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The Scale of Teachers' Self- Disclosure through Social Media: Validity and Reliability Studies

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Abstract

The purpose of this study was to develop a valid and reliable scale that can be used to identify the perceptions of teachers on their self-disclosure to their students in their interactions with them through social media. This study was designed as a sequential exploratory mixed method. So validity and reliability studies were conducted for this purpose. Data from 301 teachers for EFA and 422 teachers CFA were used psychometric properties of “The Scale of Teachers” Self-disclosure through Social Media” (STSSM). The exploratory factor analysis yielded four-factor model with 21 items. As a result of the analyses of confirmatory FA, it was found that the scale produced sufficient goodness of fit values. Finally, the findings on the reliability proved that “The Scale of Teachers” Self-disclosure through Social Media” can reliably measure the perceptions of teachers on self-disclosure to their students on social media.

Keywords: Teachers’ self-disclosure, Social media, Self-disclosure on social media

Introduction

In the twenty-first century, which is characterized by the transformation of communication and technology, developments reached incredible dimensions, and social environments and communication have been transferred to computers and the internet with Web 2.0 technology (Günaydın, 2017). Although there is a one-side interaction based on the presentation in classical web-based education, Web 2.0 and, based on this, social networks offer shared and multilateral interaction (Barış, 2011). Web 2.0 technology provided its users with the ability to create and share content. The power of social media, whose contents are created by its users, comes from the fact that communication allows more common interaction compared to one-way dissemination, giving users the opportunity to interact in a multifaceted way, communicate democratically and simultaneously, and to socialize (Aküzüm & Saracoğlu, 2017). There was a change in the way we communicate with the increase in the use of social media, and this changing communication form became a habit and a part of everyday life (Tutgun Ünal, 2015). All these changes also affected education systems and teachers.

It can be argued that the implementation of social networks in educational environments will provide more effective communication between students and teachers, as well as increased opportunities for teachers and students to know each other (Öztürk & Talas, 2015). Indeed, the active role of social networks in education strengthened communication between both teachers and students effectively, offering the opportunity to know each other individually (Konuk & GÜNTAŞ, 2019). Teachers use many methods and techniques in this communication and recognition process. When these methods and techniques are examined, it will be noticed that education with computers, the internet, and social media has an important place in ensuring the cognitive and emotional learning of students (Divernier & Hosek, 2011). One of the methods used to make the teaching process more effective is “self-disclosure” (Demir, 2020). Basically, self-disclosure is “the process of sharing personal information, thoughts and feelings with other people” (Derlega, Metts, Petronio, & Margulis, 1993, narrated by Qian & Scott, 2007; Foubert & Sholley, 1996), and might encompass any human relation, including student-teacher interaction (Saylag, 2012). Teachers’ self-disclosure can be in different ways in different classes. For example, when a mathematics teacher at an elementary school creates a problem, s/he may attract the attention of students by mentioning his/her frequent walks, memories of the mountains climbed, etc. Based on

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their own story and experience, teachers can help students benefit from this content. Another example is a teacher teaching the subject of war in history class by sharing photos and memories of relatives participating in one of these wars, associating his personal information with the course, and bringing this event to students (Zhang, Shi, Luo & Ma, 2009). Sorensen (1989) emphasized the self-disclosure of teachers as sharing information about him/her that students cannot learn from other sources, and described this as a unique means of teaching. In this way, the information described by the teacher, whether directly related to the teaching content or not, affects the academic learning, teacher-student relation, student participation, and communication of students significantly (Cayanus & Martin, 2009; Mazer, Murphy & Simonds, 2007; Sorensen, 1989). Cayanus & Martin (2016) also considered it important for the teacher to reveal himself/herself in teacher-student interaction and described the self-disclosure of the teacher as the high school of disclosure of personal information and the development of strong ties between teacher-student, in the teaching process or during the student interaction. A limited number of scale development studies measuring the status of “self-disclosure” in the literature (Cayanus & Martin, 2004; Çağ & Yıldırım, 2017; Oral, 1994; Selçuk, 1989; Topkaya, 2011; Wheelless & Grotz, 1976); however, a scale study on teachers’ self-disclosure on social media was not been detected. In line with the above explanations, it was seen that self-disclosure to students with social media has a positive effect on student development. This study intended to develop a valid and reliable scale that can be used to measure the status of teachers’ self-disclosure to their students on social media. It is considered that the data obtained from the implementation of the scale will give significant feedbacks to both the implementers and researchers and the resulting feedbacks will contribute to the literature.

Method

In this study, in order to develop a valid and reliable scale that can be used to identify the perceptions of teachers on self-disclosure to their students in their interactions with their students through social media, a sequential exploratory mixed method was used. The main purpose of sequential exploratory mixed method design is to explore a phenomenon with quantitative analysis and interpretation, following the priority given to qualitative methods (Creswell, 2003). This design is “especially advantageous when a researcher is building a new instrument” (Creswell, 2003, p. 216). For this purpose, first qualitative methods (literature review and expert analyses) were used to build a draft item pool and next quantitative methods were used to test the psychometric properties of STSSM

Study Groups

Study Group for EFA

In order to determine the participants in line with the purpose of the research, in the first semester of the 2019-2020 academic years, within the scope of the development of the trial scale form, the sample was determined by criterion sampling method, one of the purposeful sampling methods. In this regard, the use of social media was taken as the criterion. In this direction, teachers were contacted through social media groups where teachers were members, and a study group was created with 301 teachers who volunteered to participate (refined from 235 teachers after initial analysis). As a result, 301 teachers were included in the study. The data of the teachers included in the study are given in Table 1.

Table 1. Distribution of EFA Teacher Study Group according to Descriptive Characteristics (N=301)

Variable	Group	<i>f</i>	%	Variable	Group	<i>f</i>	%
Gender	Female	164	54,5	Faculty of Graduation	Faculty of Education	240	79,7
	Male	137	45,5		Faculty of Sci- Letters	38	12,6
	Total	301	100		Educational Institute	11	3,7
Education Status	Bachelor	247	82,1		Other	12	4
	Master	46	15,3		Total	301	100
	PhD	8	2,7	Daily Social Media Usage	1-60 minute	103	34,2
	Total	301	100		61-120 minute	99	32,9
School Level Served	Preschool	5	1,7		121-180 minute	53	17,6
	Primary school	57	18,9		181 minute and above	46	15,3
	Secondary school	192	63,8		Total	301	100
	High school	47	15,6	Years of Seniority	1-10 years	109	36,2
	Total	301	100		11-20 years	146	48,5
School Type Served	Public school	271	90		21-30 years	39	13
	Private	30	10		31 years and more	7	2,3
	Total	301	100		Total	301	100

Study Group for CFA

Since it would be more appropriate to apply the confirmatory factor analysis after the exploratory factor analysis on another sampling (Henson & Roberts, 2006), 422 teachers were included with the convenient sampling method.

Table 2. Distribution of CFA Teacher Study Group according to Descriptive Characteristics (N=422)

Variable	Group	f	%	Variable	Group	f	%
Gender	Female	242	57,3	Faculty of Graduation	Faculty of Education	324	76,8
	Male	180	42,7		Faculty of Sci-Letters	61	14,5
	Total	422	100		Educational Institute	9	2,1
Education Status	Bachelor	334	79,1		Other	28	6,6
	Master	82	19,4		Total	422	100
	PhD	6	1,5	Daily Social Media Usage	1-60 minute	102	24,2
	Total	422	100		61-120 minute	143	33,9
School Level Served	Preschool	17	4		121-180 minute	82	19,4
	Primary school	93	22		181 minute and more	95	22,5
	Secondary school	225	53,4		Total	422	100
	High school	87	20,6	Years of Seniority	1-10 years	154	36,5
	Total	422	100		11-20 years	201	47,6
School Type Served	Public school	389	92,2		21-30 years	57	13,5
	Private	33	7,8		31 years and more	10	2,4
	Total	422	100		Total	422	100

Development of the Data Collection Tool

In this study, it was planned to develop a scale for teachers to disclose themselves to their students through social media. In this respect, the literature on teachers' use of social media and teacher-student interaction on social media was reviewed (Acar & Yenmiş, 2014; Alican & Saban, 2013; Arthur & Bostedo-Conway, 2012; Atkins, 2010; Bridges, 2009; Cayanus, 2004; Cayanus & Martin, 2004; Cayanus & Martin, 2008; Cayanus, Martin & Goodboy, 2009; Çakmak & Arap, 2013; Dawson, 2008; Eke, Omekwu & Odoh, 2014; Eugenia & Wong, 2013; Farani & Fatemi, 2014; Ha & Shin, 2014; Haeger, Wang & Lorenz, 2014; Hassan & Landani, 2015; Hosek & Thompson, 2009; Hurt et al., 2012; Irwin, Desbrow & Leveritt, 2012; Ili, 2013; Junco, Heiberger & Loken, 2011; Kırksekiz, 2013; Kuzu, 2014; Lam, 2012; Lane, 2013; Lane & Lewis, 2013; Liccardi, 2007; Mazer, et al., 2007; Mazer & Hosek, 2012; Munoz & Towner, 2009; Nkhoma et al., 2015; Sang, 2014; Saylag, 2012; Smith, 2015; Tarantino, McDonough & Hua, 2013; Tarawneh, 2014; Tiryakioğlu & Erzurum, 2011; Togay et al., 2013; Tombuloğlu & Işman, 2014; Tucker, 2012; Weiler, 2006; Wheelless & Grotz, 1976; Zardeckaite-Matulaitiene & Paluckaite, 2013).

As a result of the review of these studies, a question pool of 43 items was created on teachers' self-disclosure to their students through social media. During the process of creating the items, short and clear expressions were written in order not to have participants bored and distracted. Then, to pre-examine these items in terms of understandability, the opinions of one Turkish teacher and one field specialist were taken, and as a result of this process, an expert evaluation form with 40 items was created.

In order to ensure the content validity, the expert evaluation form with 40 items was sent to five experts who had written book chapters, articles in peer-reviewed journals, and books in this field and who had postgraduate studies on social media in Turkey and four of these experts returned feedbacks within the specified time period. In line with expert opinions, 6 items were excluded as not appropriate in terms of the scope, accessibility and understandability through social media. Also, the remaining items were examined again by a field specialist, items that expressed multiple tasks were limited to a single task, and items that performed similar tasks were eliminated, and trial form of the scale with 34 items was created. After the review of these studies and asking for views of an expert panel, content and face validity of the scale was secured. Then, the trial form of the scale was subjected to construct validity studies. On the other hand, the items in the trial form of the scale were rated as "1- I do not agree at all, 2- I do not agree, 3- I partially agree, 4- I agree, 5- I absolutely agree", which would allow participants who would respond to the form to express their opinions in degrees.

Analysis of the Data

Exploratory and confirmatory factor analyzes was tested this study for the construct validity of the scale. In the factor analysis that is used to measure the validity of the construct, it is examined whether the scores obtained as a result of the implementation of the scale measures the characteristics that the test wants to measure (Büyüköztürk et al., 2011). Although there are many different techniques in factor analysis, the principal components analysis, which is often referenced as factoring technique, was used in the present study (Büyüköztürk, 2014, p.134). After the exploratory factor analysis (EFA), confirmatory factor analysis was tested. The purpose of confirmatory factor analysis (CFA) is to test a hypothesis or a theory regarding the structure obtained on the basis of interrelationships between variables (Büyüköztürk, 2014).

Based on these, the answers of the 301 teachers for EFA and 422 teachers for CFA who participated in this study given to the items in the pre-application form were scored and the data obtained were analyzed by using the SPSS 18.0 Package Program and Lisrel Program respectively; and the level of significance was considered as 0.05 in interpreting the results.

Results

In this part of the study, the details of the validity and reliability studies of the scale and the findings obtained as a result of the analyses are included.

Findings on Construct Validity

The Exploratory Factor Analysis Results:

Before the Exploratory Factor Analysis (EFA), the Kaiser Meyer Olkin (KMO), which is used to test the suitability of sampling size, and the Bartlett Sphericity Test, which is used to determine whether the data come from normal multivariable distribution or not (Akdağ, 2011), were applied firstly. According to the results of these tests (Kaiser Meyer Olkin = .936, Bartlett Sphericity Test = 5483,192, df= 210, p= .000), it was determined that the data were suitable for factor analysis (Büyüköztürk, 2014; Şencan, 2005), and then EFA was initiated. The resulting factors obtained after the analysis were subjected to axis rotation. In this study, Varimax, which is a common orthogonal rotation technique revealing which items are in a higher relation with the factors, was preferred in order to ensure maximum factor variances with fewer variables (Büyüköztürk, 2014, p. 136; Özdamar, 1999, p.247). As a result of successive exploratory factor analysis, 13 items that did not meet the criteria were eliminated, and the analyses were done again on the remaining 21 items. Also, the scree plot was examined to confirm the number of factors of the scale.

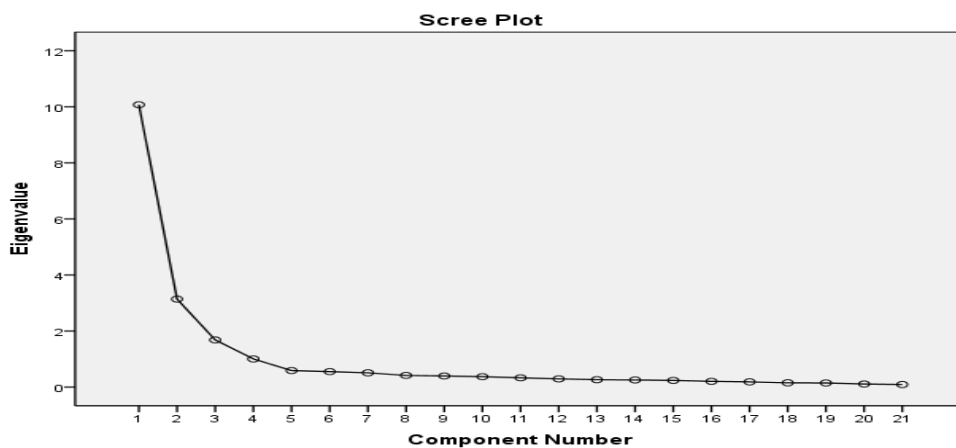


Figure 1. Scree Plot of STSSM

As shown in Figure 1, the slope of the line moved to a horizontal direction after the 5th point, and when the point ranges until to this point were counted, the scale appeared to have 4 factors. Also, the distribution of the items to factors was named by subjecting them to the content analysis:

The 9 items in the first factor (1, 2, 3, 4, 5, 6, 7, 8, 9) made up the *Communication and Confidence* [CC], the 5 items (15, 16, 17, 21 and 22) in the second factor made up the *reason for Self-Disclosure* [RSD], the 4 items in the third factor (23, 25, 26 and 27) made up the *Tendency to Self-Disclosure* [TSD], and the 3 items in the fourth and final factor (32, 33 and 34) made up the *Frequency of Self-Disclosure* [FSD]. The results regarding the scale after the Exploratory Factor Analyses are shown in Table 3:

Table 3. Exploratory Factor Analysis results for “The Scale of Teachers’ Self-disclosure through Social Media”

Items	Communalities	CC	RSD	TSD	FSD	Corrected item-total correlation
Item 1	.772	.813				.779
Item 2	.735	.830				.711
Item 3	.786	.800				.808
Item 4	.802	.851				.773
Item 5	.835	.870				.792
Item 6	.763	.807				.758
Item 7	.767	.823				.758
Item 8	.807	.852				.780
Item 9	.770	.826				.761
Item 15	.870		.832			.736
Item 16	.846		.842			.698
Item 17	.847		.820			.728
Item 21	.709		.747			.672
Item 22	.665		.740			.621
Item 23	.626			.702		.486
Item 25	.669			.796		.407
Item 26	.773			.815		.471
Item 27	.657			.730		.489
Item 32	.750				.822	.345
Item 33	.696				.776	.347
Item 34	.754				.785	.399

KMO= .936

Bartlett Sphericity Test= 5483,192; p= .000

Eigenvalue	10,075	3,140	1,683	1,004
Variance exploratory rate (%)= 75.721 (Total)	33,073	18,820	13,365	10,463
Cronbach Alpha= 0,942 (Total)	0,964	0,930	0,835	0,803
Guttman Split-Half Coefficient	0,92	0,84	0,80	0,74

Note.: Factor load values below .30 have not been shown here.

As seen in Table 3, factor loads of items varied between “.702” and “.870”. As a result of the Exploratory Factor Analysis, it was determined that the scale, which consisted of a total of 21 items and which had a four-factor structure, had 75.721% explanatory level on the total variance. The explanatory level being over 40% is considered to be one of the important indicators for construct validity (Kline, 1994; Narrated by Özer & Dönmez, 2013). In this respect, it has been revealed that the construct validity of “The Scale of Teachers' Self-Disclosure through Social Media” is ensured.

Confirmatory Factor Analysis

Since it might be misleading to analyze the confirmatory factor analysis following the exploratory factor analysis with the same dataset (Çokluk, Şekercioğlu and Büyüköztürk, 2012; Henson & Roberts, 2006). The four-factor and 21-item structure of the STSSM was tested by using the Lisrel Program with a new sampling group consisting of 422 people. It was seen that the t values for explaining the observed variables of the hidden variables were observed to be significant at the level of .01 for the 4-factor model (Çokluk et al., 2012). In the 4-factor 21-item model, the error variances of the observed variables were between 0.13 and 0.63, and the standardized parameter values defined from the hidden variables towards the observed variables were between .61 and .93. These values indicate that there were no serious problems for the model tested (Çokluk et al., 2012). In Table 4, the goodness of fit values obtained before and after the modification for the model are presented comparatively. The values presented in the table about the goodness of fit were described as “excellent” and “acceptable” by complying with the generally accepted criteria in the relevant literature (Çokluk et al., 2012; Seçer, 2013; Şimşek, 2007).

Table 4. Results of CFA for pre-modification and post-modification (final) models of STSSM

Goodness of fit values	Perfect (M)	Acceptable (K)	Pre-modification	Post- modification
P^a	$>0,05^b$	$< 0,05^b$	0,000 (K)	0,000 (K)
X^2/sd	≤ 3	3-5	665,40/183=3,63(K)	528,71/181=2,92 (M)
RMSEA	$\leq 0,05$	$\leq 0,08$	0,079 (K)	0,068 (K)
RMR	$\leq 0,05$	$\leq 0,08$	0,056 (K)	0,055 (K)
SRMR	$\leq 0,05$	$\leq 0,08$	0,051 (K)	0,05 (M)
GFI	$\geq 0,95$	$\geq 0,90$	0,87	0,90 (K)
AGFI	$\geq 0,95$	$\geq 0,90$	0,83	0,87
CFI	$\geq 0,95$	$\geq 0,90$	0,98(M)	0,98(M)
NFI	$\geq 0,95$	$\geq 0,90$	0,97(M)	0,97(M)
NNFI	$\geq 0,95$	$\geq 0,90$	0,97(M)	0,98 (M)

^aThe fact that the p was not significant shows that there were no differences between the observed and expected covariance matrices; in other words, the model was confirmed. In the case of significance, other criteria are considered (Çokluk, Şekercioğlu and Büyüköztürk, 2012: 307). ^bThe level of significance (p) was taken as 0.05 for this study.

In the Confirmatory Factor Analysis, it was observed that there were significant differences between the expected and observed covariance matrix for the 4-factor model ($p < .05$), and other parameter values other than “GFI = .87, AGFI= .83” were at acceptable or excellent levels in terms of criteria. It is important to try the modification processes suggested in the Confirmatory Factor Analysis, to contribute significantly to the fit indexes and to achieve better fit values (Karagöz, 2017; Seçer, 2013). At this stage, modification recommendations were examined to improve the model. After these two modifications, X^2 decreased significantly [the Chi-square 1 free-frame difference = 136.69 ($p = 0.000$)]. It was seen that the goodness of fit values for the 4-factor model after the modification were at excellent levels ($p=0.000$; $X^2/sd=2.92$; SRMR=0.05; CFI=0.968; NFI= 0.97 and NNFI=0.98), or at acceptable limits (RMSEA= 0.068; RMR = 0.055 and GIF= 0.90), and only the AGFI value was lower than expected; however, according to Çelik and Yılmaz (2013), this value can be considered to be “Acceptable” at “AGFI ≥ 0.86 ” level. For this reason, it can be argued that the structure of the 4-factor measuring model, which was tested again in the scope of the second pilot application, was confirmed at an adequate level. The path diagram of the standardized factor loads, error variances, and modifications of the 4-factor model is shown below.

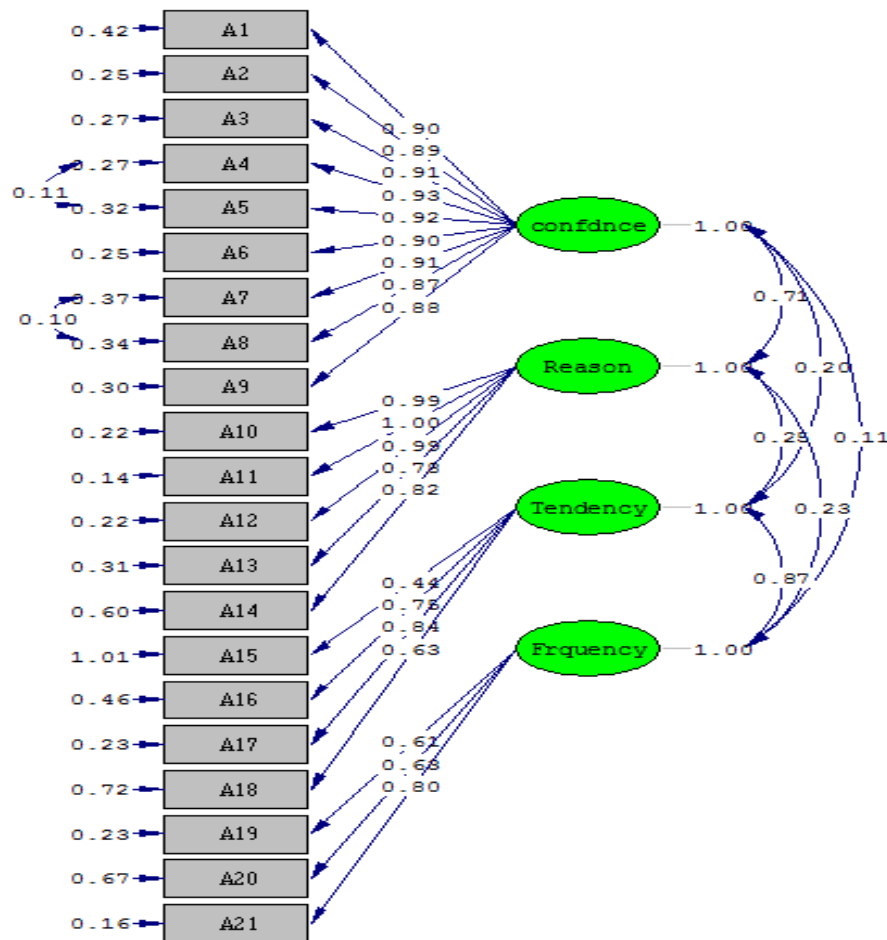


Figure 2. The path diagram of the 4-dimension model after the modification

The Findings and Comments on the Reliability of the STSSM

After the Confirmatory Factor Analyses of the pilot applications, the reliability of the final 4-factor model was tested by calculating the Cronbach Alpha, Internal Consistency Coefficient, with Guttman two semi-reliability coefficients, with corrected item total correlations, and t values for comparing the lower- and upper group averages of 27%. For this purpose, the datasets employed in pilot applications were combined, and the data set of 723 (301 + 422) people was used in the analysis.

The Cronbach Alpha and Guttman two-half reliability coefficients for the reliability of the data coming from the scale in terms of internal consistency of 0.96 and 0.92 for *Communication and Confidence Factor*, respectively; 0.93 and 0.84, for the *Reason for Self-Disclosure Factor*, respectively; 0.83 and 0.80 for the *Tendency to Self-Disclosure Factor*, respectively and finally 0.80 and 0.74 for the *Frequency of Self-disclosure Factor*, respectively (see Table 3). It can be argued that the scales with the reliability values of .70 and above have adequate reliability in the scale development processes (Büyüköztürk, 2014; Seçer, 2013).

For all the items in the scale, the total correlations of the items were between .391 and .784, and the t values were significant ($p < .001$). These results can be interpreted as having high validity in items of the scale, and items for measuring the same behavior (Büyüköztürk, 2014). The Cohen's d formula was used, and it was determined that the effect of the significant difference between the lower and upper groups for all items was at "wide ($\geq .8$)" effect size (Cohen $d = 0.86-3.33$). Based on these, it can be argued that the items tend to measure the same behavior with the factors in which they are included, and their discrimination level is high (Büyüköztürk, 2014).

STSSM was prepared in 5-point Likert design, and the options were 1 to 5 from "I do not agree at all" to "I absolutely agree". There are a total of four factors and 21 items in the scale. The lowest score in the scale is 21, and the highest score is 105.

Discussion and Conclusion

One of the important factors in healthy interpersonal relations is the self-disclosure behavior, which also contributes significantly to the ability of individuals to know and understand each other more in interpersonal relations, also playing very effective roles in establishing relations more easily, developing these relations more quickly, and sustaining them more safely (Çetinkaya, 2005). Considering that communication occurs with social networks as well as face-to-face at significant levels in this age, the importance of “social media” is seen in teacher and student interaction. Many studies were detected that examined the importance of teachers’ self-disclosure to their students in terms of student development (Cayanus & Martin, 2004; Cayanus, Martin & Goodboy, 2009; Cayanus & Martin, 2016; Demir, 2020; Downs, Javudi & Nussbaum, 2009; Fusani, 1994; Goldstein & Benassi, 1994; Lannutti & Strauman, 2006; Mazer et al., 2007; Rouse & Bradley, 1989; Song, Kim & Park, 2019; Zhang et al., 2009); however, no scale development studies were detected measuring the status of teachers’ self-disclosure to their students on social media. In this study, it was especially intended to develop a valid and reliable measurement tool that can be used to determine the status of teachers’ self-disclosure status to their students on social media.

As a result of the literature review, the item pool was presented primarily for the approval of an expert group in the context of content and face validity studies. After the construct validity of the scale was tested with Exploratory Factor Analysis with a dataset of 301 people, the 4-factor model was subjected to Confirmatory Factor Analysis based on the data obtained from a new group of 422 people.

The initial construct validity analyses showed a 4-factor measuring model with acceptable goodness of fit values ($\chi^2/df=665.40/183=3.63$; $p=0.000$; RMSEA= 0.079; GFI= 0.87; AGFI= 0.83; SRMR=0.051; CFI=0.98; NFI= 0.9 and NNFI=0.97). There is the Communication and Confidence [CC], which consists of 9 items (1, 2, 3, 4, 5, 6, 7, 8, 9) in the first dimension in this 4-factor model that consisted of a total of 21 items, the Reason for Self-Disclosure [RSD], which was formed by 5 items (15, 16, 17, 21 and 22) in the second dimension, the Tendency to Self-Disclosure [TSD] that consisted of 4 items (23, 25, 26 and 27) in the third dimension, and the Frequency of Self-disclosure [FSD] consisting of 3 items (32, 33 and 34) in the fourth and final dimension. According to the results of the Exploratory Factor Analysis, this model explained 75.721% of the total variance. As a second result of the the study, confirmatory analysis, conducted in line with the modification recommendations with an independent group, a significant decrease was detected in χ^2 value [the Chi-Square difference at 1 freedom level = 136.69 ($p = 0.000$)]. It was also found that the goodness of fit value was at excellent level for the 4-factor model after the modification ($p=0.000$; $\chi^2/df=2.92$; SRMR=0.05; CFI=0.968; NFI= 0.97, and NNFI=0.98) or was within acceptable levels (RMSEA= 0.068; RMR = 0.055 and GIF= 0.90), and only AGFI scores were below the expected levels. When the average variance explanatory rates of the items was considered, it was calculated to be approximately 77% for Communication and Confidence factor, approximately 78% for the Reason for Self-Disclosure factor, approximately 65% for the Tendency to Self-Disclosure factor, and approximately 72% for the Frequency of Self-Disclosure factor.

The Cronbach Alpha Internal Consistency Coefficient for the internal consistency reliability of the scale items was tested by calculating the Guttman two semi-reliability coefficients, corrected item total correlations, and t values for comparing lower and upper group averages of 27%. For this purpose, the datasets that were used in pilot applications were combined, and the dataset of 723 (301 + 422) people was used in the analyses. The Cronbach Alpha and Guttman two semi-reliability coefficients for internal consistency of the data of the scale were 0.96 and 0.92 for Communication and Confidence factor, respectively; 0.93 and 0.84, respectively, for the Reason for Self-Disclosure factor; 0.78 and 0.80 for the Tendency to Self-Disclosure factor and finally 0.79 and 0.74 for the Frequency of Self-Disclosure factor, respectively. It was also found that the total correlations of the item were determined to be between .391 and .784 for all items on the scale, and the t values were significant ($p<.001$). Cohen’s d formula was used to determine the effect of the significant difference, and the difference between the lower and upper groups was found to be the at “wide ($\geq .8$)” effect size for all items (Cohen $d= 0.86-3.33$). Based on this, it was determined that the items tended to measure the same behavior as the factors in which they were included, and had high differentiation levels.

When the literature is examined, there are also studies in which different dimensions are used for teachers self-disclosure on social media. Mazer, Murphy and Simonds (2009) examined teachers in terms of competence, honesty and sensitivity on Facebook, one of the social media platforms, and revealed the status of teachers at “low, medium and high”. Snell, Miller and Belk (1988) also focused on the psychological dimension of self-disclosure behavior, and in this direction, they created an emotional self-disclosure scale that includes the sub-dimensions of depression, happiness, jealousy, anxiety, anger, calmness, apathy, and fear. Cayanus & Martin (2008) also created a three-dimensional (amount, negativity, and relevance) Likert-type scale for teachers’ self-

disclosure. In this scale, they also included items such as "I often talk about what I do on the weekends", "I reveal unwanted things about myself" and "I use personal examples to create content about students". In the scale study conducted by Zhang et al. (2009) about teachers' self-disclosure, it was seen that a dimensioning was made as "the subject that the teacher opened up to himself, his goals and the student's importance". As can be seen, the concept of "self-disclosure", which offers a multi-dimensional view, can be reflected in different dimensions and content. Unlike these studies on teachers' self-disclosure, it is seen that this study focuses on the level of teachers' self-disclosure to their students through social media rather than self-disclose to all social media users.

The concept of self-disclosure, which has a significant potential in the realization of student learning in the educational process (Cayanus & Martin, 2016; Clark, 1978; Zardeckaite-Matulaitiene & Paluckaite, 2013). In this study, the concept of self-disclosure, "communication and confidence, reason for self-disclosure, tendency to self-disclosure and frequency of self-disclosure", is discussed with its dimensions. Considering the reflection of self-disclosure in the educational environment, the importance of teachers' self-disclosure will emerge, especially in providing a positive learning environment and creating a safe space based on an effective communication between teacher and student (Cayanus, 2004; Mazer & Hosek, 2012). In this context, Dobransky & Bainbridge Frymier (2004), in their study examining the relationship between students and teachers in outdoor environments, determined that teachers who trust their students and communicate more effectively with their students make a difference and that these teachers' students have more learning opportunities. In addition to communication, trust and teacher-student closeness, teachers' tendency to open themselves up and the amount of self-disclosure are also very important (Cayanus & Martin, 2008). In this respect, Cayanus, Martin, and Weber (2003) conducted their research on teachers' self-disclosure and found that teachers who open themselves up to their students and tend to open themselves up to their students more ensure their participation in classes and communicate better with students. While affective features such as communication, trust, and disposition in teachers' disclosure to their students are under similar concepts in other scales, the "frequency" degree of self-disclosure is also included in this study. According to Cayanus & Martin (2008), teachers' level of self-disclosure is also very important in quantitative terms. Apart from this, there are also studies that reveal the reasons for teachers' self-disclosure. For example, Zhang et al. (2009), in their research examining teachers' self-disclosure, determined that teachers listed the following reasons: "To present practical examples from the real world, to attract students' attention, to create positive teacher-student relationships, to create social role models, to create a comfortable classroom environment for students, to develop students' interests, , entertaining students and satisfying themselves".

Considering all these findings, in today's society where social media is used so frequently and widely, it is seen that the STSSM is a valid and reliable measuring tool that can be used to determine the status of teachers' self-disclosure to their students on social media. Teachers' self-disclosure in social media can be measured using other cognitive and affective concepts. In addition to quantitative measurements, the behavior of self-disclosure can also be examined with qualitative methods that enable in-depth understanding. It also needs to be tested with different universes and samplings to test whether the scale can make valid and reliable measurements.

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Appendix: The Scale of Teachers' Self- Disclosure through Social Media- STSSM**Personal Information Form:**

- 1) Gender : 2) Years of Seniority :
 3) Education Status: 4) School Type Served:
 5) School Level Served: 6) Social Media Usage:
 7) Faculty of Graduation:

No	ITEMS	1	2	3	4	5
1	Interacting with my students over the SM help me communicate more strongly with my students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Interacting with my students on the SM increase my students' commitment to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	When add my students to my SM account and self-disclose information about my personal and/or professional life to them over the SM, my students know me better, and increase the trust they have in me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Interacting with my students over the SM, it allowed my students to know me better and express themselves more comfortably in the classroom.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	As a result of my interactions with my students over the SM, they know me better, which makes my students more confidence in the classroom.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Knowing me better as a result of my interactions with my students over the SM increases engagement of my students in the class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	My posts on SM and positive interactions with my students (e.g. messages, likes about their shares, making positive and supportive comments, and celebrating special days) make my students more careful and attentive to me in class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Seeing that my students have common interests with me on SM makes my students feel closer to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	The interactions with my students over the SM have positive effects on the motivation of my students for the class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	I add...					
10	...my students to my SM account and interact with them to attract their attention.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	...my students to my SM account and interact with them to establish relations with them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	...my students to my SM account and interact with them to be a role model for them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	...my students to my SM account and interact with them to ensure that they receive information about various subjects related to school and/or classes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	I share...					
14	...information about myself over the SM so that students can share their information more comfortably.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	...my thoughts on topics on the daily agenda on SM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	...information about my personal life and relations over the SM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	...information about my emotional high school over the SM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	...information about things I like and/or do not like over the SM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	I often...					
19	...share information about my personal problems over the SM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	...share information about my beliefs and thoughts over the SM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	...share information that reflects my emotional high school over SM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note:(SM=Social Media)