion was sought to ensure the content validity of the scale. To this end, an expert opinion form was prepared for the scale, which consisted of fifty-nine items. The field experts were from the areas of Guidance and Psychological Counseling, Primary School Education, Curriculum and Instruction, and Measurement and Evaluation in Education, and they had conducted studies on teachers' affective skills. In line with the experts' feedback, ten items were revised to ensure their suitability, clarity, and comprehensibility for the target group. Six items on which the experts did not reach a consensus regarding their effectiveness in measuring teachers' soft skills were removed from the draft item pool before it was finalized. Then, the opinion of a Turkish language expert was sought to evaluate the scale in terms of meaning and clarity, and their feedback was taken into consideration. Finally, to ensure content validity, the final fifty-three-item version of the Soft Skills Scale for Teachers (SSS-T) was presented to five teachers who had similar characteristics to the target group, prior to the actual application. After these teachers stated that the items were clear and understandable, the scale was administered to the target group. The SSS-T is composed of 53 items, each of which is rated on a 5-point Likert-type scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). No items are reverse scored. Higher scores indicate greater levels of soft skills.

Statistical Analysis

In scale development studies, the factor analysis technique is used to test the validity of the psychometric structure. The varimax rotation technique was conducted. Varimax rotation aims to ensure that each item has a high loading value on only one factor and to maintain independence between factors (Kaiser, 1958). Thus, in developing a valid and reliable scale, the factors are made meaningful, independent and easily interpretable. The fifty-three-item scale form in the item pool was administered to 402 teachers for the first-order exploratory factor analysis. The significance level for factor loadings was accepted as .40 (Field, 2013). Accordingly, Item 44, Item 12, and Item 20 had factor loadings below .40. In addition, Item 36, Item 53, Item 40, Item 5, Item 17, and Item 43 were cross-loading items. The difference between the factor loadings of cross-loading items should be greater than .1 (Çokluk, et al., 2012). Lastly, although the factor loadings of Item 49, Item 41, Item 24, Item 15, Item 39, Item 21, and Item 45 were above .40, the number of items in a factor they were included in was less than three. A meaningful factor should contain at least three items (Şencan, 2005). In this context, Items 5, 12, 15, 17, 20, 21, 24, 36, 39, 40, 41, 43, 44, 45, 49, and 53 were removed from the dataset and the analysis was repeated. Items that loaded on two factors simultaneously but had a difference in factor loadings greater than .1 were not excluded (Çokluk et al., 2012). Accordingly, after removing 16 items, exploratory factor analysis was conducted again with the remaining 37 items. Assumptions were checked before conducting exploratory factor analysis. The Kaiser-Meyer-Olkin (KMO) measure and the Bartlett test of sphericity confirmed sampling adequacy and factorability of the data. In addition, the dataset was examined for linearity, outliers, and multicollinearity, and all indices were found to be within acceptable limits (Tabachnick & Fidell, 2007). Then, a second-order factor analysis was performed to examine whether the first-order factors reflected an overarching soft skills construct. The Kaiser-Meyer Olkin (KMO) and Bartlett Sphericity (BTS) tests were applied to determine the suitability of the data set for factor analysis.

Results

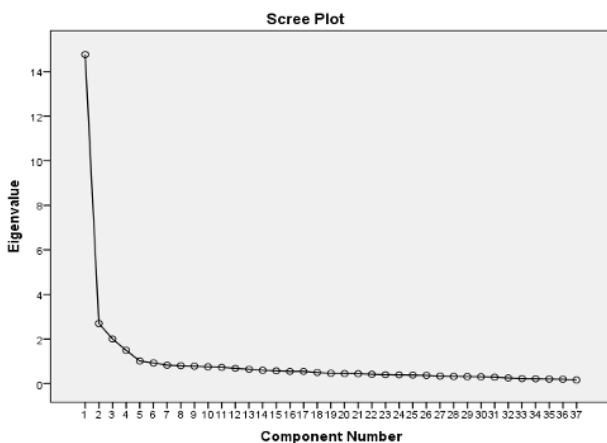
The KMO and BTS results for the second-order exploratory factor analysis are presented below. The KMO test findings are greater than .50, and the BTS is significant ($\chi^2 = 8349.800$, $df = 666$, $p < .001$). These findings indicate that the data set is suitable for an exploratory factor analysis. Following the KMO and Bartlett tests, the eigenvalues and variances of the items were examined. The findings regarding the eigenvalue statistics are shown in Table 1.

Table 1.
The Eigenvalue Statistics and Explained Variance

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.76	39.90	39.90	14.76	39.90	39.90	7.05	19.05	19.05
2	2.69	7.29	47.19	2.69	7.29	47.19	6.16	16.66	35.71
3	2.00	5.41	52.61	2.00	5.41	52.61	4.47	12.08	47.80
4	1.49	4.03	56.64	1.49	4.03	56.64	2.16	5.86	53.66
5	1.00	2.72	59.37	1.00	2.72	59.37	2.11	5.70	59.37
6	.92	2.51	61.88						
7	.82	2.23	64.11						
8	.80	2.17	66.29						
9	.78	2.11	68.40						
10	.75	2.03	70.43						
11	.72	1.96	72.40						
12	.68	1.84	74.24						
13	.64	1.74	75.99						
14	.59	1.60	77.59						
15	.57	1.54	79.14						
16	.54	1.47	80.62						
17	.54	1.47	82.09						
18	.50	1.35	83.45						
19	.46	1.24	84.70						
20	.44	1.21	85.91						
21	.44	1.19	87.10						
22	.41	1.12	88.22						
23	.39	1.07	89.30						
24	.39	1.05	90.35						
25	.38	1.03	91.39						
26	.36	.99	92.38						
27	.33	.90	93.29						
28	.31	.86	94.16						
29	.31	.84	95.00						
30	.30	.82	95.83						
31	.28	.77	96.60						
32	.25	.68	97.28						
33	.22	.61	97.89						
34	.21	.58	98.48						
35	.20	.55	99.03						
36	.19	.53	99.56						
37	.16	.43	100.00						

After the second-order exploratory factor analysis, there are thirty-seven items with eigenvalues greater than 1 and a structure with five factors. Accordingly, the first factor explains 19.05% of the total variance, the second factor explains 35.71%, the third factor explains 47.80%, the fourth factor explains 53.66% and the fifth factor explains 59.37%. Researchers can also use Scree plot graphs to determine the number of factors. A Scree Plot Graph is as shown in Figure 1.

Figure 1.
A Scree Plot Graph



As seen in Figure 1, the breaking point is between 4 and 5. In this context, it is evident that the eigenvalue statistics and the scree plot graph statistics overlap in determining the number of factors. Finally, the factor loadings of the items were examined in the study (Table 2). For this purpose, the Principal Component Analysis (PCA) method was used in the EFA, as it maximizes the total variance explained and groups a large number of items under a smaller number of components, thereby providing preliminary information about item relationships and the structure of the scale (Field, 2013).

As seen in Table 3, the analysis of the factor loadings indicated that they ranged from 0.44 to 0.80. This means that the Soft Skills Scale for Teachers consists of thirty-seven items and five factors, with factor loadings greater than .40 (Tabachnick & Fidell, 2007). After this stage, the factors were named, such as 'I organize activities that will improve my students' time management skills' under Factor 1 are Cognitive Skills; items such as 'I take care to have a trust-based relationship with my students' included under Factor 2 are Interpersonal Skills; items under Factor 3, such as 'I listen actively to understand my students', are included in Problem Solving; and under Factor 4, 'I aim for my students to acquire universal values'. Items such as 'Multiculturalism' and 'My negative emotions affect the learning environment' under Factor 5 are called Emotional control. The thirty-seven-item scale resulting from exploratory factor analysis was numbered in

the new order and made suitable for confirmatory factor analysis. During the item pool studies of the measurement tool, the items were written considering the dimensions of interpersonal skills, cognitive skills and emotional control. During the exploratory factor analysis, it was seen that the items related to problem solving and multiculturalism became factors. The fact that there are four items each with factor loadings greater than .40 in the problem solving and multiculturalism factors indicates that teachers see these factors as separate dimensions. Although soft skills are theoretically defined in three dimensions, interpersonal skills, cognitive skills and emotional control, problem solving and multiculturalism are sub-concepts of soft skills, it is understood that the factorial structure that emerged in this study is compatible with literature.

Table 2.
Rotated Factor Loading Matrix

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Item 27	.80				
Item 28	.80				
Item 26	.71				
Item 29	.69				
Item 30	.69				
Item 38	.65				
Item 33	.63				
Item 31	.59				
Item 11	.57				
Item 34	.57				
Item 35	.54				
Item 32	.52				
Item 25	.49				
Item 22	.44				
Item 3		.76			
Item 4		.75			
Item 2		.73			
Item 7		.72			
Item 8		.71			
Item 1		.70			
Item 10		.69			
Item 9		.64			
Item 6		.60			
Item 47			.70		
Item 51			.65		
Item 50			.65		
Item 48			.62		
Item 46			.58		
Item 37			.54		
Item 16				.68	
Item 18				.60	
Item 19				.60	
Item 13				.50	
Item 23					.74
Item 14					.70
Item 52					.67
Item 42					.64

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Study II

Study II incorporates a confirmatory factor analysis (CFA) aimed at evaluating the model fit of the proposed factor structure.

Participants

Study II was conducted in the spring semester of the 2023-2024 academic year in Çanakkale. Confirmatory factor analysis was performed on new participants one month after the completion of EFA. A total of 248 teachers participated in Study II, consisting of 143 females (57.66%) and 105 males (42.33%). The participating teachers were from 12 separate schools in Çanakkale and its districts, including three preschools (n = 43, 17.33 %), five primary schools (n = 108, 45.54 %), two middle schools (n = 49, 19.75), and two high schools (n = 48, 19.35 %). The teachers had professional seniority ranging from 1 to 35 years, with an average of 19.60 years.

Measures

Sociodemographic information

A personal information form was used to obtain information about the participants' gender, age, experience and school.

SSS-T

The Soft Skills Scale for Teachers consists of 37 items and five factors: Cognitive Skills, Interpersonal Skills, Problem Solving, Multiculturalism and Emotional control. The scale is a 5-point Likert type and the items are answered as "Strongly Agree", "Agree", "Neutral", "Disagree" "Strongly Disagree".

Statistical Analysis

The confirmatory factor analysis used the Maximum Likelihood (ML) estimation method, which is suitable for continuous variables and large sample sizes. This estimation method was preferred because it provides efficient and unbiased parameter estimates when multivariate normality is reasonably met (Kline, 2015). Prior to CFA, data normality, multicollinearity, and sample adequacy assumptions were examined, and all assumptions were found to be met. Then, we conducted a Confirmatory Factor Analysis (CFA) to test the model fit of the five-factor structure with 37 items obtained as a result of the Exploratory Factor Analysis (EFA). Accordingly, path analysis results were examined, and fit indices were calculated. For the exploratory factor analysis, the data were analyzed in a SPSS.24 program, while the LISREL was used for the confirmatory factor analysis.

Results

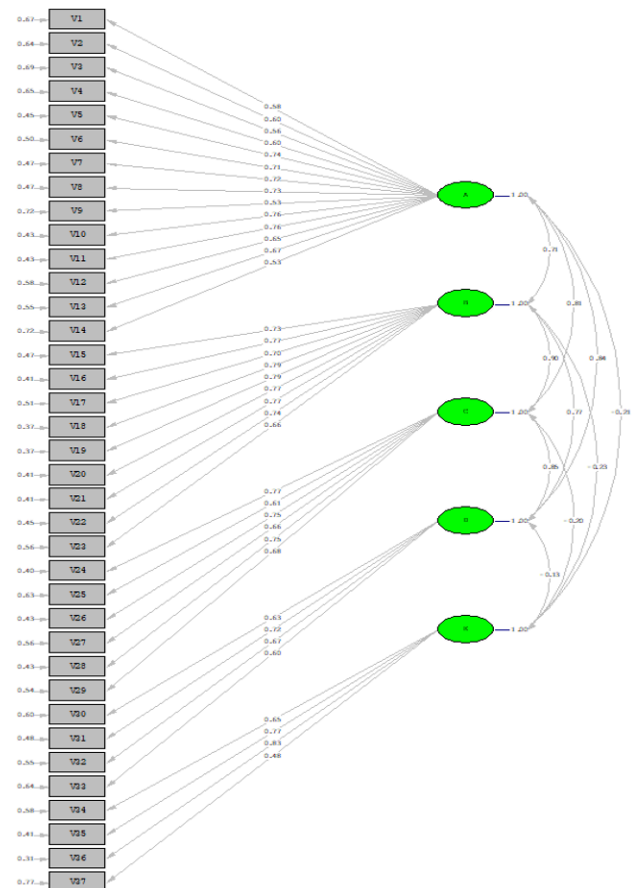
The findings of the fit indices of the scale are as shown in Table 3.

Table 3.
Fit Indices

Compliance Indices	Value	Reference
χ^2/df	2.70	2-5
RMSEA (Root Mean Square Error of Aproximation)	0.06	0-1
GFI (Goodness-of-Fit Index)	0.90	> 0.90
AGFI (Adjusted Goodness-of-Fit Index)	0.91	> 0.95
CFI (Comparative Fit Index)	0.88	> 0.90
RMR	0.06	<0.05
NFI	0.90	> 0.90
TLI	0.92	> 0.90

When the fit indices are examined, the values of the scale indicate acceptable and good fit (Tabachnick & Fidell, 2007). Following the fit indices, the path diagram of the scale was examined (Figure 2).

Figure 2.
Path Diagram



After the exploratory factor analysis, the items were renumbered. The order presented in the path analysis reflects this renumbered sequence. As seen in Figure 2, it suggests that each observed variable is related

to the latent variables. In other words, it is understood that the five-factor structure consisting of thirty-seven items was confirmed as a model.

Study III

Participants

Study III was conducted in the spring semester of the 2024-2025 academic year fall semester. The data for the study were collected from six schools, including two preschools (33.33 %), two elementary schools (33.33 %), one middle school (16.66 %), and one high school (16.66 %). A total of 122 teachers participated in the research, 68 females (55.28 %) and 54 males (44.26 %). The teachers worked in pre-schools ($n = 36$, 29.50 %), primary schools ($n = 53$, 43.45 %), secondary schools ($n = 18$, 14.75 %), and high schools ($n = 15$, 12.30 %). The teachers had professional seniority ranging from 6 months to 38 years, with an average of 22.4 years.

Measures

Sociodemographic information

A personal information form was used to obtain information about the participants' gender, age, pseudonyms, experience and school.

SSS-T

The Soft Skills Scale for Teachers consists of 37 items and five factors: Cognitive Skills, Interpersonal Skills, Problem Solving, Multiculturalism and Emotional control. The scale is a 5-point Likert type, and the items are answered as "Strongly Agree", "Agree", "Neutral", "Disagree", "Strongly Disagree".

Social-Emotional Competence Teacher Rating Scale (SEC)

SEC was adopted to Turkish by Sarisoy et al. (2021) from Tom (2012). Both the original and adapted versions of the scale consist of 25 items. The SEC includes four subscales: Student-Teacher Relationship (seven items), Emotional Regulation (six items), Interpersonal Skills (six items), and Social Awareness (six items). Items 5, 10, and 12, which are negatively worded, are reverse scored. The Cronbach's alpha internal consistency coefficients of the scale were calculated as .78, .70, .80, and .75 for the subscales, and .88 for the overall scale. The scale is a 6-point Likert type and items are answered as: "Strongly Disagree", "Disagree", "Somewhat Disagree", "Somewhat Agree", "Agree", "Strongly Agree". The tests conducted to determine the psychometric properties of the Turkish version of scale indicate that the SEC is a valid and reliable tool for measuring teachers' social-emotional competence.

Statistical Analysis

We calculated Cronbach Alpha to ensure internal consistency. Then, preliminary analyses were conducted to normality, and multicollinearity. Pearson-moment correlation coefficient was conducted to evaluate between SSS-T and SEC.

Results

Cronbach's alpha internal consistency coefficient was calculated to determine the reliability of the scale. The subscale coefficients were calculated as follows: Cognitive Skills (.89), Interpersonal Skills (.82), Problem Solving (.84), Multiculturalism (.88), and Emotional Control (.76). These values indicate that the subscales range between .76 and .89, while the overall scale has a reliability coefficient of .91. Additionally, Composite Reliability (CR) coefficients were calculated. CR for Cognitive Skills was found to be .91; for Interpersonal Skills was .92; for Problem Solving was .86; for Multiculturalism was .75, and for Emotional Control was .78; the overall composite reliability (CR) coefficient of the scale was .92. Since all coefficients were above the recommended threshold of .70, it was concluded that internal consistency was sufficient for all sub-dimensions of the scale. Subsequently, the Pearson correlation coefficient was calculated to examine the relationship between the Soft Skills Scale for Teachers and Social-Emotional Competence scales (Table 4).

Table 4.
Correlations Between SSS-T and SEC

		SSS-T	SEC
SSS-T	Pearson Correlation	1	.562**
	Sig. (2-tailed)		.000
	N	122	122
SEC	Pearson Correlation	.562**	1
	Sig. (2-tailed)	.000	
	N	122	122

** Correlation is significant at the 0.01 level (2-tailed).

As seen in Table 4, the Pearson correlation coefficient was calculated as .562, $p < .001$, between the SSS-T and SEC. In other words, the mean scores of the SSS-T and SEC are moderately correlated. This finding provides evidence for the convergent validity of the SEC, indicating that it is appropriately aligned with a related construct.

Study IV

Participants

Study IV was conducted with the same teachers at the schools that participated in Study III. The participants in the test-retest reliability study responded to the SSS-T twice in a 1-month interval. Thus, 122 teachers who participated in Study 3 were re-contacted. However, the pseudonyms of 57 teachers overlapped between

Studies 3 and 4. In this context, the analyses were conducted with the data of 57 teachers, including 33 females (57.89%) and 24 males (42.10%). Among the teachers participating in Study 4, 12 work in preschools (21.05 %), 28 in elementary schools (42.10 %), 9 in middle schools (15.80 %), and 8 in high schools (14.05 %). The teachers had professional seniority ranging from 1 year to 38 years, with an average of 22.2 years.

Measures

Sociodemographic information

A personal information form was used to obtain information about the participants' gender, age, nicknames, experience and school.

SSS-T

The Soft Skills Scale for Teachers consists of 37 items and five factors: Cognitive Skills, Interpersonal Skills, Problem Solving, Multiculturalism and Emotional control. The scale is a 5-point Likert type, and the items are answered as "Strongly Agree", "Agree" "Neutral", "Disagree" "Strongly Disagree".

Statistical Analysis

To determine the correlation between the first and second administrations of the SSS-T, we examined the test-retest reliability. Additionally, a paired-samples t test was conducted to determine whether there was any change in the mean scores of soft skills over a 1-month time interval.

Results

Pearson correlation between test and retest, the mean of the SSS-T in the first administration was 4.17, the mean in the second administration was 4.26, $r = .718$, $p < .001$. This indicates that test and retest administrations are highly correlated (Table 5).

Table 5.

Paired Sample T-Test for Test-Retest Reliability

Measure	N	Mean	sd	df	t	p
Test	57	4.1782	.31140	56	1.227	.228
Retest	57	4.2600	.26568			
	N	Correlation				p
Test & Retest	57	.718				.000

The results of the paired samples t-test indicated that there were no significant difference in mean SSS-T scores between the two time points, $t(1.227) = .228$, $p > .05$. This suggests that the scale's reliability is supported. Consequently, the validity and reliability tests applied to determine the psychometric properties of the Soft Skills Scale for Teachers show that the scale is structured to assess the soft skills level of teachers.

Discussion and Conclusion

The aim of the research was to develop a scale that would provide both valid and reliable measurements for determining teachers' soft skills levels. This aim stemmed from the fact that no scale was found that directly measures the soft skills of teachers. As far as we know, the Soft Skills Scale for Teachers is the first scale available for measuring teachers' soft skills in an educational context. The measurement of teachers' soft skills is crucial for improving the quality of student-teacher interactions in educational processes. This is because teachers' affective skills can directly influence students' classroom experiences and academic success. According to Goleman's (1995) Emotional Intelligence Theory, teachers who possess strong soft skills—such as empathy, emotional awareness, and interpersonal sensitivity—create supportive learning environments built on strong classroom relationships. In Jennings and Greenberg's (2009) Prosocial Classroom Model, teachers with well-developed soft skills serve as role models in empathy, self-regulation, and constructive interaction, thereby supporting students' social, emotional, and academic development. These theoretical and empirical perspectives indicate that teachers' soft skills directly influence the social, emotional, and academic climate of the classroom. Teachers need to be passionate about learning, take the initiative, adapt to changing conditions, and diversify the learning environment. Moreover, they must be innovative, creative, and emotionally stable. Therefore, accurately determining teachers' soft skill levels and fostering the development of these skills is a critical step in enhancing students' affective development. Measuring teachers' soft skill levels with a valid and reliable tool will contribute to the development of studies on soft skills in the field of education. Therefore, four studies were conducted in this research to ensure validity and reliability.

We first order exploratory factor analysis to confirm the construct validity of the scale. The first-order EFA was applied to the preliminary version of the scale, which consisted of 53 items. According to the results of the first-order EFA, three items were excluded because their factor loadings were below .40; six items were removed because they had similar loading values on two different factors; and seven items were excluded because, although their factor loadings were above .40, they did not show a clear factor structure (Çokluk et al., 2012; Şencan, 2005). Thus, the second-order EFA was conducted again for the remaining 37 items and five factors. Scree plot and Kaiser criterion results consistently supported the retention of the five-factor structure. Eigenvalue statistics indicate that each additional factor significantly contributes to the explained variance, reaching 59.37% of the total variance. This demonstrates that the soft skills concept consists of a multifactorial structure, with each

factor representing a different, yet interconnected, component of this structure. Furthermore, the five-factor structure aligns with the theoretical framework and previous research in the field of soft skills (Ince et al., 2025; Kalaimani, and Stephen, 2022; Maren et al., 2021). Therefore, although no parallel analysis was conducted, the five-factor model appears to be statistically and theoretically appropriate and conceptually consistent (Tabachnick & Fidell, 2007). Accordingly, considering previous literature, these factors were called cognitive skills, interpersonal skills, problem solving, multiculturalism and emotional control, respectively. These dimensions show that soft skills are discussed comprehensively and a structure compatible with the theoretical frameworks in literature. The first factor is the cognitive skills factor. Cognitive skills refer to teachers' competencies in the teaching process. These skills include skills such as developing thinking skills, time management, lesson planning, material development, using teaching methods and techniques, measurement and evaluation. Research shows that if teachers' cognitive skills are high, students show higher academic performance (Krieglstein et al., 2024; Kunter et al., 2013). When the research findings are examined theoretically, they reveal results consistent with Bandura's (1977) Social Learning Theory and Vygotsky's (1978) Sociocultural Theory. According to Bandura, students can observe their teachers and model or imitate their cognitive and metacognitive performances. In line with Vygotsky's perspective, teachers can provide students with rich cognitive experiences through social interaction and cognitive scaffolding. Similarly, Darling-Hammond et al. (2020) found that cognitively competent teachers support students' cognitive skills such as critical thinking, adaptability, and self-reflection. These theoretical and empirical perspectives together demonstrate that teachers' cognitive skills play a transformative role in the development of students' soft skills. Therefore, the importance of teachers' cognitive skills in terms of soft skills should be emphasized. The second one is the interpersonal skills factor. The interpersonal skills factor includes teachers' abilities to communicate effectively, show empathy, cooperate, and to act respectfully with students, parents, colleagues, and other stakeholders. Healthy relationships increase students' commitment to school and academic success (Epstein & Sheldon, 2006; Roorda et al., 2017). In this respect, it can be said that teachers' interpersonal skills affect students' social-emotional development as well as their academic success. The third one is the problem-solving factor. Teachers inevitably face various problems in their daily lives. Today, the problems teachers face include not only academic but also social and emotional issues. In such cases, teachers are expected to demonstrate skills such as analytical thinking, creative problem solving, adaptation and flexibility in solving problems. In cases where standard solutions do not

work, producing creative and innovative solutions and finding the most suitable solutions for students' needs are the skills expected from teachers (Bellanca & Fogarty, 2012; Darling-Hammond et al., 2017; Roorda et al., 2017). It is important for teachers to act flexibly and adaptably, adapting to changing conditions and unexpected situations, and to organize educational plans according to the needs of students. In addition, problem-solving skills help teachers effectively handle discipline problems and student behavior they encounter during classroom management. Teachers' ability to overcome classroom problems increases classroom interaction, the quality of the learning environment, and student participation. This indicates that problem-solving skills are an important professional skill that a teacher should possess in the context of soft skills. The fourth is the multiculturalism factor. Multiculturalism includes teachers' respect for cultural diversity, their understanding of the needs of students from different cultures, and their ability to effectively manage a multicultural classroom environment. Developing teachers' multicultural skills helps students accept their cultural differences and understand each other. A teacher who is soft to multiculturalism should deal with each student individually and, at the same time, be soft to the group and cultural affiliations of each student. Otherwise, if a situation occurs, situations such as disappointment, misunderstandings and intercultural conflict become more likely to occur in the classroom (Griner & Stewart, 2013; Schachner et al., 2021). As a result of all this, teachers' development of their skills in this factor will help support cultural diversity, strengthen students' cultural identities and create an effective learning environment. The last one is emotional control. Today, teachers face many challenges such as constantly increasing academic expectations, student diversity, lack of resources, parental pressure and rapid changes in the educational system. These difficulties can negatively affect teachers' mental health by causing negative emotions such as stress, burnout, anxiety and anger. The way teachers manage their own emotions, cope with stress, and react to negative emotions directly affects both their own health and the learning experiences of their students. Teachers with good emotional control can provide emotional guidance to their students and maintain their emotional balance in difficult situations, thanks to their emotional awareness and regulation skills (Schwab & Elias, 2015). Emotional control increases teachers' abilities to establish and maintain authority in the classroom and thereby contributes to an orderly and productive learning environment. As a result, we concluded that the five-factor structure obtained through EFA encompasses the teacher's soft skills in an educational context.

As the second step, we conducted a CFA to test the validity of the structure obtained through EFA as a

model. The model fit indices were calculated as $\chi^2/df = 2.70$, RMSEA = 0.06, GFI = 0.90, AGFI = 0.91, CFI = 0.88, RMR = 0.06, NFI = 0.90, and TLI = 0.92. In the confirmatory factor analysis, the model fit indices were examined separately for each reference value. The χ^2/df (Chi-square/degree of freedom) ratio examined to assess the model's fit to the data indicates excellent fit when it is less than 3 for large samples and less than 2 for small samples (Tabachnick & Fidell, 2007). In this study, the obtained $\chi^2/df = 2.70$ value suggests that the model fits the data well. In evaluating the model's fit to the data, another index, RMSEA, is examined. An RMSEA value less than 0.08 indicates good fit, and a value less than 0.05 indicates excellent fit (Hooper, et al., 2008; Schumacker & Lomax, 2010). In this context, the RMSEA value of 0.06 for the The GFI, which examines the overall fit of the model, and the AGFI, which considers the model's complexity, are considered to indicate good fit when their values are greater than 0.90 and excellent fit when greater than 0.95 (Hooper, et al., 2008; Hu & Bentler, 1999; Schumacker & Lomax, 2010). In this context, it can be concluded that the GFI and AGFI values in this study show good fit. The CFI value, which provides reliable results for both large and small samples, indicates good fit when it is greater than 0.90 and excellent fit when it is greater than 0.95 (Hu & Bentler, 1999; Schumacker & Lomax, 2010). The CFI value of 0.88 calculated for the SSS-T indicates an acceptable fit. The fact that the lower limit of the CFI value is below .90 may be related to the sample size obtained in CFA; however, the chi-square test is not an index that is sensitive to sample size (Schermelel-Engel et al., 2003). In other words, it works even with small samples. In this context, the use of both CFI and chi-square together in this study and the fact that the chi-square showed good fit indicates that the CFI value is acceptable. Both NFI and TLI evaluate the model's fit to the data, but TLI provides a more reliable fit assessment by considering the degrees of freedom. A value greater than 0.90 for both indicates good fit, and a value greater than 0.95 indicates excellent fit (Hu & Bentler, 1999; Schumacker & Lomax, 2010; Tabachnick & Fidell, 2007). It can be concluded that all indices, except for CFI, indicate good fit. However, when the model is evaluated overall with all indices, it is understood that the SSS-T has been validated as a model.

In a subsequent study, further evidence for the reliability of the scale was obtained through the calculation of Cronbach's alpha coefficients and a convergent validity analysis conducted with the SEC scale, which theoretically measures related constructs. The reliability coefficients for the subscales were as follows: Cognitive Skills (.89; .91), Interpersonal Skills (.82; .92), Problem Solving (.84; .86), Multiculturalism (.88; .75), and Emotional Control (.76; .78). These results indicate that the reliability values of the subscale ranged from .76 to .89, while the overall scale yielded

a Cronbach's alpha coefficient of .91 and composite reliability (CR) coefficient of the scale was .92, A Cronbach's alpha and composite reliability value exceeding .70 is generally considered to demonstrate high internal consistency and an acceptable level of reliability (Tabachnick & Fidell, 2007). Moreover, a significant positive correlation was found between the SSS-T and the SEC scale ($r = .562$, $p < .001$), providing evidence for the convergent validity of the developed scale. In convergent validity studies, moderate correlations are expected when two measures assess conceptually related but non-identical constructs, indicating theoretical overlap without redundancy (Hair et al., 2020). A teacher's social-emotional competence refers to the development of their social, emotional, and partially cognitive competencies (Li & Qian, 2025). Given these characteristics, social-emotional competence overlaps with teachers' soft skills, particularly in areas such as relationship-building and empathy (CASEL, 2020). Accordingly, we decided to use the SEC to assess convergent validity.

Finally, the results obtained from administering the scale twice at different time points were examined using the test-retest technique. Test-retest reliability is crucial as it provides evidence for the stability and consistency of the scale over time (Cohen & Swerdlik, 2018). The findings indicated a strong correlation between the data obtained from the two administrations of the SSS-T, $r = .718$, $p < .001$. The expected correlation level in test-retest applications is generally .70 or higher (Tabachnick & Fidell, 2007). Additionally, to assess whether there was a significant difference between the two administrations, a paired-sample t-test was conducted (Field, 2013). The results from Study 4 suggest that the SSS-T is reliable, showing no significant difference between the measurements taken four weeks apart, $t(1.227) = .228$, $p > .05$. The results from the two separate tests in Study 4 provide strong evidence for the reliability of the scale (Creswell, 2014).

The results obtained from these four separate studies, conducted to determine the psychometric properties of the SSS-T, indicate that the scale is both valid and reliable. Difficulties in determining the psychometric structure of soft skills reflect the complexity of defining and measuring this concept. In the field of education in particular, the limitation of valid and reliable measurement tools that measure soft skills prevents in-depth research in this field. Developing a valid and reliable scale to measure teachers' soft skills levels for the first time in literature with this research will provide a more comprehensive understanding of teachers' soft skills in future studies. Although soft skills are a concept that is becoming increasingly important in today's world, it is a critical issue for both education and society that teachers who train all professional groups in society have these skills (Scheerens et al., 2020). Examining teachers' soft skills in detail in these

studies will enable the determination of teachers' strengths and areas that need to be improved in terms of soft skills and the development of training and intervention programs in the areas needed. Therefore, teachers' personal and professional development will be supported, and, as a result, students' academic, social and emotional learning will be positively supported. On the other hand, skills such as life/work skills, leadership, cultural competence, and emotional awareness enable teachers to contribute to the soft skills development of students, be soft to different cultures, and to perform classroom management effectively.

Limitations and Implications

This study has some limitations. The first is about the samples of each phase. A review of the literature suggests that a sample size of 300–400 is recommended for the exploratory factor analysis in Study I (Comrey & Lee, 1992), 100–200 for the confirmatory factor analysis in Study II (Kline, 2015), and approximately 100–200 participants for the convergent validity conducted in Studies III (Kline, 2015) and 30–50 participant for the test retest conducted in Study IV (Cohen & Swerdlik, 2018). In this study, the sample sizes obtained were close to the lower boundaries of these recommended ranges, which limits the generalizability of the findings to the broader field of education. To address this limitation, future research should aim to include larger and more diverse samples of teachers across different regions and educational contexts. This would enhance the generalizability of the findings and provide a more robust validation of the scale.

The second limitation of the study concerns the acceptable and good levels of model fit indices obtained during the confirmatory factor analysis. Although these indices suggest that the model fits the development sample well, they do not guarantee that the same level of fit will be achieved in different populations. This raises concerns regarding the generalizability of the scale. Therefore, it is recommended that the scale be validated on independent samples to ensure its stability and robustness across different groups (DeVellis, 2017).

Future research should also examine the validity and reliability of the scale on different demographic groups. Additionally, testing the scale in different cultural contexts may increase the overall validity of the scale. Studies to be conducted in different cultural and social contexts will also reveal the universality and adaptability of the scale. Ensuring cultural compatibility of the scale in such studies will help obtain more accurate results in evaluating teachers' soft skills. The developed scale will help detect the presence and level of soft skills in teachers, thereby contributing to the design of teacher training programs and in-service training to develop these

skills. Teachers' possession of soft skills will positively affect the social-emotional development of students as well as their academic success and will contribute to raising them as individuals with twenty-first century skills. Therefore, this study constitutes an important step in terms of teacher competencies and student development. In addition, thanks to the developed scale, teachers' precise skill levels can be determined and the effects of these skills on teacher and student outcomes are able to be examined in future studies. In this way, the importance of soft skills and their contribution to the education system can be revealed more clearly.

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References

- Aldrup, K., Carstensen, B., Köller, M. M., & Klusmann, U. (2020). Measuring teachers' social-emotional competence: Development and validation of a situational judgment test. *Frontiers in Psychology, 11*, 519912. <https://doi.org/10.3389/fpsyg.2020.00892>
- Al-Sa'di, A., Yamjal, P., Ahmad, E., Panjabi, R., Allott McPhee, C. A. M., & Guler, O. (2023). Assessing educators' soft skills: Developing a self-assessment instrument. *Administrative Sciences, 13*(9), 208. <https://doi.org/10.3390/admsci13090208>
- Anthony, C. J., Elliott, S. N., DiPerna, J. C., & Lei, P. W. (2021). Initial development and validation of the social skills improvement system—social and emotional learning brief scales-teacher form. *Journal of Psychoeducational Assessment, 39*(2), 166–181. <https://doi.org/10.1177/0734282920953>
- Anthony, C. J., & DiPerna, J. C. (2019). Examining the psychometric properties of maximally efficient items from the social skills improvement system—teacher rating scale. *Journal of Psychoeducational Assessment, 37*(3), 307–319. <https://doi.org/10.1177/0734282917743335>
- Bellanca, J. A., & Fogarty, R. J. (2012). *How to teach thinking skills within the common core: 7 key student proficiencies of the new national standards*. Solution Tree Press.
- Chen, J. J., Li, Z., Rodrigues, W., & Kaufman, S. (2022). *Teacher Stress Scale (TSS)* [Database record]. APA PsycTests. <https://doi.org/10.1037/t85552-000>

- Calik, B., & Capa-Aydin, Y. (2022). Psychometric properties of the Turkish adaptation of Teacher Emotions Scale. *Journal of Psychoeducational Assessment, 40*(8), 1017-1032. <https://doi.org/10.1177/07342829221114624>
- Cao, C. H., Liao, X. L., Jiang, X. Y., Li, X. D., Chen, I. H., & Lin, C. Y. (2023). Psychometric evaluation of the depression, anxiety, and stress scale-21 (DASS-21) among Chinese primary and middle school teachers. *BMC Psychology, 11*(1), 209. <https://doi.org/10.1186/s40359-023-01242-y>
- Collaborative for Academic, Social, and Emotional Learning (CASEL). (2020). *Core SEL competencies*. <https://casel.org/sel-framework/>
- Cohen, R. J., & Swerdlik, M. E. (2018). *Psychological testing and assessment: An introduction to tests and measurement*. McGraw-Hill Education.
- Comrey, A. L., & Lee, H. B. (1992). *A first course in factor analysis*. Psychology Press.
- Çokluk, Ö., Şekercioğlu, G., & Büyüköztürk, Ş. (2012). *Sosyal bilimler için çok değişkenli istatistik: SPSS ve LISREL uygulamaları [Multivariate statistics for the social sciences: SPSS and LISREL applications]*. Pegem Akademi Yayıncılık.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.
- Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. *Applied Developmental Science, 24*(2), 97-140. <https://doi.org/10.1080/1088691.2018.1537791>
- DeVellis, R. F. (2017). *Scale development: Theory and applications*. Sage Publications.
- Epstein, J. L., & Sheldon, S. B. (2006). Moving forward: Ideas for research on school, family, and community partnerships. In C. F. Conrad & R. Serlin (Eds.), *SAGE Handbook for research in education: Engaging ideas and enriching inquiry* (pp. 117-138). Sage Publications.
- Escolà-Gascón, Á., & Gallifa, J. (2022). How to measure soft skills in the educational context: Psychometric properties of the SKILLS-IN-ONE questionnaire. *Studies in Educational Evaluation, 74*, 101155. <https://doi.org/10.1016/j.stueduc.2022.101155>
- Espina-Romero, L. C., Franco, S. L. A., Conde, H. O. D., Guerrero-Alcedo, J. M., Parra, D. E. R., & Ramírez, J. C. R. (2023). Soft skills in personnel training: Report of publications in Scopus, topics explored, and future research agenda. *Heliyon, 9*(4), 1-14. <https://doi.org/10.1016/j.heliyon.2023.e15468>
- Fernández-Arias, P., Antón-Sancho, Á., Vergara, D., & Barrientos, A. (2021). Soft skills of American university teachers: Self-concept. *Sustainability, 13*(22), 12397. <https://doi.org/10.3390/su132212397>
- Fernandes, P. R., Jardim, J., & Lopes, M. (2021). The soft skills of special education teachers: Evidence from the literature. *Education Sciences, 11*(3), 125. <https://doi.org/10.3390/educsci11030125>
- Frenzel, A. C., Pekrun, R., Goetz, T., Daniels, L. M., Durksen, T. L., Becker-Kurz, B., & Klassen, R. M. (2016). Measuring teachers' enjoyment, anger, and anxiety: The Teacher Emotions Scales (TES). *Contemporary Educational Psychology, 46*, 148-163. <https://doi.org/10.1016/j.cedpsych.2016.06.003>
- Granziera, H., Liem, G. A. D., Chong, W. H., Martin, A. J., Collie, R. J., Bishop, M., & Tynan, L. (2022). The role of teachers' instrumental and emotional support in students' academic buoyancy, engagement, and academic skills: A study of high school and elementary school students in different national contexts. *Learning and Instruction, 80*, 101619. <https://doi.org/10.1016/j.learninstruc.2022.101619>
- Gresham, F. M., Elliott, S. N., Cook, C. R., Vance, M. J., & Kettler, R. (2010). Cross-informant agreement for ratings for social skill and problem behavior ratings: An investigation of the Social Skills Improvement System—Rating Scales. *Psychological Assessment, 22*(1), 157. <https://doi.org/10.1037/a0018124>
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage Publications.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.
- Griner, A. C., & Stewart, M. L. (2013). Addressing the achievement gap and disproportionality through the use of culturally responsive teaching practices. *Urban Education, 48*(4), 585-621. <https://doi.org/10.1177/0042085912456847>
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. New York: Bantam Books.

- Guo, W., Wang, J., Li, N., & Wang, L. (2025). The impact of teacher emotional support on learning engagement among college students mediated by academic self-efficacy and academic resilience. *Scientific Reports*, *15*(1), 3670. <https://doi.org/10.1038/s41598-025-88187-x>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2020). *Multivariate Data Analysis*. Cengage Learning.
- Heckman, J. J., & Kautz, T. (2012). Hard evidence on soft skills. *Labour Economics*, *19*(4), 451–464.
- Hendarman, A. F., & Cantner, U. (2017). Soft skills, hard skills, and individual innovativeness. *Eurasian Business Review*, *8*, 139–169. <https://doi.org/10.1007/s40821-017-0076-6>
- Heydarnejad, T., Zareian, G., Ghaniabadi, S., & Adel, S. M. R. (2021). Measuring language teacher emotion regulation: Development and validation of the language teacher emotion regulation inventory at workplace (LTERI). *Frontiers in Psychology*, *12*, 708888. <https://doi.org/10.3389/fpsyg.2021.708888>
- Hong, J., Heddy, B., Ruan, J., You, S., Kambara, H., Nie, Y., & Monobe, G. (2016). Revising and validating achievement emotions questionnaire - teachers (AEQ-T). *International Journal of Educational Psychology*, *5*(1), 80-107. <https://doi.org/10.17583/ijep.2016.1395>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1-55. <https://doi.org/10.1080/10705519909540118>
- Ince, H., Hevedanlı, M., & Meylani, R. (2025). Developing 21st-Century Soft Skills in Teachers: A Qualitative Synthesis Aligned with Sustainable Development Goals. *İstanbul Aydın Üniversitesi Eğitim Fakültesi Dergisi*, *11*(1), 9-10.
- Jardim, J., Pereira, A., Vagos, P., Direito, I., & Galinha, S. (2022). The soft skills inventory: Developmental procedures and psychometric analysis. *Psychological Reports*, *125*(1), 620-648. <https://doi.org/10.1177/0033294120979933>
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, *79*(1), 491–525. <https://doi.org/10.3102/0034654308325693>
- Ju, E., Qi, H., Qu, G., Luo, Y., Li, Y., & You, X. (2025). What is the association between teachers' autonomous motivation, controlled motivation, and students' emotional well-being? A multilevel mediation analysis. *European Journal of Education*, *60*(1), e70012. <https://doi.org/10.1111/ejed.70012>
- Junaidi, J. M., & Rosadi, K. I. (2022). Determining the quality of educators and teacher work productivity: Competency and soft skill analysis. *Dinasti International Journal of Education Management and Social Science*, *3*(6), 867-880.
- Kalaimani, K., & Stephen, L. G. (2022). A Study on Soft Skills of High School Teachers in Relation to Their Gender and Type of Management. *Journal of Positive School Psychology*, *6*(6), 1739-1746.
- Khasanzanova, A. (2017). How volunteering helps students to develop soft skills. *International Review of Education*, *63*, 363-379. <https://doi.org/10.1007/s11159-017-9645-2>
- Kline, R. B. (2015). *Principles and Practice of Structural Equation Modeling* (4th ed.). New York: Guilford Press.
- Kunter, M., Klusmann, U., Baumert, J., Richter, D., Voss, T., & Hachfeld, A. (2013). Professional competence of teachers: Effects on instructional quality and student development. *Journal of Educational Psychology*, *105*(3), 805–820. <https://doi.org/10.1037/a0032583>
- Krieglstein, F., Schmitz, M., Wesenberg, L., & Rey, G. D. (2024). How to help students make informed assessments of cognitive load: Examining the role of training interventions. *Applied Cognitive Psychology*, *38*(5), e4247. <https://doi.org/10.1002/acp.4247>
- Lee, L. T., & Lee, T. T. (2011). Investigating soft skills for success in the workforce: Perceptions of elementary school teachers. *International Review of Social Sciences and Humanities*, *1*(2), 140-149.
- Leithwood, K., & Jantzi, D. (2006). Transformational school leadership for large-scale reform: Effects on students, teachers, and their classroom practices. *School Effectiveness and School Improvement*, *17*(2), 201–227. <https://doi.org/10.1080/09243450600565829>
- Li, D., & Qian, M. (2025). The impact of teacher social-emotional competence training on students' social-emotional competence: A theoretical framework based on the KAB model and empirical analysis using SSES data. *Psychology in the Schools*, *62*(6), 1716-1729. <https://doi.org/10.1002/pits.23427>

- Maren, M. S., Salleh, U. K. M., & Zulnaidi, H. (2021). Assessing prospective teachers' soft skills curriculum implementation: Effects on teaching practicum success. *South African Journal of Education, 41*(3), 1-21. <https://doi.org/10.15700/saje.v41n3a1915>
- Martino, G., & Bartolone, J. (2011). Soft skills for open innovation success. In P. Sloane (Ed.), *A guide to open innovation and crowdsourcing* (pp. 98-105). Kogan Page.
- Melser, N. A. (2019). *Soft skills for children: A guide for parents and teachers*. Rowman & Littlefield Publishers.
- Moussaoui, O., Bouhout, N., & Mamnoun, S. (2025). Teacher leadership and student satisfaction: A full latent growth approach to moderated mediation using soft skills and motivation. *European Journal of Education, 60*(2), e70093. <https://doi.org/10.1111/ejed.70093>
- OECD. (2021). *Teaching as a knowledge profession*. OECD Publishing.
- Phuti, F., Koloi-Keaikitse, S., Tsheko, G. N., & Oppong, S. (2023). Developing and validating a soft skills assessment scale for psychoeducational assessment. *SAGE Open, 13*(4). <https://doi.org/10.1177/21582440231218066>
- Pietro, O., & Altomari, N. (2019). A tool to measure teachers' soft skills: Results of a pilot study. *Advances in Social Science and Culture, 1*(2), 245-257.
- Rani, P., Dhanda, B., & Punia, N. A. (2010). Comparative study of soft skills in rural and urban preschoolers. *Research Journal of Recent Sciences, 5*(8), 26-30.
- Raelison, M., Thompson, V. A., & De Neys, W. (2020). The smart intuitor: Cognitive capacity predicts intuitive rather than deliberate thinking. *Cognition, 204*, 104381. <https://doi.org/10.1016/j.cognition.2020.104381>
- Roorda, D. L., Jak, S., Zee, M., Oort, F. J., & Koomen, H. M. (2017). Affective teacher-student relationships and students' engagement and achievement: A meta-analytic update and test of the mediating role of engagement. *School Psychology Review, 46*(3), 239-261.
- Schwab, Y., & Elias, M. J. (2015). From compliance to responsibility: Social-emotional learning and classroom management. In E. T. Emmer & E. J. Sabornie (Eds.), *Handbook of classroom management* (pp. 94-115). Routledge.
- Schachner, M. K., Schwarzenhal, M., Moffitt, U., Civitillo, S., & Juang, L. (2021). Capturing a nuanced picture of classroom cultural diversity climate: Multigroup and multilevel analyses among secondary school students in Germany. *Contemporary Educational Psychology, 65*, 101971. <https://doi.org/10.1016/j.cedpsych.2020.101971>
- Scheerens, J., van der Werf, G., & de Boer, H. (2020). *Soft skills in education*. Springer International Publishing.
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online, 8*(2), 23-74.
- Schumacker, R. E., & Lomax, R. G. (2010). *A beginner's guide to structural equation modeling*. Routledge.
- Shulman, L. S. (1987). *Knowledge and teaching: Foundations of the new reform*. Harvard Educational Review, 57(1), 1-22. <https://doi.org/10.17763/haer.57.1.j463w79r56455411>
- Shawer, S. F. (2017). Teacher-driven curriculum development at the classroom level: Implications for curriculum, pedagogy, and teacher training. *Teaching and Teacher Education, 63*, 296-313. <https://doi.org/10.1016/j.tate.2016.12.017>
- Sarısoy, B., Alcı, B., & Erişen, Y. (2021). Öğretmenlerin sosyal-duygusal yetkinliklerini değerlendirme ölçeğinin Türkçe uyarlaması: Geçerlilik-güvenirlilik çalışması [Turkish adaptation of the scale for evaluating teachers' social-emotional competencies: Validity and reliability study]. *Boğaziçi University Journal of Education, 38*(2), 3-26. <https://doi.org/10.52597/buje.953597>
- Shulman, L. S. (1987). *Knowledge and teaching: Foundations of the new reform*. Harvard Educational Review, 57(1), 1-22.
- Snoek, M., Dengerink, J., & de Wit, B. (2019). Reframing the teacher profession as a dynamic multifaceted profession: A wider perspective on teacher quality and teacher competence frameworks. *European Journal of Education, 54*(3), 413-425. <https://doi.org/10.1111/ejed.12350>
- Şencan, H. (2005). *Sosyal ve davranışsal ölçümlerde güvenirlik ve geçerlilik [Reliability and validity in social and behavioral measurements]*. Seçkin Yayıncılık.

- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Pearson Education Inc.
- Tuomi, I. (2022). Artificial intelligence, 21st century competences, and socio-emotional learning in education: More than high-risk? *European Journal of Education*, 57, 601-619. <https://doi.org/10.1111/ejed.12531>
- Van Werven, I. M., Coelen, R. J., Jansen, E. P., & Hofman, W. H. A. (2021). Global teaching competencies in primary education. *Compare: A Journal of Comparative and International Education*, 53(1), 37-54. <https://doi.org/10.1080/03057925.2020.1869520>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Zheng, F. (2022). Fostering students' well-being: The mediating role of teacher interpersonal behavior and student-teacher relationships. *Frontiers in Psychology*, 12, 796728. <https://doi.org/10.3389/fpsyg.2021.796728>