International Journal on New Trends in Education and Their Implications
October 2014 Volume: 5 Issue: 4 Article: 09 ISSN 1309-6249

DEVELOPMENT OF A SELF-ASSESSMENT SCALE FOR EFFECTIVE PRESENTATION SKILLS AND THE VALIDITY-RELIABILITY STUDY

Assist. Prof. Dr. Selim GÜNÜÇ
Yuzuncu Yil University
Faculty of Education
Computer Education and Instructional Technologies
Van- TURKEY

Assist. Prof. Dr. Serap CAVKAYTAR
Anadolu University
Open Education Faculty
Department of Turkish Language and Literacy
Eskisehir- TURKEY

Belgin SÖNMEZ
Anadolu University
Eskisehir- TURKEY

Fidan ÖZBEY
Sakarya University
Faculty of Education
Department of Special Education
TURKEY

Zeynep KILIÇ
Osmangazi University
Faculty of Education
Department of Primary Education
Eskisehir- TURKEY

ABSTRACT

The purpose of this study was to develop a "self-assessment scale for effective presentation skills". The scale was developed via two different research processes. As the intention was to develop the scale via a two-factor construct determined by the researchers in line with the suggestions in related literature, the CFA was carried out on 50 items in the first study for item analysis and item selection. In the second study, the CFA was applied again for the appropriateness of the two-factor 41-item scale obtained in the first study. The sample of the Study-1 was made up of 409 teacher candidates and the sample of the Study-2 included 423 teacher candidates. Finally, the two-factor 41-item scale was tested, and such good values of fit indices as χ^2/sd: 2.84, RMSEA: 0.067, NFI: 0.90, NNFI: 0.92 and CFI: 0.93 were obtained. The Cronbach Alpha of the scale was found to be α= 0.90.

Key Words: Effective presentation skills; presentation skills; self-assessment; scale development.

INTRODUCTION

Effective presentation skills are considered to be an important skill for the educational field. The purpose of making effective presentations should not only be the introduction of new profitable products or services into the business life but also be the presentation of new or synthesized cumulative information in education.

Today, effective presentation skills are important for informing, guiding and influencing the audience with careful use of verbal/written statements and meaningful body language with the aid of modern day audio-visual tools (Marancı, 2011). Effective presentation is also important for the achievement of our goals and the approval of our ideas. Presentations using technological presentation tools such as PowerPoint not only help learners understand the subject better and develop their competences regarding the process but also provides teachers as well as learners with the benefits of storing and retrieving the information (Pugsley, 2010).

These presentation skills are taught in the criculum of the second year course of "Instructional Technologies and Material Design" given in Faculty of Education in Turkey to teacher candidates who are most likely to make presentations as part of their future professions. Since the purpose of this course is to integrate technology into the teaching-learning process and help students transfer their knowledge effectively, it is an important course expected to be taught in the teacher training process (Gündüz & Odabaşı, 2004). The fact that most higher education graduates lack the ability to speak in front of large groups of people and to express their thoughts effectively and consistently, demonstrates that these skills have not been taught effectively. The process of having students acquire effective communication skills is a time-consuming and difficult process that requires teachers to work in co-operation in a careful and planned manner. Graduate teacher candidates from schoosl of education are expected to acquire effective presentation skills. Therefore, it is one of the responsibilities of higher education institutions to teach and measure these skills (Aldağ & Gürpınar, 2007).

In this regard, a measurement tool in the higher education process is necessary to assess students' effective presentation skills. This measurement tool should not only allow faculty members to evaluate both the process and the students but also enable students to have an idea about their own level of presentation skills.

In related literature, it is emphasized that the presentation skills acquired by students should be assessed and that in general, more than one assessment method should be used for appropriate assessment of their skills. Besides assessment by the instructor, self-assessment has been suggested to increase the level of learning and to decrease the dependence on the instructor during assessment. Research results indicated that self-assessment contributes positively to learning (Aldağ & Gürpınar, 2007).

Mandel (2000) developed a self-assessment tool that could be used for the assessment of effective presentation skills. The 20 items found in this measurement scale included the elements necessary for an effective presentation. In addition, the score ranges regarding the students' responses to the scale items were given to help them assess themselves. Thus, depending on these score ranges, the students were allowed to determine how effective their presentations were.

When the related literature is examined, it can be seen that there are studies which provide basic information about effective presentation skills (Adams, 2004; Aldağ & Gürpınar, 2007; Andrew & Griffith, 2006; Brody, 2007; Edwards; 2007; Leblebicioğlu, 1998; Marancı, 2011; McDonalds & McDonalds 1993; Namhata, 2011) but that there is no measurement tool developed to measure effective presentation skills. Therefore, there is a need for a measurement have acquired the effective presentation skills during their process of undergraduate education.

The purpose of this study was to develop a "self-assessment scale for effective presentation skills". The validity and reliability studies were conducted for the purpose of allowing the teacher candidates to assess their own effective presentation skills and the faculty members to assess their students. In the study, effective presentation skills were determined by the use of PowerPoint and similar technologies.

STUDY-1: CREATING THE ITEM POOL AND SELECTING THE ITEMS

1. Material and methods

1.1. Sample

It is reported in related literature that it would be better to study with different sample groups for separate analyses which require testing the appropriateness of the factor structure and the items selection. Henson and

Roberts (2006) reports that it is important to study with separate sample groups for factor analysis and for the analysis of the appropriateness of the factor construct. For this purpose, in the study, the research data were collected in two phases and with two different sample groups. The purpose of the Study-1 was to select the items according to the factor structure established on a theoretical basis using the confirmatory factor analysis (CFA) with the help of the data collected. The sample in the Study-1 included a total of 409 teacher candidates, 244 of whom were female and 163 of whom were male. They were all teacher candidates attending the Faculty of Education of Anadolu University in the academic year of 2011-2012. Within the scope of the sample, the research data were collected from 6 different undergraduate departments at the Faculty of Education; English Language Teaching, Guidance and Psychological Counseling, Computer Education and Instructional Technologies, Pre-school Education, Primary School Education and Social Studies Education (Table 1). The sample included only third year (n=163) and senior (n=244) teacher candidates. The reason for this was that the teacher candidates attending the undergraduate programs at Faculty of Education took the course of "Instructional Technologies and Material Design", which helped them acquire the effective presentation skills in the Spring Term of their second academic year at the university. In this respect, teacher candidates are expected to have acquired the presentation skills by the end of their second academic year at university. Since the scale was targeted at measuring the effective presentation skills, the research data were collected only from the third year and senior teacher candidates.

Table 1: Distribution of the Participants with Respect to Their Departments

Departments at the Faculty of Education	Frequency	%
English Language Teaching	103	25.2
Guidance and Psychological Counseling	27	6.6
Computer Education and Instructional Technologies	106	25.9
Pre-school Education	19	4.6
Primary School Education	86	21.0
Social Studies Education	68	16.6
Total	409	100.0

1.2. Data collection tool

In order to develop the self-assessment scale for effective presentation skills, the first step was to prepare the item pool. Self-assessment measurement tools are important for students in terms of becoming aware of the extent to which they have such skills, making comments on their skills, determining their weak and strong points and recognizing their development. According to Cram (1995), self-assessment requires involving the students into the process of discovering what they know, how they feel and what they can do. Lewkowicz & Moon (1985) defines self-assessment as a process that allows learners to decide on their own success and failure in line with the goals they set forth or with those goals set forth by others.

There are certain sub-skills mentioned in related literature about acquiring effective presentation skills. In this study, the sub-skills were assessed, and the effective presentation skills were taken into consideration in two phases: (1) the phase of planning and preparing the presentation and (2) the phase of presenting the presentation. Therefore, the item pool was established according to two sub-factors based on theory. In the phase of creating the item pool, the views of the students and of the experts were asked about the skills that will be acquired in the process of preparing and making the presentation. Also, the following literature was reviewed to examine the related studies (Adams, 2004; Andrew & Griffith, 2006; Brody, 2007; Edwards, 2007; Emden & Becker; 2004; Gelula, 1997; Magin & Helmore, 2001; Mandel, 2000; Marancı, 2011; McDonalds & McDonalds 1993; Namhata, 2011; Pugsley, 2010; Shepherd, 2006; Shetciliffe, 2001; Sloboda, 2003; Ulrich, 2007).

After the researchers who were taking part in the study finalized the items, the item pool created was presented to a group of 20 language and field experts from two different universities. After the field experts made their corrections, the scale was piloted by a group of 10 students. The purpose of this preliminary

application was to find out whether the items in the scale were understood by the students or not, to correct any spelling mistakes and any ambiguous statements and to determine how long it would take to respond to the scale. As a result of the feedback obtained, a total of 50 items, 12 of which were negative, were applied to the sample group for data analysis. Of all the 50 items, 30 of them belonged to the first factor, and 20 of them belonged to the second factor of the scale. The scale included a 5-point Likert-type grading and was marked with the scores ranging from 1 to 5 as "Never", "Rarely", "Sometimes", "Often" and "Always", respectively. Besides the piloted scale, data related to the gender, departments and class-year of the sample group were also collected within the scope of the study.

1.3. Data Analysis

For the analysis of the data, CFA was conducted to select the items in the scale. CFA is one of analysis techniques suggested to develop a theory-based measurement scale or to test a present theory (Henson & Roberts, 2006; Worthington & Whittaker, 2006). For the CFA, the computer software of Lisrel 8.80 was used (Jöreskog & Sörbom, 2001). After the data were entered into these programs, the missing data, outliers, normality, linearity and multicollinearity, which are all assumptions of multivariate statistics, were examined to conduct a healthier application of the analyses and to obtain more accurate results. In this way, the data were made appropriate to analysis before carrying out the analyses (Mertler & Vannatta, 2005).

After conducting descriptive statistics for the sample, the validity analysis was carried out for the scale. The validity analysis, content validity, face validity and construct validity were examined. The CFA was run for the construct validity,. For the CFA, the items appropriate and inappropriate to the construct were established on theoretical bases. In this respect, the items were selected by considering the error variances, item loads, item-total and item-item correlation values and *t*-test values for each item.

In addition, the convergent validity and discriminant validity were also examined. The convergent validity was measured with the factor loads, and the discriminant validity was measured with the value of the relationship between the factors (Kline, 2011).

1.4. Results

1.5. Preliminary Analyses

Before conducting the CFA, the data were checked and made ready for these analyses. In order to do this, the missing data, multicollinearity, outliers, normality and linearity, which are all assumptions of multivariate statistics, were examined (Hutcheson & Sofroniou, 1999; Kline, 2011; Tabachnick & Fidell, 2007).

While determining the missing data, the responses of each individual in the sample to the 50 items in the scale were examined. As CFA was influenced to a great extent by the missing data, the data collected from the 60 teacher candidates were excluded from the sample. As a result, the data set covered 349 teacher candidates. The multicollinearity problem could occur when certain items correlate with each other at a high level. One way of testing whether there is a multicollinearity problem or not is to examine the item-itemcorrelation matrix to determine the items with a value of 0.90 or over (Field, 2005; Kline, 2011; Tabachnick & Fidell, 2007). The item-item correlations of the 50 items found in the scale were examined and it was revealed that the correlation values of all the items were lower than 0.90. In order to examine the outliers in the sample, the z-scores were calculated. It is suggested that z-scores be in the range of ±3 (Hutcheson & Sofroniou, 1999; Kline, 2011). Thus, 3 teacher candidates ($z = -3.23$, $z = -3.02$, $z = -4.79$) in the sample who were not found in this range were excluded from the data set. The assumption that outliers result from the multivariate normal construct was examined with Barlett's Test of Sphericity. The data were made ready for analysis and the validity and reliability analyses were conducted with 346 teacher candidates remaining in the sample.

The distribution of the sample was determined with the help of the Kolmogorov Smirnov test, the skewness-kurtosis values and histogram. The Kolmogorov Smirnov test with values of ($p = 0.068$; $p > 0.05$), kurtosis (-0.017; ±1) and skewness (-0.320; ±1) along with the histogram were examined and the distribution was found to be normal. The linearity between the variable pairs in the data set was examined with the scatter plot, and it was found that all the variables demonstrated oval-shape scattering.

1.6. First Confirmatory Factor Analysis (CFA)

The results of CFA conducted for the 50 items were examined, and the *t*-values were evaluated. In literature, the *t*-value for each indicator in the scale is suggested to be out of the range of ±2.56 (at the level of 0.01) (Kline, 2011; Raykov & Marcoulides, 2006; Tabachnick & Fidell, 2007). Thus, the items in the first factor with a *t*-value in the range of ± 2.56 and those with an error variance of 0.90 or over, I4 (*t*: -1.56; error: 0.99), I6 (*t*: 1.57; error: 0.99), I9 (*t*: 1.03; error: 1.00) and I13 (*t*: 0.78; error: 1.00) were excluded from the pilot scale. As for the second factor, it was found that the *t*-values for all items were out of the range of ± 2.56 since they were in the range of 3.24-11.22. After these four items were excluded from the scale, CFA was conducted again. It was found that the *t*-values in the first factor were in the range of 2.72-12.68. As the scale had a stronger construct, among the remaining 46 items, those with low values of item-total correlation coefficients, error variance and factor load were excluded. Therefore, the items with a very low level of item-total correlation and item load and those with an error variance over 0.90 were examined and excluded from the scale. As a result, such items in the first factor as I20 (factor load: 0.15; error: 0.98; r: 0.14), I28 (factor load: 0.24; error: 94; r: 0.256) and I24 (factor load: 0.25; Error:0.94; r: 0.239) and those in the second factor such as I48 (factor load: 0.19; error: 0.97; r: 0.222) and I50 (factor load: 0.22; error: 0.95; r: 0.226) were excluded from the scale. As a result, a total of 9 items were excluded from the factor structure established according to the literature. As a result of the first phase in which the item pool was created and the validity analysis that was conducted, 23 items in the first factor and 18 items in the second factor were obtained. Table 2 presents the results of CFA regarding the 41 items remaining in the pilot scale.

Table 2: The First CFA Findings

Item	*t*-value	Factor load	Error variance	Item-total correlation (r)	Mean
I1	0.56	0.69	.479	4.29769	.827670
I2	0.41	0.83	.374	4.06936	.894970
I3	0.33	0.89	.296	3.63873	1.040960
I5	0.53	0.71	.430	4.49711	.777393
I7	0.47	0.78	.428	3.69075	1.105861
I8	0.58	0.67	.546	4.04624	.873540
I10	0.62	0.62	.491	4.50867	.642626
I11	0.59	0.65	.492	4.50867	.628949
I12	0.49	0.76	.383	4.02312	1.054755
I14	0.48	0.77	.419	3.62428	1.125664
I15	0.39	0.85	.354	3.51445	.996265
I16	0.56	0.69	.471	4.32370	.805319
I17	0.33	0.89	.251	4.01734	1.015668
I18	0.55	0.70	.474	4.29191	.764270
I19	0.53	0.72	.456	4.24566	.791474
I21	0.64	0.59	.511	4.21676	.743557
I22	0.60	0.64	.501	4.14740	.822655
I23	0.56	0.69	.431	4.20809	.793118
I25	0.52	0.73	.461	4.02890	.860925
I26	0.35	0.88	.303	3.79191	.915277
I27	0.51	0.74	.393	3.82370	1.049839
I29	0.61	0.62	.492	4.47399	.685810
I30	0.58	0.66	.493	4.18786	.845772
I31	0.35	0.88	.323	3.22543	1.002050
I32	0.58	0.67	.467	4.00578	.765163
I33	0.53	0.72	.483	3.97688	.772376
I34	0.57	0.68	.456	3.84104	1.182306
I35	0.33	0.89	.277	3.18497	1.111419
I36	0.58	0.66	.389	3.73699	.934161

I37	0.72	0.48	.576	4.08382	.770036
I38	0.33	0.89	.249	3.14740	1.118336
I39	0.36	0.87	.377	4.07803	.882836
I40	0.41	0.83	.317	3.40462	1.086615
I41	0.39	0.85	.343	3.54624	.983575
I42	0.35	0.88	.286	3.32948	1.080042
I43	0.60	0.64	.448	3.68208	.849602
I44	0.51	0.74	.468	4.15896	.834504
I45	0.34	0.88	.263	3.42775	1.142960
I46	0.52	0.73	.437	3.95954	.793878
I47	0.45	0.80	.431	4.29191	.873967
I49	0.40	0.84	.287	3.39017	1.152598

As can be seen in Table 2, the factor load values ranged between 0.33 - 0.72; the error variances were between 0.59 - 0.89 and the item-total correlations were in the range of 0.251 - 0.576. In addition, a correlation of r = 0.64 was found between the two factors.

STUDY-2. TESTING THE APPROPRIATENESS OF THE SCALE WITH CFA

2. Material and methods

2.1. Sample

Study-2 was conducted for the confirmation of the construct obtained as a result of the item analysis in Study-1. The sample in Study-2 included a total of 423 teacher candidates, 322 of whom were female and 101 of whom were male. They all attended the Faculty of Education of Osmangazi University in the city of Eskisehir in the academic year of 2011-2012. The data were collected from the sample attending the departments is demonstrated in Table 3. As in Study-1, the sample included only the third year (n=306) and senior (n=117) teacher candidates.

Table 3: Distribution of the Participants According to Their Departments

Departments at the Faculty of Education	Frequency	%
Science Education	100	23.6
Guidance and Psychological Counseling	39	9.2
Computer Education and Instructional Technologies	38	9.0
Primary School Education	111	26.2
Education of Religion and Ethics	31	7.3
Total	423	100

2.2. Data Collection Tool

The appropriateness of the 41-item and two-factor scale obtained in the first study was tested with CFA in the second study. For the CFA, the computer software of Lisrel 8.80 was used (Jöreskog & Sörbom, 2001). Mertler and Vannatta (2005) reports that after the data were entered into these programs, the missing data, outliers, normality, linearity and multicollinearity, which are all assumptions of multivariate statistics, were examined to conduct a better analyses and to obtain more accurate results. In this way, the data were made more appropriate before carrying out the final analyses.

The scale to be used in the second study had a two-factor structure made up of 23 items in the first factor and 18 items in the second factor. The scale included 5-point Likert-type grading and was marked with the scores ranging from 1 to 5 as “Never”, “Rarely”, “Sometimes”, “Often” and “Always”. In addition, as it was in the first study, data related to the gender, departments and class year of the sample group were also collected beside the scale.

2.3. Data Analysis

After the items were selected via the CFA, the appropriateness of the two-factor model (which was formed by re-conducting the CFA was determined by the indices: χ^2 (Chi-Square Goodness of Fit), GFI (Goodness of Fit Index), AGFI (Adjusted Goodness of Fit Index), CFI (Comparative Fit Index), NFI (Normed Fit Index), NNFI (Not-Normed Fit Index), RMR (Root Mean Square Residuals), SRMR (Standardized Root Mean Square Residuals) and RMSEA (Root Mean Square Error of Approximation). To determine the reliability of the items obtained as a result of these analyses, the internal coefficient of Cronbach Alpha (α) value was calculated.

2.4. Results

2.5. Preliminary Analyses

Before conducting the CFA, the data were checked and made ready for these analyses. In order to determine, the missing data, multicollinearity, outliers, normality and linearity, which are all assumptions of multivariate statistics, were examined (Hutcheson & Sofroniou, 1999; Kline, 2011; Tabachnick & Fidell, 2007).

While determining the missing data, the responses of each teacher candidate were examined after the data collected from the 423 teacher candidates were entered into the SPSS program, the missing data were examined. As a result, 8 teacher candidates were excluded. In order to determine whether there was a multicollinearity problem or not, the item-item correlations of the 41 items found in the scale were examined, and it was determined that the correlation values of all the items were lower than 0.90. In order to examine the outliers in the sample, the z-scores were calculated. In literature, z-scores are required to be in the range of ±3 (Hutcheson & Sofroniou, 1999; Kline, 2011). In the sample, 3 teacher candidates who were not in this range were excluded from the data set. The assumption that outliers result from a multivariate normal construct was examined with Barlett's Test of Sphericity. When the final data were made ready the validity and reliability analyses were conducted with 412 teacher candidates.

The distribution of the sample was determined with the help of the Kolmogorov Smirnov test, the skewness-kurtosis values and a histogram. The Kolmogorov Smirnov test values ($p = 0.126$; $p > 0.05$), kurtosis (-0.157; ±1) and skewness (-.108; ±1) and the histogram were examined and the distribution was found to be normal. The linearity between the variable pairs in the data set was examined with the scatter plot and it was determined that all the variables demonstrated oval-shape scattering.

2.6. The Second Confirmatory Factor Analysis (CFA)

As a result of the CFA conducted, as can be seen in Table 5, the *t*-values regarding the explanation of the observed values by latent variables ranged between 6.17 and 15.33 for the first factor and between 4.23 and 12.97 for the second factor. When the fit indices of the measurement model were examined, it was found that χ^2 = 2206.10 and that the degree of freedom was sd= 778. While evaluating this fit index for the CFA, the rate of χ^2/sd (2206.10/778) was 2.84, which implies good fitness. Since the value of χ^2 is influenced by the size of the sample, it is not considered to be sufficient alone for the evaluation of the model. Therefore, the other fit indices were examined as well (Table 4).

Table 4: Evaluation of the CFA

Index	Good Fit	Sample Statistic	Rationale
χ^2 /df	χ^2 /df ≤ 3	2.84	(Kline, 2011)
RMSEA	RMSEA ≤ 0.08	0.067	Hooper, Coughlan & Mullen (2008) Sümer (2000)
RMR	RMR ≤ 0.08	0.061	Brown (2006) Hu & Bentler (1999)
SRMR	SRMR ≤ 0.08	0.068	Brown (2006)

			Hu & Bentler (1999)
NFI	0.90 ≤ NFI	0.90	Sümer (2000) Tabachnick & Fidell (2007) Thompson (2008)
NNFI	0.90 ≤ NNFI	0.92	Sümer (2000) Tabachnick & Fidell (2007) Thompson (2008)
CFI	0.90 ≤ CFI	0.93	Hu & Bentler (1999) Sümer (2000) Tabachnick & Fidell (2007)
GFI	0.90 ≤ GFI	0.79	Hooper, Coughlan & Mullen (2008) Hu & Bentler (1999)
AGFI	0.90 ≤ AGFI	0.77	Hooper, Coughlan & Mullen (2008) Hu & Bentler (1999)

Ki Kare:2206.10; df:778

When the index of RMSEA in the path diagram was examined, a fit index with a value of 0.067 was obtained. The value of RMSEA less than 0.06 refers to good fitness. It was also seen that GFI was 0.79 and that AGFI was 0.77. It is required that the GFI and AGFI values of 0.90 or over refer to good fitness. As the GFI and AGFI values obtained were less than 0.90, it was thought that the model had weak fitness. In addition, it was seen that the RMR and SRMR fit indices were found to be 0.061 and 0.068, respectively. The RMR and SRMR values lower than 0.05 refer to excellent fitness. The values regarding the other fit indices were found to be as follows: NFI 0.90, NNFI 0.92 and CFI 0.93. These values over 0.95 refer to excellent fitness. The path diagram regarding the model is presented in Appendix 1. Also, Table 5 presents the statistics regarding the items after the construct made up of 2 factors and 41 items was confirmed.

Table 5: Item Statistics Related to the Second CFA Findings

Item*	***t*-value**	**Factor load**	**Error var.**	**Item-total correlation (r)**	**Mean**	**Standard deviation (sd)**
Planning and Preparing the presentation (*α=0,88)*						
I1	13.3	.62	.62	.575	4.1869	.78708
I practice before I present	10.03	.49	.76	.437	4.0922	.96973
I3	9.62	.47	.78	.449	3.7549	1.02551
I4	12	.57	.68	.524	4.3131	.79629
I5	10.99	.53	.72	.499	3.6748	1.02335
I design the presentation systematically	11.21	.53	.71	.479	3.8786	.89052
I7	13.19	.61	.63	.543	4.3617	.76275
I8	15.33	.69	.53	.621	4.3471	.72724
I9	7.97	.40	.84	.368	3.9345	1.02432
I10	8.48	.42	.82	.395	3.5000	1.13236
I11	6.56	.33	.89	.303	3.5073	.95772
I consider color match among slides	10.81	.52	.73	.467	4.1505	.88054
I13	6.17	.31	.90	.302	4.0097	.93585
I use visual elements (picture, video…)	10.19	.49	.76	.436	4.1214	.79526

I emphasize important information in a slide	10.21	.49	.76	.435	4.0655	.87855
I16	15.08	.68	.54	.605	4.1869	.75874
I17	14.78	.67	.55	.603	4.1117	.84125
I18	11.44	.54	.70	.520	3.9951	.86002
I19	7.77	.39	.85	.369	3.8495	.92106
I use maximum 5-7 rows in a slide	8.54	.42	.82	.417	3.8058	.89397
I21	9.4	.46	.79	.448	3.7136	1.03727
I22	12.88	.60	.64	.550	4.5073	.68522
I23	10.2	.49	.76	.438	4.0170	.86691
Presenting the presentation (*α=0,83)*						
I24	6.21	.32	.90	.345	3.1359	.99192
I25	12.95	.61	.62	.520	3.7087	.77843
I use time effectively	11.52	.56	.69	.480	3.7791	.77192
I27	10.21	.50	.75	.516	3.7961	1.04039
I28	5.39	.28	.92	.334	3.1335	1.01768
I use body language effectively	12.97	.61	.62	.553	3.4636	.93128
I30	12.67	.60	.64	.486	3.8204	.82052
I31	4.23	.22	.95	.277	3.1214	1.08734
I consider suggestions/critics in the end of presentation	10.5	.52	.73	.399	3.8617	.92164
I33	10.05	.50	.75	.417	3.0971	.99892
I34	7.71	.39	.85	.289	2.9684	1.00193
I35	4.83	.25	.94	.271	3.3447	1.02411
I36	12.82	.61	.63	.524	3.4417	.90900
I37	11.1	.54	.71	.431	4.0607	.81870
I38	6.97	.36	.87	.372	3.3519	1.07388
I39	10.68	.52	.73	.412	3.8083	.78280
I40	10.69	.52	.73	.417	4.2961	.84559
I41	9.57	.48	.77	.500	3.2039	1.12143

* This scale was developed in Turkish language and some items were translated from Turkish version only for this article.

Although the error variance for certain items was over 0.90, they were not excluded from the scale as the *t* values and the factor loads were at acceptable levels. Among the 41 items obtained as a result of the analyses, item numbers of 24, 27, 28, 31, 35, 38 and 41 included negative statements. Therefore, while calculating the total score of the scale, it was necessary to transpose and then code these items.

Results Regarding Reliability

The Cronbach Alpha reliability coefficient for the first factor of the two-factor scale was calculated as $\alpha = 0.88$, and The Cronbach Alpha reliability coefficient for the second factor was found to be $\alpha = 0.83$. As for the Cronbach Alpha reliability coefficient for whole 41 item scale, it was calculated as $\alpha = 0.90$ (Table 5).

DISCUSSION

Effective presentation skills are among important skills that not only allow transferring information effectively to the audience in scientific meetings but also help increase quality in educational settings. In this respect, it is suggested that just like teachers, students should also have effective presentation skills to share their studies and knowledge in front of an audience in educational settings.

Although effective presentation skills are expected to be acquired by all higher education students, these skills are more important for teacher candidates attending faculties of education to integrate technology into their teaching setting when they start their profession. Therefore, effective presentation skills are among the professional skills that teacher candidates attending faculties of education are supposed to acquire. However, even though the teacher candidates participating in the study knew how to use presentation programs such as PowerPoint, they reported that they did not know how to use the program with the required skill (Mendez, 2011). Murphy (1996) stated that most university students lack the skills to speak effectively in front of a large group of individuals and to transfer their thoughts effectively to the target population. There is either not enough importance given to the acquisition of these skills or the related training is insufficient.

In literature, although effective presentation skills are taught in different phases, they are all basically the same. Namhata (2011) considers effective presentation skills to include preparation, presentation and packing up, while Edwards (2007) suggests planning, preparation and practice. Mandel (2000) emphasizes the phases of planning, preparation and presentation. In this study, effective presentation skills included planning, preparation of the presentation and presentation. In this study, effective presentation skills were gathered conceptually under two headings. The first heading was *"*The Presentation Preparation Phase*"*, which focused on the basic skills needed prior to making any presentation. The other phase was the "Presentation Phase", which covered the skills needed to make the presentation. In this study, the findings regarding the related literature mentioned below were taken into consideration while creating the scale items and the scale construct.

In the Presentation Preparation Phase, the presenter is primarily supposed to know for what purposes he or she will make the presentation. The presenter must list in detail what the audience should learn and plan the content of the presentation accordingly (Brody, 2007; Namhata, 2011). For the effectiveness of the presentation it is important that the background of the audience be taken into consideration and that the examples, statements and salutations in the presentation be prepared for the target audience (Adams, 2004; Aldağ & Gürpınar, 2007; Andrew & Griffith, 2006; Brody, 2007; Edwards; 2007; Leblebicioğlu, 1998; Marancı, 2011; McDonalds & McDonalds 1993; Namhata, 2011). A dry run should be performed before the presentation (Andrew & Griffith, 2006; Brody, 2007; Mandel, 2000) and if it lasts more than the planned time, adjustments should be made to the presentation (Adams, 2004; Shetciliffe, 2001). The use of visual elements such as graphics, figures, pictures and tables increase the effectiveness of the presentation (Andrew & Griffith, 2006; Brody, 2007; Emden & Becker; 2004; Gelula, 1997; Leblebicioğlu, 1998; Magin & Helmore, 2001; McDonalds & McDonalds 1993; Mandel, 2000; Saçar, İnan & Saçar, 2007; Sloboda, 2003; Ulrich, 2007). Additionally, it is emphasized that in order to make the presentation more effective, it is important to use audio and visual

elements (Andrew & Griffith, 2006; Gelula, 1997). The resolution of the visuals chosen should be of high quality and be directly related to the content of the subject as well (Aldağ & Gürpınar, 2007; Brody, 2007; Edwards, 2007; Gelula, 1997; Mandel, 2000; Pugsley, 2010). The line spacing on the slides should be 1.5 (Pugsley, 2010; Saçar, İnan & Saçar, 2007), 5 to 7 lines in each slide (Saçar, İnan & Saçar, 2007; Shepherd, 2006; Sloboda, 2003) and 5 to 7 words in each line (Leblebicioğlu,1998; Shepherd, 2006; Sloboda, 2003). On the other hand, it is recommended that there should be at most 10 words in each line (Edwards, 2007). It is also pointed out that each slide should present a single concept or judgment (Andrew & Griffith, 2006; Shepherd, 2006; Pugsley, 2010) and that spell-check should be made (Brody, 2007). In addition, color matching is stated to be another important point that should be taken into consideration while preparing a slide, and it is emphasized that use of too many colors in a single slide should be avoided (Aldağ & Gürpınar, 2007; Leblebicioğlu, 1998; Marancı, 2011; Pugsley, 2010; Shepherd, 2006; Sloboda, 2003). Moreover, it is also important to avoid the use of red/green combinations due to the possibility that there could be color-blind individuals in the audience (Pugsley, 2010; Shepherd, 2006). It is suggested that the background color of the slide should be be of light colors and that combinations of contrast colors is generally be preferred (Aldağ & Gürpınar, 2007; Edwards, 2007; Leblebicioğlu, 1998; Pugsley, 2010; Sloboda, 2003).

In the presentation phase, it is important to plan the duration of the presentation that will match the attention span of the audience and to use this duration of time effectively (Adams, 2004; Aldağ & Gürpınar, 2007; Andrew & Griffith, 2006; Brody, 2007; Leblebicioğlu, 1998; Namhata, 2011; Shetciliffe, 2001). It is stated that the beginning and ending phases of a presentation are among the most remembered phases. Therefore, these phases should be used well. It will increase the interest in the presentation if a short story, some statistical information, an example or a question is inserted either at the beginning or at the end of the presentation. It is also suggested that the closing part should include a good intention or will for the future. The final thank you should be as short as possible (Andrew & Griffith, 2006; Gelula, 1997; Leblebicioğlu, 1998; Namhata, 2011; Shetciliffe, 2001). During the presentation, the presenter should make eye-contact with the audience rather than turning his or her back to the audience or reading aloud from the slide or from the hand-outs (Adams, 2004; Aldağ & Gürpınar, 2007; Brody, 2007; Edwards, 2007; Emden & Becker, 2004; Gelula, 1997; Magin & Helmore, 2001; Mandel, 2000; McDonalds & McDonalds 1993). The presenter should use warm and friendly facial expression towards the audience and interact with them via one-on-one talks (Adams, 2004; Edwards, 2007; Gelula, 1997; Namhata, 2011). During the presentation, body language should be used effectively (Adams, 2004; Aldağ & Gürpınar, 2007; Edwards, 2007; Emden & Becker, 2004; Leblebicioğlu, 1998; McDonalds & McDonalds, 1993). Also, the presenter should not stand in a fixed place but walk among the audience (Adams, 2004; Aldağ & Gürpınar, 2007; Andrew & Griffith, 2006; Edwards, 2007; Emden & Becker, 2004; Gelula, 1997). In addition, during the presentation, wearing appropriate, casual clothes (Leblebicioğlu, 1998; Mandel, 2000), overcoming one's excitement/nervousness (Mandel, 2000; Namhata, 2011) and allocating time to the question-answer part at the end of the presentation (Adams, 2004; Andrew & Griffith, 2006; Brody, 2007; Leblebicioğlu, 1998; Magin & Helmore, 2001; Mandel; 2000; Namhata, 2011; Shetciliffe, 2001) are among the most important factors that contribute to an effective presentation. Adjusting the tone of voice during the presentation will not only increase interest in the presentation but also draw the attention to the important points. The tone of voice should not remain the same during the presentation, and the presenter should be sure the whole audience can hear his or her voice (Adams, 2004; Aldağ & Gürpınar, 2007; Andrew & Griffith, Brody, 2007; 2006; Magin & Helmore, 2001; Edwards, 2007; Emden & Becker, 2004; Gelula, 1997; Mandel, 2000; Namhata, 2011). The presenter should draw the attention of the audience to the important points in the content of the presentation (Gelula,1997; Pugsley, 2010) and try to avoid going off subject during the presentation.

These suggestions and findings in related literature were shaped via experts' views, and nine items were excluded from the 50-item pilot scale as a result of the analyses conducted. Among these nine items were such statements as "I include more than one judgment in a single slide", "thinking about the presentation makes me anxious" and "I use audial elements in my presentation". Although especially the statement of "I use audial elements in my presentation" is suggested in related literature (Andrew & Griffith, 2006; Gelula, 1997), it was excluded from the scale due to low values obtained as a result of the analyses. Depending on this, it could be

stated that the teacher candidates did not consider this item to be important at all or that this item did not work as the teacher candidates perceived this item in different ways.

In literature, it is emphasized that students' presentation skills should be assessed and that for an appropriate assessment, more than one assessment methods should be used. In order to increase the level of learning and to decrease dependence on the instructor during the assessment, self-assessment and other similar assessment types are suggested besides the assessment conducted by the instructor. Certain research results reported in related literature demonstrated that self-assessment contributes positively to learning (Aldağ & Gürpınar, 2007). Therefore, the measurement tool developed in the present study not only helps students assess themselves but also allows teachers to assess their students' effective presentation skills via their responses to the measurement tool. In addition, it is possible to use the observation technique with the measurement tool developed in the present study and also to use this tool as a checklist to score students' presentations.

In literature, it is seen that there are different studies in which such techniques as observation, interview and peer assessment are used to measure individuals' effective presentation skills in every year of education and in a number of professional fields (Kayacan, Öztürk & Demir, 2011; Saban, Koçbeker & Saban, 2010; Aldağ & Gürpınar, 2007; Langan et al., 2008). In one study, Mandel (2000) developed a self-assessment scale to assess effective presentation skills which is quite similar to the Presentation Skills Self-Assessment Scale. The 20 items found in that measurement tool includes elements which are important for an effective presentation. However, this tool was not intended for measurement but prepared as a checklist that allows individuals to assess their own presentations.

CONCLUSION

In this study, the validity and reliability analyses of the "Effective Presentation Skills Self-Assessment Scale" developed in line with the related literature and with the views of experts and students were conducted, and as a result, quite good values were obtained. The scale was developed via two different research processes. As the intention was to develop the scale via a two-factor construct determined by the researchers in line with the suggestions in related literature, the CFA was carried out on 50 items in the first study for item analysis and item selection. In the second study, the CFA was applied again for the appropriateness of the two-factor 41-item scale obtained in the first study. The sample of the Study-1 was made up of 409 teacher candidates attending the Faculty of Education of Anadolu University in the academic year of 2011-2012, and the sample of the Study-2 included 423 teacher candidates from the Faculty of Education of Osmangazi University in the same academic year.

As a result of Study-1, nine items were excluded from the scale. In Study-2, the appropriateness of the two-factor 41-item scale was tested, and such good values of fit indices as χ^2/sd: 2.84, RMSEA: 0.067, GFI: 0.79, AGFI: 0.77, RMR: 0.061, SRMR: 0.068, NFI: 0.90, NNFI: 0.92 and CFI: 0.93 were obtained.

The Cronbach Alpha reliability coefficient for the first factor of the two-factor scale was found to be α= 0.88, the Cronbach Alpha reliability coefficient for the second factor was calculated as α= 0.83. The Cronbach Alpha reliability coefficient for the whole 41-item scale was found to be α= 0.90.

The scale was limited to the effective presentation skills of students from the faculty of education. Effective presentation skills are important as they are needed in all years of education as well as in scientific meetings. Regarding the effective presentation skills self-assessment scale developed, adaptation studies are suggested in a way to include postgraduate students or to cover scientific meetings.

International Journal on New Trends in Education and Their Implications
October 2014 Volume: 5 Issue: 4 Article: 09 ISSN 1309-6249

BIODATA AND CONTACT ADDRESSES OF AUTHORS

Selim GÜNÜÇ graduated from Computer Education and Instructional Technologies Department in 2004. He graduated Educational Sciences Master Program in 2009. He received him Ph. D. in Anadolu University, Department of Computer Education and Instructional Technologies in 2013. He is an assistant professor in Department of Computer Education and Instructional Technologies at Yuzuncu Yil University. His research interes ciber psychology (technology/internet/game addictions so on), technology integration and student engagement.

Assist. Prof. Dr. Selim GÜNÜÇ
Yuzuncu Yil University
Faculty of Education
Computer Education and Instructional Technologies
Van- TURKEY
E. Mail: selimgunuc@hotmail.com

Serap CAVKAYTAR received her Ph. D. in Anadolu University, Primary Education in 2009. She has been working as an assistant coordinator in Anadolu University, Open Education Faculty, at Turkish Language and Literacy Program. She is also a language advisor for the office of Instructional Design for books at the Open Education Faculty. She managed a national project and participated some projects and conferences on teaching Turkish language and education.

Assist. Prof. Dr. Serap CAVKAYTAR
Anadolu University
Open Education Faculty
Department of Turkish Language and Literacy
Eskisehir- TURKEY
E. Mail: scavkayt@gmail.com/ scavkayt@anadolu.edu.tr

Belgin SÖNMEZ is a Ph. D. Student in Curriculum and Instruction, at Education Faculty Anadolu University. She is working as an elementary teacher in a public school.
Elemantry Teacher.

Belgin SÖNMEZ
Anadolu University
Eskisehir- TURKEY
E. Mail: ozgursonmez78@gmail.com

Fidan ÖZBEY, is a instructor in the Department of Special Education, at Education Faculty, Sakarya University. She is PH. D. student at Special Education Program in Ankara University.
Lecturer

Fidan ÖZBEY
Sakarya University
Faculty of Education
Sakarya- TURKEY
E. Mail:ffozbey@sakarya.edu.tr

Zeynep KILIÇ, graduated from Department of Primary Education in 2007. She graduated Department of Primary Education Master Program in 2010.She is PH.D student at Primary Education Program . She has been working as a research assistant in Department of Primary Education, at Education Faculty, Osmangazi University.

Research Assistant Zeynep KILIÇ
Osmangazi University
Faculty of Education
Department of Primary Education
Eskisehir- TURKEY
E. Mail: zeynepk@ogu.edu.tr

REFERENCES

Adams, K. (2004). Modelling success: enhancing internationalpostgraduate research students' self-efficacy for research seminar presentations. *Higher Education Research & Development, 23*(2), 115-130.

Aldağ, H. & Gürpınar, K. (2007). Üniversite Öğrencilerinin Sunu Becerilerini Etkileyen Faktörler. Akademik Bilişim Konferansı 31 Ocak - 2 Şubat 2007. Kütahya.

Andrew, F. & Griffith, P.E. (2006). Effective presentation skills for cost engineers. *AACE International Transactions, 2, 1-6.*

Brody, M. (2007), Mastering presentation skills is critical to professional development. *Employment Relations Today*, *34*(3), 37–46.

Brown, T. & Morrissey, L. (2004). The effectiveness of verbal self guidance as a transfer of training intervention: its impact on presentation performance, self efficacy and anxiety. *Innovations in Education and Teaching International,41*(3), 255-271.

Cram, B. (1995). *Self-assessment: From theory to practice. Developing a workshop guide for teachers.* In G. Brindley, *Language assessment in action* (pp. 271-350). Sydney: National Centre for English Language Teaching and Research, Macquerie University.

Edwards, J. (2007). *Presentation skill*. Delhi: Global Media.

Emden, J.V. & Becker, L. (2004). Presentation Skills for Students. Retrieved from 29 February, 2012 ftp://teknik.unitomo.ac.id/Ebooks/Interpersonal%20Skill/PresentationSkillsforStudents.pdf

Field, A. P. (2005). *Discovering statistics Using SPSS* (2nd ed.). London: Sage.

Gelula, M. H. (1997). Effective lecture presentation skills. *Surg Neurol*, *47*, 201-204.

Gündüz, Ş. & Odabaşı, F. (2004). Bilgi çağında öğretmen adaylarının eğitiminde öğretim teknolojileri ve materyal geliştirme dersinin önemi. *The Turkish Online Journal of Educational Technology –TOJET*, *3*(1), 43-48.

Henson, R.K. & Roberts, J.K. (2006). Use of Exploratory Factor Analysis in Published Research: Common Errors and Some Comment on Improved Practice. *Educational and Psychological Measurement, 66*, 393-416.

Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modelling: guidelines for determining model fit. Articles, 2.

Hu, L.T. & Bentler, P.M. (1999). Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives, *Structural Equation Modeling, 6*(1), 1-55.

Hutcheson, G. D., & Sofroniou, N. (1999). *The Multivariate Social Scientist: An introduction togeneralized linear models*. Sage Publications.

Jöreskog, K. & Sörbom, D. (2001). *LISREL 8: User's reference guide.* Chicago: Scientific Software International Inc, USA.

Kayacan, K. Öztürk, N. & Demir, R. (2011). Sınıf öğretmenliği öğretmen adaylarının PowerPoint materyaline karşı görüşleri, *2nd International Conference on New Trends in Education and Their Implications. Antalya-Turkey.*

Kline, R.B. (2011). *Principles and Practice of Structural Equation Modeling* (3rd ed.). New York: The Guilford Pres.

Langan, M., Shuker, D., Cullen, R., Penney, D., Preziosi, R. & Wheater, P. (2008). Relationships between student characteristics and self-, peer and tutor evaluations of oral presentations. *Assessment & Evaluation in Higher Education, 33* (2), 179–190.

Leblebicioğlu, L. (1998). Etkili sunum yöntemleri. *O.M.Ü. Tıp Dergisi, 15* (3), 191-197.

Lewkowicz, J. & J. Moon. (1985). Evaluation: A way of involving the learner. In J. C. Alderson, *Evaluation: Lancaster Practical Papers in English Language Education* (pp. 45-80). Oxford: Pergamon Press.

Magin, D. & Helmore, P. (2001). Peer and teacher assessments of oral presentation skills: how reliable are they? *Studies in Higher Education,* 26(3), 287-298.

Mandel, S. (2000). *Effective presentation skills: A practical guide for better speaking (3rd ed.)*. Menlo Park, CA: Crisp Publications.

Marancı, B. (2011) Etkili Sunum Teknikleri & Resmin Önemi. Retrieved from 2 March, 2012 www.bilisimdergisi.org/pdfindir/s136/pdf/100-107.pdf

McDonalds, G. & McDonalds, M. (1993). Developing oral communication skills of computer science undergraduates. *Newsletter ACM SIGCSE Bulletin 25*, 1.

Mertler, C. A. & Vannatta, R. A. (2005). *Advanced and multivariate statistical methods: Pratical application and interpretation* (3rd ed.). CA: Pyrczak Publishing.

Mendez, L. A. (2011). *Teacher education students' perceptions and actual abilities as demonstrated through examinations in MicrosoftRTM Word, Excel, and PowerPoint*. Thèse de doctorat inédite, University of the Incarnate Word, San Antonio (Texas).

Murphy, E. (1996). Developing Student Presentation Skills. *Different Approaches: Theory And Practice in Higher Education.* Proceedings Herdsa Conference 1996. Perth, Western Australia, 8-12 July. Http://www.Herdsa.Org.Au/Confs/1996/Murphy.Html

Namhata, R. (2011). Smooth talk, smart attire, efficient practice and a tinge of humor: presentation skills for beginners*. The IUP Journal of Soft Skills, 5*(1), 31-36.

Pugsley, L. (2010). How to... Design an effective PowerPoint presentation. *Education for Primary Care*, *21*(1), 51-53.

Raykov, T., & Marcoulides, G.A. (2006). *A first course in structural equation modeling* (2nd ed.). Lawrence Erlbaum Associates, Inc. Publishers.

Saban, A., Koçbeker, B.N. & Saban, A. (2010). Sınıf öğretmeni adaylarının PowerPoint sunularının öğretimsel değerine ilişkin görüşleri. *9. Ulusal Sınıf Öğretmenliği Eğitimi Sempozyumu. Fırat Üniversitesi Eğitim Fakültesi, Elazığ. Bildiri Kitapçığı, 9, 942-946.*

Saçar, S., İnan, B.K. & Saçar, M. (2007). Etkileyici bir poster sunumu hazırlamak. *Akademik Dizayn Dergisi, 1,* 10-15.

Shepherd, M. (2006). How to give an effective presentation using PowerPoint. *European Diabetes Nursing*, *3*, 154–158.

Shetcliffe,J. (2001). Presentation skills. *Insurance Brokers' Monthly, 51*(10), 35-36.

Sloboda, B. (2003). Creating effective power point presentation. *Management Quarterly, 44*(1), 20-34.

Sümer, N. (2000). Yapısal eşitlik modelleri: Temel kavramlar ve örnek uygulamalar [Structural equation models: Basic principles and sample applications]. *Turkish Psychological Articles*, *3*(6), 49–74.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics* (5th ed.). Boston: Allyn and Bacon.

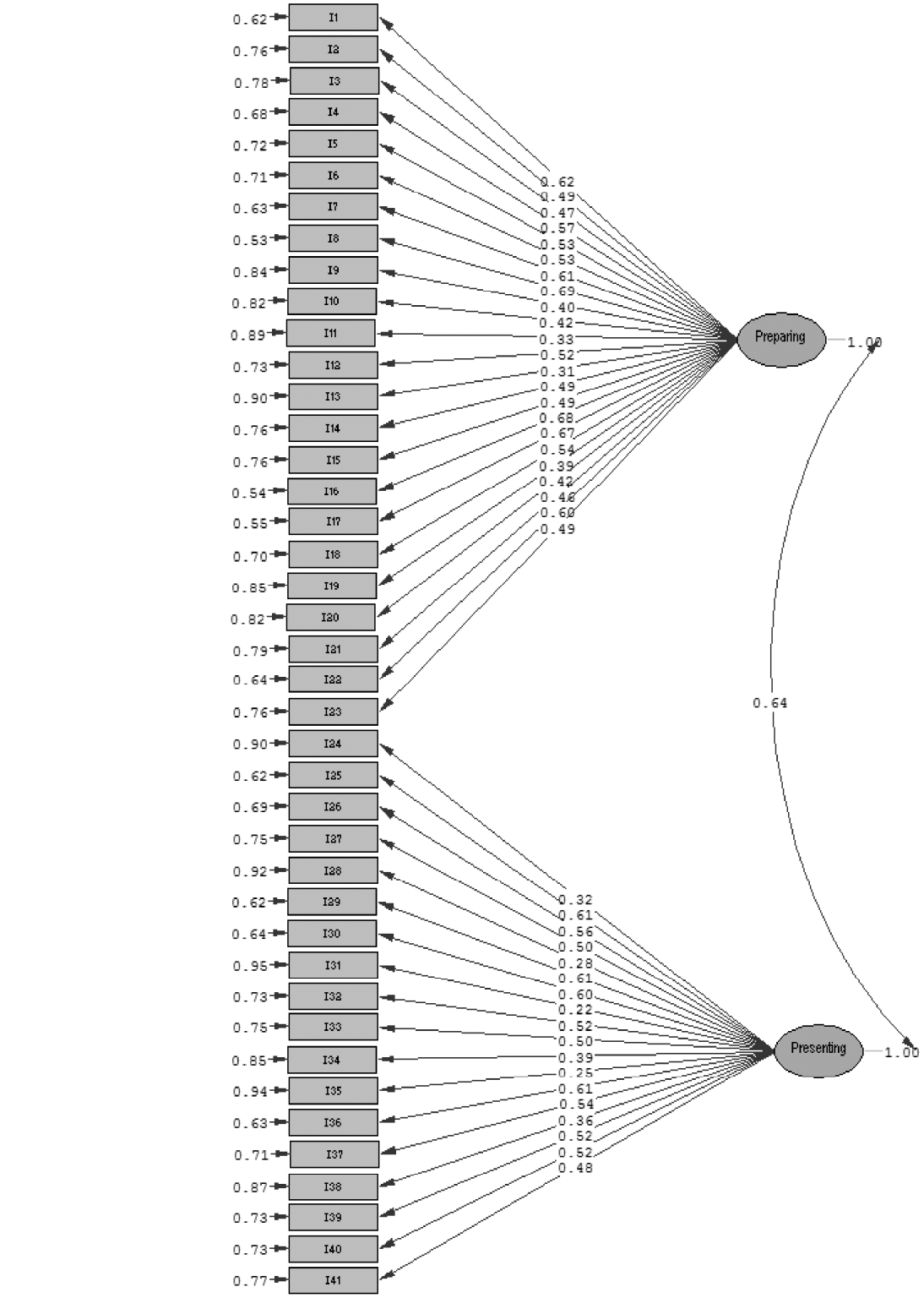
Thompson, B. (2008). *Exploratory and confirmatory factor analysis: Understanding concepts and applications* (3rd ed.). Washington, DC: American Psychological Association.

Ulrich, B. (2007). Professional Communications: Publications and Presentations. *Nephrology nursıng journal, 34*(5), 503-508.

Worthington, R.L. & Whittaker, T.A. (2006). Scale Development Research: A Content Analysis and Recommendations for Best Practices. *The Counseling Psychologist, 34*, 806-837.

International Journal on New Trends in Education and Their Implications
October 2014 Volume: 5 Issue: 4 Article: 09 ISSN 1309-6249

Appendix 1: Standardized Path Diagram



Chi-Square=2206.10, df=778, P-value=0.00000, RMSEA=0.067