Validity and Reliability Study of Listening Attitude Scale for Prospective Teachers

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Abstract

The aim of this study is to develop a measurement tool to measure the listening/watching attitudes of pre-service teachers. 387 pre-service teachers were administered the scale, and its validity and reliability studies were conducted by exploratory factor analysis, internal consistency measurement, and confirmatory factor analysis. EFA revealed that the scale has four dimensions. To determine the reliability of the scale, the Cronbach Alpha internal consistency coefficient was calculated at 0.928. In the principal component analysis, Kaiser-Meyer-Olkin (KMO) coefficient was found to be 0.937. In addition, the Barlett Sphericity test was significant ($\chi2 = 4607.552$; $p<0.05$). Varimax rotation resulted in factor loadings ranging between 0.37 and 0.91. In CFA, the standardized regression coefficients averaged around 0.700 and the items in each dimension had a significant predictive power. As a result of the analysis, a valid and reliable scale was obtained.

Keywords: Attitude, Listening/watching, Scale development

Introduction

Language is one of the essential elements of communication and one of the most effective tools. Individuals transfer their feelings and thoughts through language. The aim of communication is to deliver the message to the target in the shortest time and in the most understandable way. At this point, it is recommended that individuals learn to listen and gain the habit of listening in order to communicate effectively (Atalay & Melanlıoğlu, 2016). Unlike hearing, listening is an active process based on making sense and associating what is understood with the existing schema. Existing definitions in the literature also support this. Özbay (2005) emphasizes in his definition that listening is a way of learning just like reading, speaking, and observation, and that most of the learning takes place through listening. According to Wolvin (2010), listening is the receiving process of the communication process based on hearing verbal or non-verbal messages, paying attention and interpreting the message, and reconstructing the message. In other words, it is the individual's perception and interpretation of what he or she hears. When the organ of sight is added to the organ of hearing in the listening process, the skill of watching occurs. Listening, which is one of the four basic language skills, has a very important place in our lives because it is part of our daily lives and forms the basis for other language skills. So much so that listening draws attention as the most frequently used skill in communication in researches. According to Göğüş (1978), individuals spend almost half of the time they spend with people by listening; in school, up to 4 hours of listening activity takes place daily in teacher-student communication. In addition to its role in the learning process, listening is also effective in ensuring communication and organizing relationships between individuals in social life. With listening, which is among the basic conditions of healthy communication, individuals can mutually share their feelings, thoughts, concerns, and needs with each other. In addition, listening enables individuals to gain self-confidence by improving their empathizing, problem-solving, and inference-making skills. Despite its role in both learning and communication processes, listening, which is the basis of communication, has been accepted as a skill that can develop spontaneously, and it is thought that there is no need for training in listening skills (Emiroğlu & Pınar, 2013).

Contrary to popular belief, listening skills are a skill that should be evaluated both in terms of education and affective characteristics such as attitude, anxiety, and motivation. Attitude, which is one of the key concepts in behavioral sciences (İnceoğlu, 2004), is very important among affective characteristics. Attitude is not innate, it is acquired through various experiences. They are emotional, mental, and behavioral tendencies that arise from

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the influence of people, events, and situations (parents, friends, media, etc.) on individuals (Tayşi & Özbay, 2016). The tendency in question can be positive or negative. Individuals accept or reject a group, institution, or idea with a positive or negative disposition (Özgüven, 1994). In this respect, attitudes have a direct effect on individuals' behaviors and skills. The determination of this effect and its reflection on language skills should be investigated. Ignoring the effect of attitudes on skills may cause individuals to have negative attitudes towards language skills in general and listening skills in particular, which causes some negativity in their educational activities and social lives. The consideration of the psychological variable, the determination of its source, and awareness of its conditions prevent the formation of possible negative attitudes. Since listening skill is a skill that involves many factors, individuals may often remain passive in the process; this passivity may cause individuals to get bored and develop negative attitudes towards listening (Goh & Taib, 2006; Tayşi & Özbay, 2016). It is important to determine the emotional, mental, and behavioral tendencies that affect listening skills. The obstacle of individuals' interests, expectations, needs, and personal problems to listening skill has a negative effect on the skill. In cases where the individual is not interested, has negative feelings and thoughts, the teacher's efforts in the lesson or at the point of communication become meaningless. For this reason, the primary goal is to make the current attitude positive, but for this to happen, it is necessary to identify the problem, which is, the negative attitude.

There are studies in the literature to determine students' attitudes. Karahan (2020), who determined the effect of attitude on skills, developed an attitude scale for 5th grade students' attitude towards listening; Daşöz (2013) developed an attitude and anxiety scale for 7th grade students' listening skills; and Tayşi & Özbay (2016) developed an attitude scale for middle school students' attitude towards listening. Bayram's (2019, p.61) detection that "as long as the teacher cannot solve the problems arising from himself/herself, he/she encounters the listening barrier arising from the student's attitude in the classroom" is very important at this point. Considering this determination, teachers need to review their attitudes. Çifci (2001) states that the attitudes and behaviors of the teacher have an effect on the listener. Since pre-service teachers encounter listening barriers such as not being aware of the target, the length of the lecture, not being interested in the subject, being interested in personal problems, staying passive in the lesson, not being able to use the information in the future, not knowing the terms and concepts used, not asking about the points that are not understood, not using the body language of the instructor effectively and trying to take notes of everything explained (Aşılıoğlu, 2009), it is as important to determine the attitudes of teachers or pre-service teachers as it is to determine the attitudes of students.

From this point of view, there was a need to develop a general listening attitude scale suitable for use on all pre-service teachers. With the "Validity and Reliability Study of the Listening Attitude Scale for Prospective Teachers", it is aimed to develop a measurement tool with reliability and validity studies to determine the listening attitudes of prospective teachers. The measurement and evaluation approaches used in the listening and watching process, which has an important role in both the daily life and academic life of individuals, are important for the efficiency of the skill and the effectiveness of teaching. The existence of a scale that will reflect and determine pre-service teachers' attitudes towards listening skills is important for the skill. On the other hand, the inadequacy of studies determining pre-service teachers' attitudes towards listening increases the importance of the developed scale. In addition, the scale is expected to contribute to the development of positive attitudes towards listening and shed light on future studies.

Method

This study is a scaling-based research project that was prepared to determine the construct validity and internal consistency reliability coefficient of the listening attitude scale for prospective teachers.

Research Group

The reliability and validity studies of the Listening Attitude Scale for Prospective Teachers were conducted on a total of 387 university students studying at the Faculty of Education and the Faculty of Sports Sciences at Bayburt University in the autumn term of the 2021-2022 academic year. In the selection of the study group an easily accessible sampling method, one of the purposeful sampling methods—was preferred. In this method, the researcher chooses a situation that is close to him/her and, therefore easy to access (Yıldırım & Şimşek, 2011:105). The distribution of the study group that emerged as a result of the selection made is 45% (f=174) of the first grades, 23.4% (f=94) of the third grades, 17.1% (f=66) of the second grades, and 13.7% (f=53) of the fourth grades. The participants forming the study group were included in the study according to the principle of volunteerism. The determination of the sample size was based on five times the total number of items in the scale (Tezbaşaran, 2008; Tavşancıl, 2014). It can be said that the study group is sufficient for reliability and validity

procedures. The distribution of the selected study group according to departments and classes is shown in Table 1:

Table 1. Descriptive statistics of the study group

Grade Level	f
1	174
2	66
3	94
4	53
Total	387

Department	f
Preschool Education	82
Guidance and Psychological Counselling	69
Turkish Language Teaching	66
English Language Teaching	40
Classroom Teaching	35
Physical Education Teaching	34
Primary Mathematics Teacher Education	33
Social studies teaching	28
Total	387

Scale Development Process

In the first stage of scale development, the theoretical infrastructure of the concept to be measured and the target group to be used in the scale are determined (Devellis, 2021). In this direction, an item pool of 54 items was created by using the keywords "listening, listening attitudes" in the domestic and foreign literature to determine the theoretical structure of the feature aimed to be measured in the study. These items were presented for consistency to six experts from the Department of Turkish Education and two experts from the Department of Measurement and Evaluation for consistency. In addition, the scale items were also examined by language experts in terms of language and meaning. It was aimed at creating a candidate scale form with feedback from both field experts and language experts. For this purpose, a triple evaluation form was prepared. In the prepared form, "Appropriate, Inappropriate, Partially Appropriate" options were given for each item in the item pool, and the expert who would make the evaluation was asked to tick one of these options. At the end of the marking, it was checked how many experts accepted each item.

In addition, the content validity of the items was tried to be ensured. Content validity is the extent to which the entire scale serves the purpose (Karakoç & Dönmez, 2014). For content validity, the opinions of the experts on the subject are taken. For the content validity of the scale items (Veneziano & Hooper, 1997), the content validity ratio was used. The calculation of the content validity ratio was made by taking one minus the ratio of the total number of experts who responded positively for each scale item to the total number of experts. At the end of this calculation, items with a content validity ratio below 0.80 were removed from the scale. After the expert opinions, final corrections were made, and the 54-item draft scale form was created and made ready for pilot application. The 54-item draft scale was applied to a group of pre-service teachers who had similar characteristics with the target group to determine whether the items were comprehensible or not. With the removal of six items from, the pilot application, the 48-item trial scale was finalized. Thus, a Likert-type measurement tool based on giving information about the individuals involved in the study was prepared. The participants were asked to express their attitudes on a 5-point Likert-type scale ranging from "Strongly Agree, Agree, Somewhat Agree, Disagree, and Strongly Disagree". Depending on the ranking, it was scored as "5, 4, 3, 2, 1".

Data Analysis

The main purpose of scale development studies is to present a valid and reliable scale (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2017). For this purpose, exploratory and confirmatory factor analyses were conducted in the data analysis of the study. SPSS 25 was used in exploratory factor analysis, and IBM SPSS AMOS 26 software was used in confirmatory factor analysis. Since there was no clear information about the number of factors of the measurement tool in the study, exploratory factor analysis was used to obtain information about the nature of the measured factor, and confirmatory factor analysis was used to confirm the hypothesis developed in line with the theory.

Results

The main purpose of the analysis conducted on the attitude scale prepared for pre-service teachers is to demonstrate that the developed scale is valid and reliable. Factor analysis was performed to create a coherent structure among the 48 items planned to be used during the application to measure the attitudes of pre-service teachers towards listening. Item analyses of the items within the structure revealed by the factor analysis were performed. In this section, the values obtained from the analyses are interpreted.

Before the factor analysis, the total score correlation of 48 items was analyzed to create a meaningful whole among the items accepted to be related to the listening attitudes of pre-service teachers and for scale reliability. With correlation, the relationship between the score obtained from the test items and the total score of the test is examined. For item discrimination, the item-total correlation should be 0.30 and above (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2017). The results of the analyses for the items in the scale are presented on the table below:

Table 2. Item total correlations of scale items

Scale Item No	Item Total Correlations
M1	,277
M2	,477
M3	,432
M4	,385
M5	,577
M6	,522
M7	,613
M8	,646
M9	,562
M10	,460
M11	,676
M12	,508
M13	,502
M14	,553
M15	,054
M16	,527
M17	,550
M18	,602
M19	,340
M20	,547
M21	,551
M22	,583
M23	,519
M24	,613
M25	,535
M26	,375
M27	,272
M28	,138
M29	,572
M30	,477
M31	,526
M32	,636
M33	,407
M34	,524
M35	,592
M36	,383
M37	,240
M38	,466
M39	,443
M40	,103
M41	,459
M42	,524
M43	,091
M44	,502
M45	,046
M46	,147
M47	,335
M48	,364

The table shows the item total correlation amounts for all items. In item-total correlation analysis, it is expected that the expected item total correlation amount should not be negative, and the item total correlation value should be greater than 0.20 (Sapmaz, et al., 2016). As the table is examined, it is seen that there is no negative value in item total correlations, and the item total correlations of items 15, 28, 40, 43, 45, and 46 are lower than .20. According to these results, items with correlations lower than .20 were removed from the scale. Factor analysis was used to reveal the most appropriate structure possible among the 42 items of the measurement tool that was planned to be used in the actual application. The items within the structure revealed by the factor analysis were analyzed.

Factor Analysis

The aim of the study was to determine the items that would provide a meaningful whole among a large number of items thought to be related to pre-service teachers' attitudes towards listening/watching skills. Since the researcher did not determine the number of dimensions before the analysis, all items related to listening and watching skills were evaluated.

As part of the validity study of the scale to be developed, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted for construct validity. While exploratory factor analysis aims to reach a small number of identifiable, meaningful structures that these variables can explain together among a large number of variables, confirmatory factor analysis aims to evaluate to what extent the factors formed from various variables based on a theoretical basis are compatible with real data (Büyüköztürk, Akgün, Özkahveci, & Demirel, 2004). Depending on the item-total correlation, the remaining 28 items were categorized under four factors, and no item was excluded. Information about the factor is given below.

Construct Validity Results of the Scale

Within the scope of Exploratory Factor Analysis, KMO and Bartlett's Test results were examined to evaluate the suitability of the data obtained from the "Listening/Watching Attitude Scale for Prospective Teachers" for factor analysis. KMO and Barlett Sphericity test results were evaluated to assess suitability. The values determined for the decision of whether the data in the sample are suitable for analysis are presented in the table:

Table 3. KMO value level

KMO Value	Level
0.90-1.00	Perfect
0.80-0.89	Good
0.70-0.79	Medium Level
0.60-0.69	Bad
0.50-0.59	Very Bad
0.00-0.49	Not Accepted

In sampling adequacy, it is accepted that when the KMO value is between 0.90-1.00, the data set can be factorized perfectly; when it is between 0.80-0.89, it can be factorized well, and when it is between 0.70-0.79 it can be factorized moderately when it is between 0.60-0.69 it can be factorized poorly, and when the KMO value is 0.50 or less than 0.50, the data set cannot be factorized.

The results of the KMO and Barlett Sphericity test conducted on the attitude scale prepared for pre-service teachers are presented in the table:

Table 4. Listening/watching attitude scale KMO and Bartlett test results

KMO Measure of Sampling Adequacy		,937
Bartlett's Test of Sphericity	Chi -Square	4607,552
	Sd	378
	P	,00

*p<0.05

The KMO (Kaiser-Meyer-Olkin) value to determine the suitability of the data for factor analysis is ,937 and the Bartlett Sphericity Test (Bartlett's Test of Completeness) result is ,00, which shows that the data is suitable for factor analysis (p<0.05). According to Çevik & Akgül (2003), Bartlett's test should be significant, and the KMO (Kaiser-Meyer-Olkin) coefficient should be higher than .50. The chi-square value of 4607,552 and sd of 378 indicate that the data are suitable for exploratory factor analysis. Factor analysis was performed with principal component analysis for the data set whose suitability was proven.
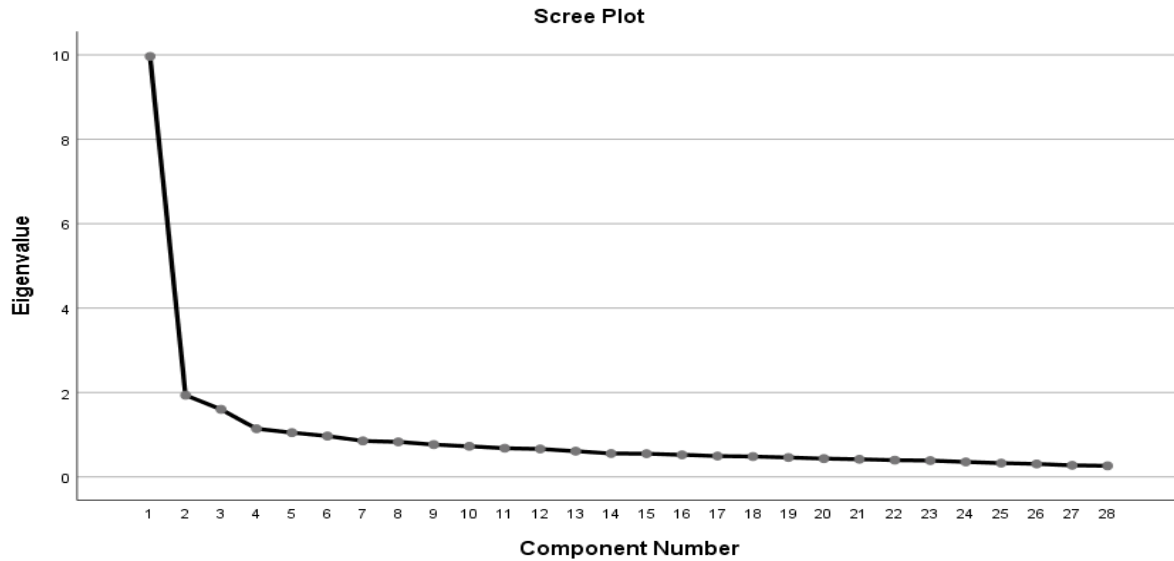

Figure 1. Scatter plot for the items

On the other hand, eigenvalue criteria were utilized to determine the number of factors that would reveal both the small number of items and the most effective way. Based on the literature (Büyüköztürk, Akgün, Özkahveci, & Demirel, 2004), the factors with eigenvalues greater than 1 and 1 were considered significant factors, and in this framework, the eigenvalue data of the scale factor were presented in the table:

Table 5. Eigenvalues and variance ratios for factors

Factor	Sum of Transformed Squared Weights		
	Eigenvalue	Variance Explained	Total
1	9,964	35,585	35,585
2	1,935	6,912	42,498
3	1,600	5,714	48,212
4	1,141	4,076	52,288

According to the figure and the table, a four-factor structure was formed from 28 items. Factor 1 explains 35,585 % of the total variance, factor 2 explains 6,912 % and, factor 3 explains 5,714 %, factor 4 explains 4,076 %. The eigenvalues are 9,964 for factor 1, 1,935 for factor 2, 1,600 for factor 3 and 1,141 for factor 4. The literature shows that it is quite difficult to keep the variance explained high in the behavioural sciences; for this reason, while it is sufficient to have a variance ratio of 30% in single-factor scales, the variance ratio should be higher in multi-factor scales (Bayram N. , 2017). In this context, the variance ratio that the "Listening/Watching Attitude Scale for Prospective Teachers" can explain can be considered as an indicator that the suitability of the developed scale to determine the attitudes of prospective teachers is at an acceptable level. The factor loadings of the items are given below:

Table 6. Factor analysis findings of listening/watching attitude scale for prospective teachers

Item No	1.Factor	Item No	2.Factor	Item No	3.Factor	Item No	4.Factor
M13	,914	M16	,881	M48	,739	M26	,764

M12	,739	M18	,699	M47	,664	M38	,743
M23	,735	M17	,698	M34	,597	M35	,727
M30	,715	M5	,670	M10	,466	M32	,508
M25	,668	M11	,628				
M14	,628	M2	,606				
M21	,606	M9	,546				
M24	,517	M8	,545				
M44	,506	M7	,503				
M41	,375	M42	,496				

In the item factor analysis of the study, a loading value of .35 was accepted as the basis. It is seen that there is a general acceptance in the literature to take between .30 and .40 as a cut-off point for factor loadings (Sheskin, 2011; Tavşancıl, 2014). The fact that the lowest factor loading value after the analysis is above .35 reveals that the factor loading values on the scale are good. Again, during the analyses, attention was paid to the difference between the loadings of the items on the first factor and the loadings on the other factors (,10 and higher), and the overlapping items 1, 3, 4, 6, 19, 20, 22, 27, 29, 31, 33, 36, 37, and 69 were removed from the scale. After this process, factor analysis was performed again, and a scale with 28 items was obtained. When the table is analyzed, the loading values of the items in the first factor vary between .914 and .375. When the items gathered under the first factor were analyzed, it was seen that the items were mostly about the benefits of listening skills to the individual, and for this reason, the first factor was named as "contributions of listening/watching". The load values of the items belonging to the second factor, which consists of 10 items are between ,881 and ,496. Considering that the items under the second factor were mostly activities in the listening process, the second factor was named as "listening/watching process". The loadings of the items belonging to the third factor consisting of 4 items, are between ,739 and ,466. Since the items were based on individual differences in the listening/watching process, the third factor was named as "individual differences in listening/watching". The loadings of the 4 items belonging to the fourth factor are between ,764 and ,508. Since the items under this factor were related to individuals' preferences for listening skills, the fourth factor was named as "prioritizing listening/watching". Expert opinion was taken about the factor nomenclature, and the factor nomenclature was finalized.

Confirmatory Factor Analysis

3 scale forms indicate random marking was determined; it was excluded from the analyses. CFA was conducted on the data obtained from 157 participants. The fit indices of the model obtained from the confirmatory factor analysis conducted to ensure the construct validity of the "Listening/Watching Attitude Scale of Prospective Teachers" were analyzed and presented in a table below:

Table 7. Model-data fit indexes

Fit Criterion	Perfect Fit Values	Acceptable Fit Values	Concordance Value Obtained from the Scale	Degree of Compliance
Chi -Square (p)	-	-	1,124 (p=0,00)	-
Df	-	-	270	-
Chi -Square /df	$0 \leq \chi^2/df \leq 2$	$\chi^2/df \leq 4$	1,124	Perfect Fit
RMSEA	$0,00 \leq RMSEA \leq 0,05$	$RMSEA \leq 0,08$	0,028	Perfect Fit
RMR	$0,00 \leq RMR \leq 0,05$	$RMR \leq 0,08$	0,054	Acceptable Compliance
SRMR	$0,00 \leq SRMR \leq 0,05$	$SRMR \leq 0,08$	0,060	Acceptable Compliance
GFI	$0,90 \leq GFI \leq 1,00$	$GFI \geq 0,85$	0,879	Acceptable Compliance
AGFI	$0,90 \leq AGFI \leq 1,00$	$AGFI \geq 0,80$	0,830	Acceptable Compliance

| CFI | 0,95≤CFI≤1,00 | CFI≥0,90 | 0,979 | Perfect Fit |
| NFI | 0,95≤NFI≤1,00 | NFI≥0,90 | 0,979 | Perfect Fit |

As a result of the confirmatory factor analysis of the listening/watching attitude scale for pre-service teachers, consisting of 28 items with 4 factors formed by exploratory factor analysis, the fit of the data obtained from 27 items with the removal of the 26th item from the scale to the established models was examined.

The data obtained were evaluated according to the perfect fit and acceptable values (Seçer, 2013; Şimşek, 2007). Accordingly, χ^2/df (chi-square/degree of freedom) value was found to be 1,124. A value of 2 or less indicates a perfect fit, and a value of 4 or less indicates that the model has an acceptable fit. According to the results of the analysis, the Chi-square value (x2=1,124, sd=270, p=.00) was found to be significant and acceptable.

When the fit values in the table are examined, all model data fit indices except NFI showed an acceptable value or excellent fit as a criterion value (Seçer, 2013; Şimşek, 2007).

RMSEA value was found as 0.028 in the model. The RMSEA value of the model less than 0.05 indicates an excellent fit, while the RMSEA value less than 0.08 indicates an acceptable good fit. The fit index value obtained as a result of the analysis reveals that the model gives a perfect fit.

RMR fit index was calculated as 0.054 and SRMR fit index was calculated as 0.060. RMR and SRMR values of 0.05 and below indicate a perfect fit, and 0.8 and below indicate a good fit. According to the result obtained, RMR and SRMR values show that the model is in the acceptable fit.

GFI and AGFI values of the model show that GFI is 0.879 and AGFI is 0.830. GFI and AGFI index values of 0.90 and above are an excellent fits, and 0.85 and above are a good fits. Accordingly, GFI values reveal that the model gives an acceptable fit and AGFI values reveal that the model gives an acceptable fit. There are also studies in the literature that accept AGFI ≥0.80 as an acceptable fit for the AGFI value (Uzun, Gelbal ve Öğretmen, 2010). Considering the obtained fit index values, it is possible to say that the model provides an adequate fit.

When the NFI and CFI fit indices of the model are examined, it is seen that NFI and CFI have values of 0.856 and 0.916, respectively. NFI and CFI values of 0.95 and above indicate perfect fit, and 0.90 and above indicate acceptable fit. The values obtained as a result of the analysis show that NFI and CFI are in perfect agreement.

A confirmatory factor analysis was performed to confirm that the scale has a four-factor structure within the scope of "Model-Data Fit Indices". According to the "Fit Model Estimates" findings, the chi-square value was 303,523, the df value was 270 and the RMSEA value was 0.028. The results are presented in Figure 2:
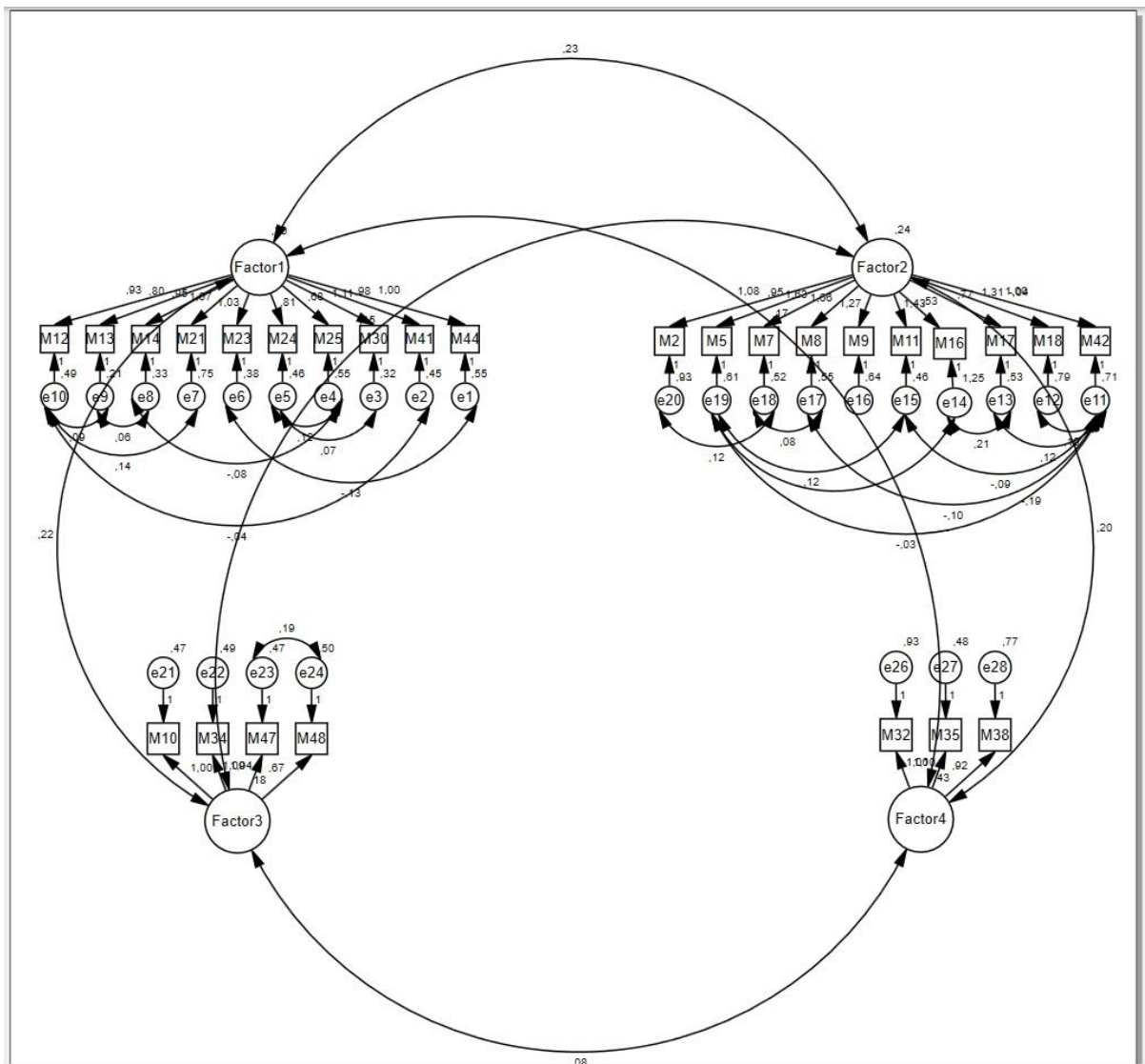
Figure 2. Path diagram and factor loadings of listening/watching attitude scale for prospective teachers

When the diagram is analyzed, it is seen that the prediction levels of the item scores representing the four factors for the latent variable vary between 0.37 and 0.91. According to the values in the diagram and table, the model data fit indices showed an acceptable value or perfect fit as a criterion value. It can be said that the four-factor structure of the "Listening/Watching Attitude Scale for Prospective Teachers" was confirmed.

Findings on the Reliability of the Scale
In order to prove the construct validity of the Listening/Watching Attitude Scale for Preservice Teachers, the correlation between the sub-dimensions of the scale was calculated and the results are given in the table:

Table 8. Correlation values between sub-dimensions

Sub-dimensions (n=387)		Contributions of Listening/Watching	Listening/Watching Process	Individual Differences in Listening/Watching	Prioritizing Listening/Watching
Contributions of Listening/Watching	r	1,000	,618	,482	,383
	p	,000	,000	,000	,000
Listening/Watching Process	r	,618	1,000	,522	,491
	p	,000	,000	,000	,000
Individual	r	,482	,522	1,000	,282

Differences in Listening/Watching	p	,000	,000	,000	,000
Prioritizing Listening/Watching	r	,383	,491	,282	1,000
	p	,000	,000	,000	,000

According to the table, when the correlation value between the sub-dimensions of the developed scale is considered, a positive and significant relationship is found between all sub-dimensions (p<0.01).

When a measurement is made on the listening/watching attitudes of pre-service teachers, the share of the error included in the measurements in the total variability observed in these measurements is a measure of the reliability of the prepared scale (Büyüköztürk, Akgün, Özkahveci, & Demirel, 2004). In this context, Cronbach's Alpha reliability coefficient was calculated to determine how accurately the scale prepared by the researcher measures the trait it wants to measure. A coefficient between .60 and .80 indicates that the scale is reliable; a coefficient between .80 and 1.00 indicates that the scale is highly reliable. The reliability analysis findings of the scale obtained as a result of the information provided and the procedures performed are shown in detail in the table:

Table 9. Listening/watching scale reliability analysis findings

Factor	Coronbach Alpha Reliability Coefficient
Contributions of Listening/Watching	,877
Listening/Watching Process	,874
Individual Differences in Listening/Watching	,665
Prioritizing Listening/Watching	,714
Total	,928

As a result of the analysis, the Cronbach's Alpha reliability coefficient for the entire scale was calculated as .928. This result shows that the scale is a highly reliable scale. In terms of sub-dimensions, the reliability level was calculated as .877 for the factor of contributions to listening/watching; .874 for the factor of listening/watching process; .665 for the factor of individual differences in listening/watching; and .714 for the factor of prioritizing listening/watching. These levels reveal that the internal consistency of the scale in four dimensions is quite high.

After the calculation of Cronbach's Alpha reliability coefficient, factor-based discrimination procedures were performed. Independent samples t-test was used to determine whether there was a significant difference between the arithmetic averages of the scores of the individuals in the lower and upper groups (27%) of the test and the results are presented below:

Table 10. Independent sample t-test of the factors and the scale's top and sub group independent sample t-test

Factor		N	Mean	Sd	t	p
Contributions of Listening/Watching	Sub Group	104	37,1057	206	21,279	,000
	Top Group	104	48,4134			
Listening/Watching Process	Sub Group	104	30,4231	206	30,208	,000
	Top Group	104	46,7308			
Individual Differences in Listening/Watching	Sub Group	104	14,7692	206	18,849	,000
	Top Group	104	19,2885			
Prioritizing Listening/Watching	Sub Group	104	7,1346	206	16,139	,000
	Top Group	104	12,0673			
Total	Sub Group	104	126,5000	206	36,999	,000

	Top Group	104	89,4327

Based on the self-efficacy scores ranked from high to low, the lower and upper groups were each formed from 104 individuals each. According to the table, it is seen that the items are significant at p<.001 level. These results reveal that the developed scale can distinguish between the lower and upper groups of 27%.

The item analyses of the data in the Listening/Watching Attitude Scale for Prospective Teachers are presented in a table by comparing the item-total test correlation. With the item-total test correlation, it was tested whether each item in the scale measures the feature it wants to measure and whether it distinguishes individuals in terms of the feature it measures, and items with an item-total test correlation score of 0.30 and above were considered to have good discrimination.

Table 11. Item-total test correlation

Items	N	Item Total		Item Reminder	
		r	p	r	p
M2	387	,495	,000	,341	,000
M5	387	,625	,000	,500	,000
M7	387	,644	,000	,523	,000
M8	387	,670	,000	,555	,000
M9	387	,584	,000	,463	,000
M10	387	,497	,000	,367	,000
M11	387	,720	,000	,593	,000
M12	387	,543	,000	,474	,000
M13	387	,554	,000	,589	,000
M14	387	,609	,000	,524	,000
M16	387	,493	,000	,377	,000
M17	387	,585	,000	,468	,000
M18	387	,614	,000	,485	,000
M21	387	,586	,000	,456	,000
M23	387	,562	,000	,473	,000
M24	387	,650	,000	,534	,000
M25	387	,585	,000	,487	,000
M30	387	,520	,000	,445	,000
M32	387	,620	,000	,524	,000
M34	387	,542	,000	,402	,000
M35	387	,542	,000	,457	,000
M38	387	,401	,000	,377	,000
M41	387	,485	,000	,382	,000
M42	387	,557	,000	,419	,000
M44	387	,571	,000	,407	,000
M47	387	,404	,000	,330	,000
M48	387	,392	,000	,294	,000

When the table is examined, it is seen that the item total correlation values ranged between r = .39 and r = .72 and the item residual correlation values were r = 29. and r = .59 and there was a significant relationship between the scores at .01 level.

Evaluation of the Scores

There are 27 items in the Listening/Watching Attitude Scale for Prospective Teachers. Since it offers a 5-point Likert-type rating, the highest score that can be obtained from the scale is 135 and the lowest score is 27. As the scores obtained from the sub-dimensions of the scale increase, it can be said that pre-service teachers have the characteristics of the relevant dimension at a high level. The application time of the scale is approximately 10-15 minutes.

Conclusion and Discussion

There are many factors that play a role in the realization of communication. There are two basic elements in verbal communication. One of these elements is listening. With the scale developed, it was aimed to determine which attitudes the pre-service teachers selected as the study group have about listening. The aim of the research is to bring a measurement tool aiming to measure pre-service teachers' attitudes towards listening and monitoring skills into the literature. Although there are many measurement tools dealing with different dimensions of listening/monitoring skills, there is no attitude scale for listening/monitoring skills for pre-service teachers, so the validity and reliability analysis of the "Listening Attitude Scale for Pre-service Teachers" was conducted.

It is expected that the scale obtained as a result of the research will contribute to the determination of pre-service teachers' attitudes towards listening/watching skills and the development of similar measurement tools. The high and significant validity and reliability analyses suggest that the developed scale can be used to measure the attitudes of pre-service teachers in the field of listening/watching. In addition, it is foreseen that it can be used in studies on the determination of attitudes.

In the scale developed by Melanlıoğlu (2013) to determine the listening concerns of secondary school students, students' concerns were measured based on five dimensions: "evaluation of listening, watching the listening process, individual differences in listening, focusing on after listening, and listening barriers".

In the scale developed by (Tayşi & Özbay, 2016) in order to measure the attitudes of secondary school students towards listening skills, 4 dimensions were identified as "seeing listening as necessary, individual differences in listening, listening difficulties, and effective listening habits".

Atalay & Melanlıoğlu (2016) reached a three-factor structure as "pre, during, and post listening strategies" in the scale they developed to measure the listening strategies of secondary school students.

Doğan & Erdem (2017) limited the scale they developed for secondary school students to critical, comprehensive, and discriminative dimensions.

Taşkın (2017) developed a three-dimensional scale consisting of the dimensions of "making sense of what is heard, questioning, and interpreting" to measure pre-service teachers' attitudes towards critical listening.

While creating the item pool of the listening/watching attitude scale for pre-service teachers, firstly, an item pool of 54 items was created by using the keywords "listening, listening attitudes" in the domestic and foreign literature. These items were presented for consistency to six experts from the Department of Turkish Education and two experts from the Department of Measurement and Evaluation for consistency. After the expert opinions, final corrections were made, and the 54-item draft scale form was created and made ready for pilot application. The 54-item draft scale was applied to a group of pre-service teachers who had similar characteristics as the target group to determine whether the items were comprehensible or not. With the removal of six items from the pilot application, the 48-item trial scale was finalized. The study was conducted on a total of 387 university students studying at the Faculty of Education and the Faculty of Sports Sciences at Bayburt University in the autumn term of the 2021-2022 academic year.

The analyses of the developed listening/watching attitude scale for pre-service teachers were made with the help of SPSS 22. The Cronbach Alpha reliability coefficient of the listening/watching attitude scale for pre-service teachers was calculated as ,928. This ratio shows that the developed scale is suitable for the use by pre-service

teachers. The Cronbach's Alpha reliability coefficient of each of the 4 sub-dimensions of the scale was calculated separately. Since the first dimension called "contributions of listening" has a reliability coefficient of ,779, the second dimension called "listening/watching process" has a reliability coefficient of ,740, the third dimension called "individual differences in listening/watching" has a reliability coefficient of ,612, and the fourth dimension called "prioritizing listening/watching" has a reliability coefficient of ,612, it can be said that the developed scale is very reliable.

In the literature, it is accepted that the KMO value, which corresponds to the compatibility of the correlation between the sample suitability and the scale item, is above .50. When the obtained data are analyzed, it is understood that the KMO value is .90. A KMO value higher than .70 indicates that the data are suitable for factor analysis. Bartlett's test result ($\chi2$=4607,552; sd=378 p<.,000) was found significant.

When the data obtained from the study were analyzed, a Likert-type measurement tool consisting of 27 items and 4 factors was prepared. As a result of the analysis performed on the final form of the scale, the lowest score that can be obtained from the scale is 27, and the highest score is 135. The factor loadings of the scale items ranged between 0.37 and 0.91. When the 4-factor structure of the scale was analyzed, it was found that the 10 items belonging to the first factor were classified as "other".

Recommendations

This scale was developed for pre-service teachers' listening/watching attitudes. Scales can be developed for different language skills by conducting the necessary validity and reliability studies.

Ethical Approval

The ethics committee approval required for the research was obtained with the decision of Bayburt University Ethics Committee dated 24/02/2022 and numb orered 35, and ethical rules were followed in all processes of the research.

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