IJGE

SCALE DEVELOPMENT TO DETERMINE THE GRAMMAR LEARNING TENDENCIES OF FOREIGN STUDENTS WHO LEARN TURKISH[1]

Hakan ÜLPER
Prof. Dr., Mehmet Akif Ersoy Üniversitesi, Burdur
ORCID: https://orcid.org/0000-0002-7067-599X
hakanulper@mehmetakif.edu.tr

Suggested Citation:
Ülper, H. (2022). Scale development to determine the grammar learning tendencies of foreign students who learn Turkish. *International Journal of Global Education (IJGE), 7*(2), 41-57.

Abstract

There have been debates, on grammar teaching in the literature for a long time. In these debates it has been argued that the students to learn the grammars by themselves on the one hand, and on the other hand, it has been claimed that the students could not learn the grammar by themselves and therefore it should be taught in the lessons. In this debate, among those who argue that grammar should be taught, there is also a debate about how grammar should be taught. According to this debate, one group supports teaching grammar in a separately pre-planned manner, while the other group supports that the grammar should be taught in a communicational context when it is appropriate. As a result of these discussions in the literature, we have come across different grammar teaching styles. These are meaning-focused grammar teaching, form-focused grammar teaching, and traditional grammar teaching. Each learning/teaching style has its own weaknesses and strengths. In this respect, it becomes important to determine students' tendencies and opinions towards grammar learning. This study aims to develop a measurement tool to determine students' tendencies towards grammar learning styles. In this context, a draft scale was prepared, the content validity, reliability, and distinctiveness of the items in the scale were examined by consulting experts, and the factor structure of this draft scale and whether this structure was verified was determined. Thus, a valid and reliable measurement tool was obtained to determine students' grammar learning tendencies.

Keywords: Scala development, grammar types, grammar learning.

INTRODUCTION

When we look at language from a simple structural point of view, we see that language is made up of symbols and these symbols are put together to form a sequence. It can be seen that each language has a double articulation structure and that the symbols and syntactic structures can be changed and transformed with various morphemes depending on the analysis and addition processes of the user. It is also clear that all these should be done without arbitrariness and should not present a subjective view according to the individual. In this context, the definition by Harmer (2001) is quite good, "It is an explanation of how words can be changed and combined within sentences in that language which decide the grammatical rules of each language".

These rules of grammar, which appear in every language, may be related to the word size of the language, and the syntaxes which regulate the uses of these words. Besides, considering that the language has both verbal and written forms of communication, it is important that these rules should determine the usage characteristics of both forms. Therefore, it would be appropriate to define grammar as a set of rules regarding sound, form, meaning, and syntaxes that all users must comply with regarding both the verbal and written language aspects in the context of the word, sentence, and text levels of a language during communication processes.
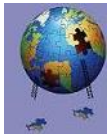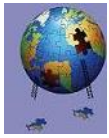

When we consider the principles of the communication process; it is clear how important it is to have compromise points that the speaker and the listener should agree on as customary to the communication process. For a language to achieve a suitable basis for communicative purposes for the speaker and the listener, it is extremely necessary to establish a set of rules through grammar. It is also clear how difficult it will be for the language to function in terms of communication if these rules are not implemented and used by both sides in a common and comprehensive way. In a situation where the grammatical rules are not known by the speaker and the listener or they are not addressed based on the same partnership, the speaker's message will not be understood. A similar situation would also valid for the written text.

On the other hand, even people who were native to that language and grew up acquiring the grammatical rules, this in itself would not be enough for them to fully understand and be able to express their own language. It is obvious that a set of grammatical rules need to be learned when considering how important it is to know a language for those who learn and teach a foreign language. However, according to Sezer (1994), grammatical teaching is not just having students memorize certain rules. In reality, language is a rule-driven entity, which enables language to be a communication tool. In this respect, grammar allows the student to recognize the language and communicate more efficiently.

These explanations direct us to other explanations of grammar types. In general, the types of grammar in literature are prescriptive, descriptive, instructive, traditional, universal, functional, etc. It is noteworthy that there are many concepts under the names that deal with the subject of grammar all with different perspectives and separate theoretical foundations. When these concepts are evaluated within their own confines, the focus is on the way the concept handles the language, and the aims of the language learner, bringing about whether it is necessary to learn or teach the grammar rules. For example, prescriptive grammar has absolute correct and incorrect usages, that must be followed, the grammatical definition in the form of which there are other uses outside of these rules. This becomes questionable when these uses do not cause problems with the communicative function of the language. This situation may lead to perception and discussion that grammar teaching based on such an understanding is unnecessary. For example, in a study conducted by Çetinkaya and Ülper (2015) on expression disorders, students found many sentences were defined within the scope of having expression disorder, which is, grammatically incorrect, but still understandable, and acceptable. This finding indicates that the content of this grammatical phenomenon, and the discussion of its need to be taught, can also be explained separately from the normative grammar. Therefore, regardless of the reason, it is normal that separate perspectives and related methods have emerged that can be used for grammar teaching and learning. For example, traditionally defined methods consider language teaching the same as grammar teaching and place grammar at the center of language learning, while some other methods do not see grammar teaching the same as teaching the language, but do not deny its importance. While some methods consider teaching grammar unnecessary.

In these contexts, it seems possible to encounter various grammar teaching styles. According to Ellis (2006), grammar teaching consists of the presentation and application of different linguistic elements. However, some grammar lessons may involve students exploring the language patterns for themselves without a presentation or practice. On the other hand, learning can be accomplished by exposing students to input from many different sources in the target language. Finally, grammar explanation can be carried out by giving corrective feedback to students about their mistakes while performing communicative tasks.

As shown, it is possible to use different grammar teaching methods in three different teaching styles. These are the meaning-focused grammar teaching style, which does not require grammar teaching. The form-focused grammar teaching requires grammar teaching with language skills in the context of communication, and focus on forms, in other words, traditional grammar teaching.

The necessity of grammar teaching began to be questioned and discussed. Especially when looking at the statement by Krashen needs to attract attention. According to him, using language in a real communication context is important in terms of creating input for learning. In doing this it creates an important resource for obtaining the grammatical rules of the target language. It is important that language students strive to often create written and spoken texts in their target language so that they can learn new syntactic structures. Meaningful oral and written texts can still be produced despite the students' grammatical errors in these speaking and writing activities (Brosh, 2017).
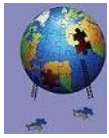
Form-focused instruction is defined by Ellis (2001, p.1) as "planned or incidental educational activities aimed to encourage language learners to pay attention to the linguistic forms of the language", which are the activities of drawing students' attention either implicitly or explicitly to the target language. Form-focused instruction focuses on the communicative aspect of grammar, based on the assumption that grammar can facilitate communication. In this grammar teaching, students pay attention to both the meaning and form at the same time. Thus, students grasp the connection between the forms and functions of the language without interrupting the flow (Wind, Mansouri & Jami, 2019).

Meaning-focused grammar teaching encourages the student to use the language to achieve specific communication goals by focusing on only communication and participating in social interactions and using practical processes. Form-focused grammar teaching is based on these study and application techniques and requires learners to pay attention to the formal and functional characteristics of the language (Pawlak, 2006). Traditional grammar teaching requires the separation of the linguistic features from any communicative activities and focuses on separating the language into categories, from the context. Teaching grammar in an isolated, ie decontextualized form, which often focuses on teaching a range of sentence structures that are included in a syllabus and not based on the students' communication priorities (Wind, Mansouri & Jami, 2019; Doughty & Williams, 1998). Traditional grammar teaching has been developed to teach the elements of the sentence, their structure, spelling, punctuation, and to analyze and describe the order of words in the sentences with the help of a textbook or workbook (cited in Çetinkaya & Yolcusoy, 2020).

In the literature, the existence of debates arising from the explanations based on these three very different teaching styles draws attention. Basically, the basis of these debates is whether it is necessary to teach formal grammar or not. The fact that there are studies that will support or refute both points of view makes this discussion a permanent one.

According to those who argue that there is no need for grammar teaching, grammar occurs unconsciously and naturally. For this process, students need to experience only understandable sentences and have a low-level affective filter for language learning. No formal presentation of information or any corrective feedback to explain the linguistic form is given. When using the linguistic form of teaching, any conventional presentation of information and any corrective feedback is thought to be unnecessary. Although the practice of oral grammar correction continues to gain a wide range of acceptance in language classes, research evidence points to the conclusion that oral correction does not improve the students' grammar or speaking skills. For these reasons, language teachers should seriously consider the option to abandon using oral grammar correction altogether (Krashen, 1981; Schwartz, 1993; Truscott, 1999).

There are also studies that reveal findings that contradict these views. They are based on the students' grammatically incorrect usage even after being exposed to the target language for many years. This suggests that some kind of form-focused teaching is beneficial for successful L2 learning. This idea has been confirmed by many studies. Carrol et al. (1992) investigated the effects of feedback (open correction) on learning of structural grammar in their experimental studies with intermediate and advanced level learners of French. They found that the experimental group achieved better success in their research. In another study investigating the effect of feedback, Spada and Lightbown (1993) found that form-focused education and corrective feedback provided in the context of communicative interaction can positively contribute to second language development in both the short and long term.

Fotos & Ellis (1991) found that communicative grammar activities enable learners to increase their knowledge about difficult L2 rules. Spada & Lightbown (2008) show that form-focused teaching helps students learn target language features that they may not be able to acquire on their own, and also shows that education is carried out with separate (isolated) or communicative activities (integrated) is beneficial. In this context, Spada (1997) concluded that form-focused teaching is beneficial for second language acquisition and can be most effective when integrated into a communicative context.

Lightbown (1998) argued that form-focused teaching should be included in communicative language teaching and can be presented separately from the language use. Ellis (2002), in his study, in which he reviewed the research investigating the effects of form-focused teaching in regards to implicit knowledge, found that form-focused teaching can significantly affect the correct use of the grammar elements and help acquire implicit knowledge for beginner-level students. Similarly, Ellis (2006), referring to other relevant research, concluded that there is convincing direct and indirect evidence that supports teaching grammar, although she is not certain about how the grammar should be taught. However, she has stated that there is not just one preferred approach in grammar acquisition, the acquisition of an L2 is a complex process, and therefore it should be supported by various approaches.

VanPatten & Cadierno (1993), in their study comparing the traditional form-focused instruction, which includes the explanation and practice of grammar rules, and the processing instruction, which includes both the explanation and the application of the language, stated that the subjects who received processing training achieved significantly higher gains in both understanding and speaking, while those who were exposed to traditional education, were found to only achieved significant gains in speaking.

Looking at the above explanation and research results, it is seen that teaching grammar is on the one hand unnecessary, but on the other hand, has very positive effects on the language learners, and each of the various reproaches and methods for teaching grammar offer some benefits. From this information, it is not easy to decide whether grammar should or should not be taught, or how grammar would be most effectively taught if it is to be taught at all. In such situations, it will be highly beneficial in pedagogical terms to turn to the learners, who are the main participants of learning, to determine their learning preferences and to take their personal learning styles. On the other hand, the lack of studies in regards to teaching Turkish as a foreign language to determine students' grammar learning tendencies draws attention as an important deficiency. Therefore, developing a measurement tool that can be used to determine students' grammar learning requirements will be an important contribution to the literature.

Purpose

This study is aimed at developing a scale that determines the tendencies of foreign students in regards to their Turkish grammar learning styles. In accordance with these purposes, this study aims to determine the factor structure of the draft scale and whether this structure is verified, to determine the content validity, its reliability, and to examine the distinctiveness of the items in the scale.

METHOD

Study Group

22 people participated in the research as an expert jury. 10 of the expert jury are lecturers who have studies teaching Turkish to foreigners, and 12 members are who are actively teach in this field. Participants in the exploratory factor analysis come from different Turkish levels, ages, and countries. 180 of these participants are men, 213 of them are women, with there being 393 participants in total. The exploratory factor analysis was done with participants between the age range of 18-41, the level of language distribution being between B1 to C2, and from 0-9 years being in Turkey. With a native distribution by region as follows, 42% of the participants are from Africa, 55% are from other Turkic Republics, and 3% are from Russia, Ukraine, Albania, or Bosnia. 106 of the 210 participants in the confirmatory factor analysis are men while 104 are women. Confirmatory factor analysis was done on
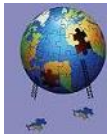
participants between the ages of 18-41, the level of distribution ranged between B1 to C2 and their presence in Turkey was between 0-9 years. Considering their distribution by region, 45% of the participants are from Africa, 54% from Turkic Republics, and 1% from Albania and Bosnia. All the participants are people who have received or are currently receiving training at TÖMER language school.

Data collection tool

There are many strategies, methods, and techniques for teaching and / learning grammar. These strategies, methods, and techniques can be collected under different learning styles. There are also many formatting models related to these strategies. This study is based on the structure created by Graus & Coppen (2016) during the development of the data collection tool. Accordingly, grammar teaching styles are structured in the following order. However, in this configuration, traditional grammar teaching is not structured separately. Graus & Coppen made a distinction in form-focused grammar teaching under the name of deformation, which refers to traditional grammar teaching. For this reason, the traditional grammar dimension was added instead of the formatting by making minor changes in the model.
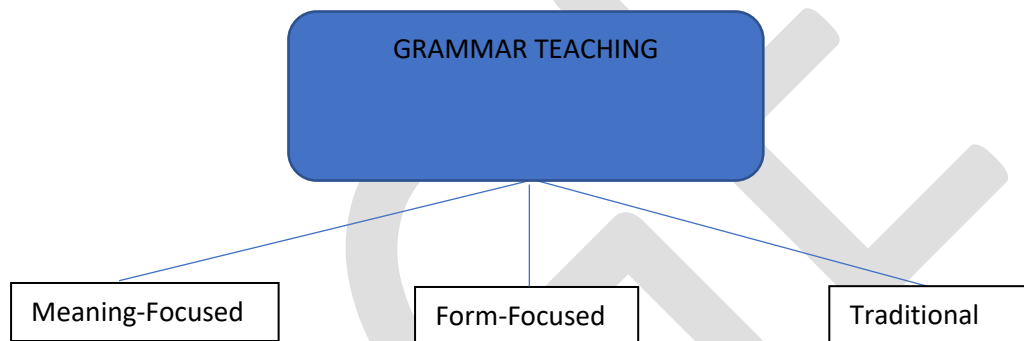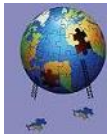

Based on this structure, statements were written, and an item pool was created in accordance with the characteristics of the teaching styles here. The created item pool consists of 47 items. These 47 statements were structured in a five-point Likert-type order, in the format of choosing from "I do not agree at all" – "I strongly agree." Participants were asked to mark the appropriate option indicating their degree of agreement by reading each item.

Data Collection Process

In this study, the data was collected from two separate participant groups. The first group was the expert jury that evaluated the content validity of the scale, and the other group was the student group who learned Turkish as a foreign language and who responded to the final form of the scale. The draft questions that were prepared to form the scale were sent to the expert group, and the draft scale form was prepared to allow experts to express their opinions as "appropriate", "should be corrected" or "not appropriate" regarding these questions. The final version of the scale was prepared according to the opinions and suggestions of the experts and sent to the student group as Google Form. While the items in the last version of the scale were arranged as Google Forms, the placement of the items were randomly changed. In this way, the items related to meaning-focused, form-focused and traditional grammar teaching were presented in random order.

Validity and Reliability

In the context of having a valid and reliable study, the opinions of twenty-two experts were sought after. Since there is more than one subscale in the scale included, a multidimensional measurement tool was needed, it is necessary to have an evaluation by experts as to whether the items are related to

the dimension in which they have been included (DeVellis, 2003). Experts were asked to evaluate whether the items were being used in the appropriate category and to indicate for which grammar level these items were appropriate. According to the opinions of the experts, deletions, corrections, and additions were made in order to make a more cohesive and in-depth study. Accordingly, the first version of the scale contained forty-seven items in total, while the final version contains thirty-nine. Some examples of the changes that were made are shown in Table 1, these changes were made at the advice of the experts. The content validity rate (CVR) and content validity index (CVI) data regarding the scope validity are presented in Table 2.

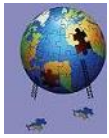**Table 1.** Sample view of changed scale items after the development and revision

First version	Second version	Last version
Fluency in communication is more important than accuracy.	Fluent speaking is more important than accuracy.	Fluent speaking is more important than grammatical accuracy.
Language teaching is not teaching grammar.	Language teaching is not teaching grammar rules.	Language teaching means to gain communication skills.
It is appropriate to have reading and listening activities for students to learn grammar rules.	It is a correct method to have reading and listening activities for students to discover grammar rules.	Reading and listening activities are an appropriate way for students to discover grammar rules.
Grammar teaching should be done without reading and listening activities.	Grammar teaching should be done independently from reading and listening activities.	Grammar teaching should be done separately from reading and listening activities.
The main purpose in teaching Turkish should be to learn grammar rules.	The main purpose in teaching Turkish is to learn grammar rules.	It was removed from the scale.
No item.	To give homework helps to learn grammar rules.	To do homework helps to learn grammar rules.

Data Analysis

Content validity is meant to ensure that the items which constitute the scale are sufficiently representative of the subject and the field of the behavior of the study, and generally expert opinions are consulted for this. Construct validity is related to whether the scale scores can only measure the structure to be measured in accordance with this construct. Factor analysis is one of the methods used to obtain evidence for construct validity (as cited in Koyuncu & Kılıç, 2019).

In the calculation of content validity rate (CVR) values in the context of content validity, the formula of CVO = required number/half of the number of experts minus one is used, and if the values are zero or negative, the item was removed from the scale. In addition, the recommended minimum CVR value for a scale is 0.42 if the number of experts is 20; 25 is 0.37. Also, items below these values should be removed from the scale. The content validity index of the scale (CVI) is calculated by taking the average of the CGO values of the remaining items. The value obtained must be greater than 0.67. If the scale is multidimensional, CVI calculation is made separately for each dimension (Yurdugül, 2005; Alpar, 2012: 415).

In this context, in order to gather information about the validity of the scale, a CVR and CVI calculation was performed according to the feedback from the experts. In the second stage, the Cronbach's Alpha index was used to evaluate the reliability of the sub-dimensions in meaning-focused grammar learning (MFGT), form-focused grammar learning (FFGT), and traditional grammar learning (TGT). This index indicates the degree of consistency or reliability within a scale (Brown, 2001).

It is stated by many researchers that one of the most basic statistics used to measure construct validity is through exploratory factor analysis (EFA) (Turgut, 1980; Urbina, 2004). This analysis aims to find new factors by bringing together a large number of interrelated variables and to reduce or simplify complex data (Çokluk, Şekercioğlu, & Büyüköztürk, 2010; Kline 2016). One of the most frequently used factor extraction methods in factor analysis is principal component analysis (PCA) based on the varimax rotation method (Peterson, 2000; Howard, 2016; Akbaş et al. 2019). PCA is a statistical technique used to determine whether groups of questions came together to form a component or structure (Gorsuch, 1983; Stevens, 2002). In this respect, our main strategy is to perform a PCA on the items of the scale in order to empirically show the view of the scale's validity regarding the structure, that is, to clarify whether the scale measured what it claims to measure. While performing PCA, a solution suitable for the theoretical framework was found, and component definition was used in SPSS.

Another important point to be taken into consideration for EFA is to test the adequacy of the sample size and whether the assumptions of normality are met. Kaiser-Meyer-Olkin (KMO) test was used for the sample size and the Bartlett test was used for the multivariate normality assumption of the data. In this context, the KMO value should be greater than 0.50 and the Bartlett test should be significant (Sipahi, Yurtkoru, Zinc, 2008; Tavşancıl, 2002; Tabachnick & Fidell, 2013). Both the Kaiser-Meyer-Olkin test and Bartlett's test of sphericity were used to examine the appropriateness of the data in order to perform exploratory factor analysis. In addition, mean, median and mode values were also examined in order to understand whether the data showed normal distribution.

It has been stated that (Büyüköztürk 2007; Tavşancıl, 2002; Stevens, 2002), a factor load can be reduced to 0.30, and the difference between the factor loads given by a variable to more than one factor should be minimum 0.1. Besides, Çokluk et al. (2010), if the sample size consists of at least 350 people, an item with a factor load of .30 is able to remain in the scale. Again, in the literature (Kline, 1994, Tabachnick & Fidell 2013), it is stated that a factor should consist of at least three items, a factor load may also be negatively signed, and a negative sign shows the inverse relationship with the variable in question. Based on this information, in this study, it was decided that the minimum factor load should be .30, the condition that the evaluation consisted of at least 3 items, and that items giving negative factor load were not included in the relevant factors.

After these processes, a confirmatory Factor Analysis was performed. In this context, firstly, the t values of the latent variables for the explanation of the observed variables were examined, then the standardized factor load values showing the correlations between each observed variable and the latent variable related to the items were examined, and finally, the harmony between the expected and observed covariance matrices, indexes have been checked.

One of the analyzes that should be performed for the reliability of the measurement tool is item analysis. One of the ways to do this is to look at the item-total correlation and to test the difference between the item average scores of the lower and upper 27% groups determined according to the total scores of the measuring tool with the unrelated t-test. The significant difference between the lower and upper group scores indicates the distinctiveness of the items. For item-total correlation, the value of .30 can be taken as the lower limit (Büyüköztürk, 2007; Erkuş, 2012). In this context, these two ways were used for item analysis.
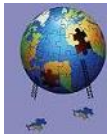
FINDINGS

Findings of Content Validity

As stated above, twenty-two experts reviewed the 47 scale items to assess the content validity and filled out the form that was sent to them. Later, the expert jury members made determinations on the
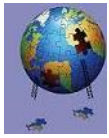
form regarding whether each item is related to its own category and whether it is "appropriate". The content validity rates, and content validity index were calculated according to these determinations. After this calculation, a total of 39 items with values between .72-1 were included in the scale. Since the values of the remaining eight items were between-.81 and -1, they were excluded from the scale. The results of the evaluations regarding the content validity are presented in Table 2. The practices aimed to determine the participation rates of the experts were also carried out to determine which level of the questions in the scale are appropriate. Accordingly, it was decided that the prepared questions were appropriate for B1 and advanced level students. The results of the evaluation made to determine the level of the questions are presented in Table 3.

Table 2. Content validity rate and index

Items	Appropriate	Should be corrected	Not Appropriate	CVR	Items	Appropriate	Should be corrected	Not Appropriate	CVR
1	20	2	-	,81	25	20	2	-	,81
2	20	2	-	,81	26	2	3	17	-,81
3	21	1	-	,90	27	21	1	-	,90
4	22	-	-	1	28	21	1	-	,90
5	22	-	-	1	29	21	1	-	,90
6	22	-	-	1	30	22	-	-	1
7	22	-	-	1	31	22	-	-	1
8	22	-	-	1	32	20	2	-	,81
9	22	-	-	1	33	21	1	-	,90
10	22	-	-	1	34	21	1	-	,90
11	19	3	-	,72	35	20	2	-	,81
12	20	2	-	,81	36	-	8	14	-1
13	2	3	17	-,81	37	22	-	-	1
14	21	1	-	,90	38	22	-	-	1
15	21	1	-	,90	39	-	6	16	-1
16	22	-	-	1	40	22	-	-	1
17	22	-	-	1	41	22	-	-	1
18	1	6	15	-,90	42	-	9	13	-1
19	22	-	-	1	43	1	9	12	-,90
20	22	-	-	1	44	19	3	-	,72
21	22	-	-	1	45	22	-	-	1
22	20	2	-	,81	46	19	3	-	,72
23	20	2	-	,81	47	1	6	15	-,90
24	20	2	-	,81	48	-	-	-	-
Total Expert Number:22									
First Factor CVI: ,92									
Second Factor CVI: ,90									
Third Factor CVI: ,90									

Table 3. Level Determination Rates

Items	A2 and above	B1 and above	CVR	Items	A2 and above	B1 and above	CVR	Items	A2 and above	B1 and above	CVR	Items	A2 and above	B1 and above	CVR	Items	A2 and above	B1 and above	CVR
1	1	21	,90	11	0	22	1	21	1	21	,90	31	0	22	1	41	1	21	,90
2	1	21	,90	12	0	22	1	22	0	22	1	32	0	22	1	42	0	22	1
3	1	21	,90	13	0	22	1	23	0	22	1	33	0	22	1	43	0	22	1
4	0	22	1	14	0	22	1	24	0	22	1	34	1	21	,90	44	0	22	1
5	0	22	1	15	0	22	1	25	0	22	1	35	0	22	1	45	0	22	1
6	0	22	1	16	0	22	1	26	0	22	1	36	0	22	1	46	0	22	1
7	1	21	,90	17	0	22	1	27	0	22	1	37	0	22	1	47	0	22	1
8	1	21	,90	18	0	22	1	28	1	21	,90	38	0	22	1	48	-	-	
9	0	22	1	19	0	22	1	29	0	22	1	39	0	22	1	49	-	-	
10	0	22	1	20	0	22	1	30	0	22	1	40	1	21	,90	50	-	-	

Findings of Exploratory Factor Analysis

A draft scale consisting of 39 items was developed in order to determine the Turkish grammar tendencies of students who learn Turkish as a foreign language. This scale was prepared based on three different approaches that explain grammar learning theoretically. These approaches are meaning-focused grammar learning (MFGL), form-focused grammar learning (FFGL), and traditional grammar learning (TGL). As a draft, exploratory factor analysis (EFA) was conducted to reveal the factor design of the measurement tool prepared according to these three categories.

Before EFA was done, it was checked as to whether there was any missing value. There is no missing value since the data was collected with Google Forms and participants have to mark each item to complete. Then, to determine the extreme values, the range of z values was determined as ± 3.00 (Çokluk, Şekercioğlu, & Büyüköztürk, 2010), and 4 pieces of data outside this range were removed from the scale. In this regard, there is no single outlier in the data. Then, Mahalonobis distances were calculated, and it was seen that 20 data gave multivariate outliers. The mean, median, and mode values were examined to look at the normality distribution of the remaining data. It was observed that all items were distributed normally. In total, 24 data were extracted and EFA was performed with 393 data. VIF and Tolerance values were examined to see if there was a multiple connection problem between the variables, and it was seen that the tolerance values were greater than .00 and the VIF values were less than 10. These values indicate that the multiple link assumptions were met (Çokluk, Şekercioğlu, & Büyüköztürk, 2010).

In the next step, Kaiser-Meyer-Olkin (KMO) test was applied to test whether the sample size was suitable for factorization and a numerical value of .787 was obtained. This numerical value indicates that the sample size is sufficient. However, the chi-square value obtained as a result of the application of Bartlett's test of sphericity, which was performed to understand the normality of the distribution of data, was found significant. This numerical value ($x^2120 = 1361,574$; $p < .01$) indicates that the data comes from multivariate normal distribution.
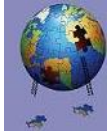
In order to reveal the factor pattern of the Grammar Learning Tendency Identification Scale (GLTIS), principal component analysis and varimax orthogonal rotation method were used. According to the results of the analysis repeated several times due to whether the items are related to the relevant dimension, the appearance of the overlap, and whether they meet the factor load values, it is determined that 5 items are overlapped, 9 items have a load value below the accepted value of .30, and it has been observed that 9 items are unrelated to the included dimension.
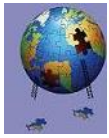
According to the last analysis results made with the remaining 16 items, it was seen that there were four components with an eigenvalue greater than 1. These components explain 53.908% of the total variance. When the total variance table of these components and their appearances on the slope-accumulation chart was examined, it was seen that the first three components contributed significantly, while the contribution was low in the other component. On the other hand, the fact that the measurement tool was prepared theoretically in three dimensions, it was decided to repeat the analysis by defining three factors.

Table 4. Expressed Total Variance

| Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,820	23,874	23,874	3,820	23,874	23,874	2,848	17,802	17,802
2	1,935	12,091	35,965	1,935	12,091	35,965	2,502	15,636	33,438
3	1,710	10,690	46,655	1,710	10,690	46,655	2,115	13,217	46,655
4	1,161	7,253	53,908						
5	,875	5,466	59,374						
6	,813	5,079	64,453						
7	,744	4,649	69,101						
8	,715	4,468	73,570						
9	,668	4,173	77,743						
10	,629	3,929	81,671						
11	,624	3,901	85,572						
12	,530	3,310	88,883						
13	,505	3,159	92,042						
14	,480	2,998	95,039						
15	,409	2,554	97,593						
16	,385	2,407	100,000						

Extraction Method: Principal Component Analysis.

As a result of the analysis performed by defining three factors, it was seen that the first factor contributed 23.874%, the second factor 12.091% and the third factor contributed 10.690% (See Table 4). The total contribution of these three factors to variance is 46,655%. Considering that the fourth component with an eigenvalue above 1 contributes 7.253% to the total variance and considering that it is more appropriate to have a three-component structure according to the theoretical framework, it was

decided that the scale should have three factors. This situation can be confirmed by examining the slope-plot graph.
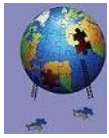
Graph 1. Slope-plot graph
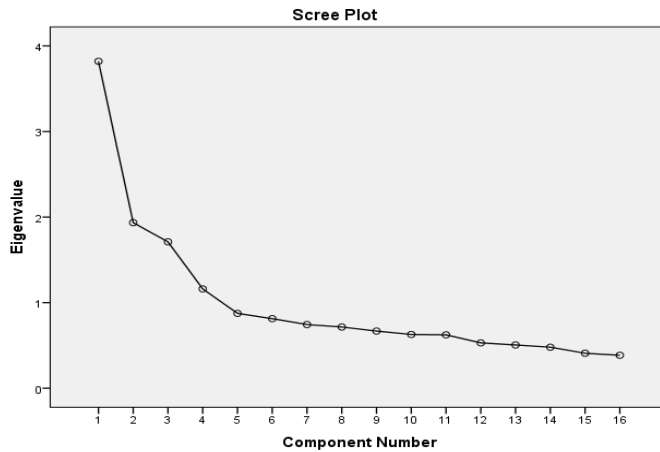
The factor pattern, factor load values of the items, and common factor variances, obtained as a result of the analysis by defining three factors with the remaining 16 items, are given in Table 5.

Table 5. Factor Pattern of the Determining Grammar Learning Tendency Scale

Items	Meaning-focused (MO)	Form-focused (FO)	Traditional (T)	Common Factor Variance (h^2)
1	,723			,545
2	,713			,513
3	,684			,536
4	,672			,504
5	,567			,451
6	,521			,317
8		,726		,367
11		,718		,530
10		,648		,421
13		,611		,547
14		,573		,401
7		,449		,409
15			,758	,577
17			,723	,514
16			,714	,531
18			,479	,300

As a result of the analysis, it was seen that the appearance of the resulting factor distribution is compatible with the theoretical framework. In this context, the load values of the sub-dimensions are .521-.723 for MO; .449-0.726 for FO; For T it ranges from .479 to .758. When the common factor

variances of the 16 items that make up the scale are examined, it is seen that the numerical values vary between .300 and .545.

Findings of Confirmatory Factor Analysis

In the examinations made on the confirmatory factor analysis (CFA) data, it was seen that there was no data outside the range of ± 3.00 z values. In this regard, there is no single outlier in the data. Then, Mahalanobis distances were calculated and it was seen that 10 data gave multivariate outliers. The mean, median, and mode values were examined to look at the normality distribution of the remaining data. It was observed that all items were distributed normally. CFA was carried out with 210 data by extracting 10 data in total. VIF and Tolerance values were examined to see if there was a multiple connection problem between the variables, and it was seen that the tolerance values were greater than .00 and the VIF values were less than 10. These values indicate that the multiple link assumptions are met (Çokluk, Şekercioğlu, & Büyüköztürk, 2010).

After this stage, the CFA application was started. Data in Form 1 and Form 2 were obtained as a result of CFA performed in order to verify the factor structure of the scale determined by EFA and to provide additional evidence for construct validity.
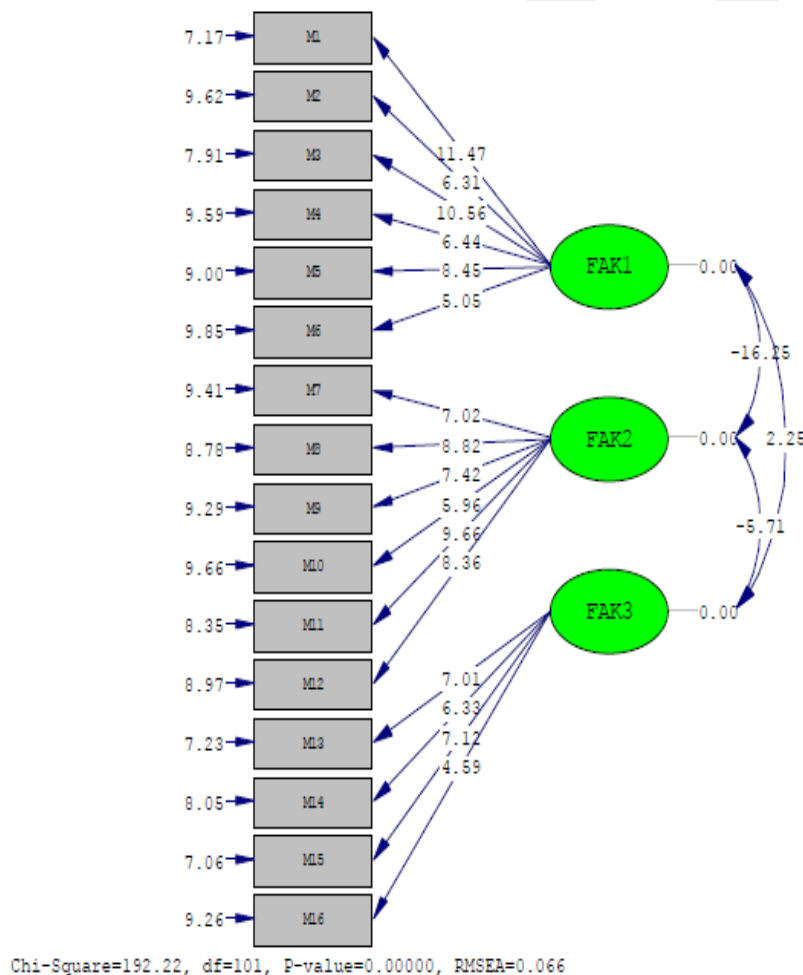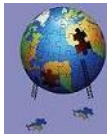

Figure 1. Path Diagram (t Values)

When Figure 1 is examined, it is seen that the t values that give information about the observed variables of the latent variables and their explanation states are significant for all items at the 0.01 level.
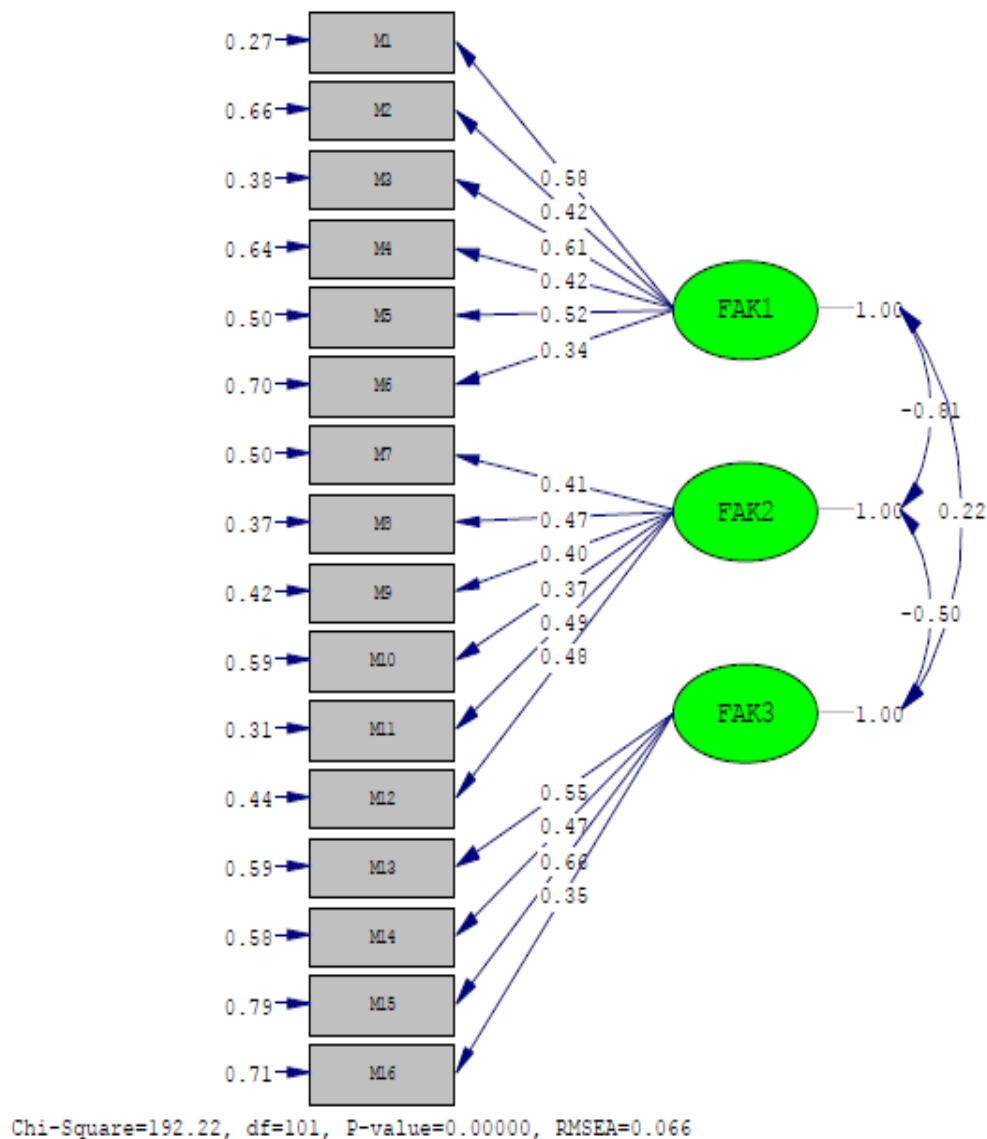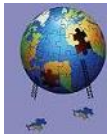

Figure 2. Path Diagram (factor loads)

When Figure 2 is examined, the standardized factor load values showing the correlations between each observed variable and the latent variable related to the items are 0.34-0.61 for the first dimension containing AODÖ items, 0.37-0.49 for the second dimension containing the ISS items, and the third containing GDS items. It was found that the size ranged from 0.35-0.66. The fit indices between expected and observed covariance matrices are examined in Table 6.

Table 6. Fit Index Rates of the Scale

Fit Index	χ^2/sd	RMSEA	SRMR	GFI	IFI	NNFI	CFI
Rate	1.90	0.066	0.075	0.90	0.93	0.92	0.95
Fit	Perfect Fit	Acceptable Fit	Acceptable Fit	Acceptable Fit	Acceptable Fit	Acceptable Fit	Acceptable Fit

When the fit indices presented in Table 6 are examined; The ratio χ^2/sd (192.22 / 101) is calculated as 1.90. If this ratio is ≤3, it indicates a perfect fit (Kline, 2016). RMSEA is calculated as 0.066 in the path diagram. The calculated value corresponds to the good fit criteria of RMSEA (≤0.07), and the SRMR value (≤0.10) to acceptable fit (Çokluk, Şekercioğlu, & Büyüköztürk, 2010). If GFI, IFI, NNFI, and CFI indexes are 0.90 and above, it corresponds to acceptable fit (Tabachnick & Fidell, 2013; Yılmaz & Çelik, 2009).
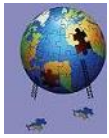
Findings of Reliability

In order to determine GLTIS reliability, an internal consistency determination method was used. Internal consistency coefficients calculated from the data obtained from the participants were found to be .75 for the MFGL subscale, .71 for the FFGL subscale, and .63 for the TGL. Considering that values of .70 and above are generally reliable, it is noteworthy that the MFGL and FFGL subscales are reliable. Also, although the internal consistency coefficient of the TGL subscale seems somewhat low, it seems possible to say that this subscale is also reliable based on the literature. For example, Özdamar (1999) states that if the internal consistency coefficient is between .60 and .80, the scale is highly reliable. Similarly, Sipahi, Yurtkoru and Zinko (2008) state that .60 and above is sufficient if the number of questions is low.

Findings of Item Analysis

In order to determine the distinctive features of 16 items included in GLTIS, the corrected item-total correlation was examined, and the two groups in the lower and upper 27% slice were compared with the independent sample t-test.

Table 7. Item Analysis Data Table

Subscale	Item No	Alpha without the item	Corrected Total-Item Correlation[1]	T (Lower%27-Upper%27)[2]
MFGL	1	,694	,573	-6,903***
	2	,696	,552	-7,362***
	3	,698	,551	-6,960***
	4	,730	,429	-5,386***
	5	,721	,467	-9,051***
	6	,745	,376	-7,979***
FFGL	7	,666	,485	-3,428***
	8	,646	,556	-2,321**
	9	,688	,410	-3,119**
	10	,692	,402	-5,546***
	11	,673	,463	-1,262
	12	,697	,384	-,172
TGL	13	,516	,484	-10,436***
	14	,522	,480	-9,337***
	15	,574	,408	-9,447***
	16	,642	,300	-7,707***
	n=393	n_1=n_2=106	***p<.001	**p<.01

When the findings in Table 7 are examined, item-total correlations of all items in the scale vary between .300 and .573. It is seen that the t values regarding the differences in item scores of the 27% lower and upper groups are significant (p <.01) except for the 11th and 12th items. This situation can be interpreted as, considering that the item-total correlations of the 11th and 12th items are high, all items are distinguished in terms of determining students' grammatical learning tendencies.

CONCLUSION and DISCCUSION

This measurement tool, which was developed to determine the grammatical learning tendencies of students who learn Turkish as a foreign language, was initially prepared with 47 questions and sent to experts. Content validity rates were calculated according to the answers from the experts. After this calculation, a total of 39 items with values between .72-1 remained on the scale. The values of the subtracted eight items are between -.81 and -1. The content validity index of the measuring tool was calculated separately for each dimension and found as .92 for the first factor; .90 for the second factor and .90 for the third factor. These values, as stated in the literature (Yurdugül, 2005; Alpar, 2012), provide important evidence regarding the content validity of the measuring tool. On the other hand, opinions of the same experts were obtained in order to determine the appropriate level of the items in the measurement tool. Accordingly, it was concluded that the questions prepared were suitable for B1 and advanced level students.

In the next step, exploratory factor analysis of the scale was conducted. Before this analysis, after the statistical processes performed, items that gave a single outlier and a multivariate outlier were removed, and there was no problem of multiple connections between variables. The conditions reported by Çokluk, Şekercioğlu, and Büyüköztürk (2010) seem to have been met. As a result of the Kaiser-Meyer-Olkin test applied, a value of .787 was obtained. This value indicates the adequacy of the sample size in line with the information presented in the literature (Tavşancıl, 2002; Sipahi, Yurtkoru & Zinc, 2008).

Principal component analysis and varimax vertical rotation method were used to reveal the factor design of the scale. As a result of these operations repeated several times, 5 items are interlaced; 9 items were excluded from the scale because they gave a load value below the accepted value of .30 and 9 items were not related to the included dimension. According to the last analysis results made with the remaining 16 items, it was seen that there are four components with an eigenvalue greater than 1. However, the Grammar Learning Tendency Identification Scale is expected to be three-dimensional in terms of theoretical framework (Graus & Coppen, 2016).

Therefore, the analysis was repeated by defining three factors. As a result of the analysis performed by defining three factors, 23.874% of the first factor, 12.091% of the second factor, and 10.690% of the third factor; It was seen that the total contribution of these three factors to variance was 46.655%. It is stated in the literature that this ratio is sufficient (Çokluk, Şekercioğlu, & Büyüköztürk, 2010). This situation shows that the scale has a three-factor structure. This structure was confirmed by the confirmatory factor analysis applied.

In order to decide on the reliability of the scale, its internal consistency was checked, and .75 for MFGL; The values of .71 for the FFGL and .63 for the TGL were obtained. These values show that the scale is reliable (Özdamar, 1999; Sipahi, Yurtkoru, & Zinc, 2008). Again, in order to determine the reliability of the scale, total item correlations of 16 items were examined. It has been observed that all items have a value above .30. This situation indicates that the items have distinctive features, as stated by Büyüköztürk (2007) and Erkuş (2012). Finally, the lower and upper 27% slices were compared, and it was concluded that the items were distinctive character.

This scale consists of 16 items; is a three-factor scale under the names of MFGL, FGL, and TGL, in accordance with the theoretical framework and verified by confirmatory factor analysis. The scale is valid and reliable according to the results of statistical procedures for validity and reliability. In this respect, it can be used to determine the tendency of students who learn Turkish as a foreign language in their grammar learning processes. A total score is not obtained from the scale. Scores for each sub-dimension should be calculated separately. The high scores obtained according to the sub-dimensions indicate that the students' tendency towards that learning style is high, and the low level is evaluated as low or not having a tendency towards that learning style.

References

Akbaş, U., Karabay, E., Yıldırım-Seheryeli, M., Ayaz, A. & Demir, Ö. O. (2019). Türkiye Ölçme Araçları Dizininde yer alan açımlayıcı faktör analizi çalışmalarının paralel analiz sonuçları ile karşılaştırılması. Kuramsal Eğitimbilim Dergisi [Journal of Theoretical Educational Science], 12(3), 1095-1123.

Alpar, R. (2012). Uygulamalı İstatistik ve Geçerlik-Güvenirlik. Detay, Ankara.

Brosh, H. (2017). Grammar in the Arabic Language Classroom: Perceptions and Preferences. *Al-ʿArabiyya: Journal of the American Association of Teachers of Arabic 50*, 25-52.

Brown, J.D., (2001). Using Surveys in Language Programs. Cambridge University Press, Cambridge.

Büyüköztürk, Ş. (2007). Sosyal bilimler için veri analizi el kitabı: İstatistik, araştırma deseni, SPSS uygulamaları ve yorum (7. baskı). Ankara: Pegem Akademi.

Carroll, S., Y. Roberge & M. Swain (1992). The role of feedback in adult second language acquisition: Error correction and morphological generalization. Applied Psycholinguistics 13, 173–189.

Çetinkaya, G. & Yolcusoy, Ö. (2020). Dilbilgisi Öğretimine Eğitimbilimsel Yaklaşımlar, (A. Pehlivan; İ.S. Aydın), *Dil Bilgisi Öğretimi* içinde (105-136), Ankara: Pegem Yayınları.

Çetinkaya, G. ve Ülper, H. (2015). Anlatım Bozukluğu Taşıyan Tümcelerin Kabuledilebilirliği ve Kavranabilirliği: Öğrenci Okurlar Üzerinden Karşılaştırmalı Bir İnceleme. Hasan Ali Yücel Eğitim Fakültesi Dergisi, 12, 23, 251-264.

Çokluk, Ö., Şekercioğlu, G. ve Büyüköztürk, Ş. (2010). Sosyal bilimler için çok değişkenli istatistik SPSS ve Lisrel uygulamaları. Ankara: Pegem Akademi.

DeVellis, R.F. (2003). *Scale Development: Theory and Applications.* Newbury Park: Sage Publications.

Doughty, C., & Williams, J. (1998). Issues and terminology. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 1–11). Cambridge: CUP

Ellis, R. (2001). Introduction: Investigating form-focused instruction. Language Learning, 51, 1– 46.

Ellis, R. (2002). Does form-focused instruction affect the acquisition of implicit knowledge? A review of the research. Studies in Second Language Acquisition 24, 223–236.

Ellis, R. (2006). Current issues in the teaching of grammar: An SLA perspective. *TESOL Quarterly*, 40(1), 83– 107.

Erkuş, A. (2012). Psikolojide ölçme ve ölçek geliştirme. Ankara: Pegem Akademi Yayınları.

Fotos, S. & R. Ellis (1991). Communicating about grammar: A task-based approach. TESOL Quarterly 25, 605–628.

Gorsuch, R.L., (1983). Factor Analysis, second ed. Lawrence Erlbaum, Hillsdale, NJ.

Graus, J., & Coppen, P.-A. (2016). Student teacher beliefs on grammar instruction. Language Teaching Research, 20(5), 571–599. doi:10.1177/1362168815603237

Harmer, J. (2001). The practice of English language teaching. London: Longman.

Howard, M. C. (2016). A review of exploratory factor analysis decisions and overview of current practices: what we are doing and how can we improve? International Journal of Human-Computer Interaction, 32(1), 51-62.

Kline, R. B. (2016). Principle and practice of structural equation modelling (4. bs.). New York, NY: The Guilford Press.

Kline, P. (1994). An easy guide to factor analysis. New York: Routledge.

Koyuncu, İ. & Kılıç A. F. (2019). Açımlayıcı ve Doğrulayıcı Faktör Analizlerinin Kullanımı: Bir Doküman İncelemesi. Eğitim ve Bilim, 44, (198), 361-388.

Krashen, S. (1981). Second language acquisition and second language learning. Oxford: Pergamon.

Lightbown, P. (1998). The importance of timing in focus on form. In C. Doughty & J. Williams (eds.), Focus on form in classroom second language acquisition. Cambridge: Cambridge University Press, 177–194.
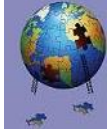
Özdamar, K. (1999). Paket Programlar ile İstatistik Veri Analizi I. Eskişehir: Kaan Kitapevi.

Pawlak, M. (2006). The place of form focused instruction in the foreign language classroom. Kalisz-Poznan´: Wydawnictwo WPA UAM.

Peterson, R. A. (2000). A meta-analysis of variance accounted for and factor loadings in exploratory factor analysis. Marketing Letters, 11(3), 261-275.

Schwartz, B. (1993). On explicit and negative data effecting and affecting competence and linguistic behavior. Studies in Second Language Acquisition, 15, 165–175.

Sezer, A. (1994). Anadili öğretiminde dilbilgisinin yeri. Uygulamalı Dilbilim Açısından Türkçenin Görünümü. Ankara: Dil Derneği Yayınları.

Sipahi, B., Yurtkoru, E. S. & Çinko, M. (2008). Sosyal Bilimlerde SPSS'le Veri Analizi, İstanbul: Beta Yayınları.

Stevens, J. P. (2002). Applied multivariate statistics for the social sciences (Fourth Edition). New Jersey: Lawrance Erlbaum Association.

Spada, N. & P. Lightbown (1993). Instruction and the development of questions in L2 classrooms. Studies in Second Language Acquisition 15, 205–224.

Spada, N. (1997). Form-focused instruction and second language acquisition: A review of classroom and laboratory research. Language Teaching 30, 73–87.

Spada, N. & Lightbown, P. (2008). Form-focused instruction: Isolated or integrated? TESOL Quarterly 42, 181–207.

Tabachnick, B. G. & Fidell, L. S. (2013). Using multivariate statistics (Sixth Edition). USA: Pearson Education Limited.

Tavşancıl, E. (2002). Tutumların Ölçülmesi ve SPSS ile Veri Analizi, Ankara: Nobel Yayınları.

Truscott, J. (1999). What's wrong with oral grammar correction. Canadian Modern Language Review/La Revue canadienne des langues vivantes, 55, 437– 456.

Turgut, F. (1980). Eğitimde ölçme ve değerlendirme. Ankara: Gül Yayınevi.

Urbina, S. (2004). Essentials of psychological testing. New Jersey: John Wiley ve Sons, Inc.

VanPatten, B. & Cadierno, T. (1993). Explicit instruction and input processing. Studies in Second Language Acquisition 15, 225–244.

Wind, S., Mansouri, B. & Jami, P., Y. (2019). Student Perceptions of Grammar Instruction in Iranian Secondary Education: Evaluation of an Instrument using Rasch Measurement Theory, Journal of Applıed Measurement, 20(1), 46-65.

Yılmaz, V. ve Çelik, H. E. (2009). LISREL ile yapısal eşitlik modellemesi-1. Ankara: PegemA.

Yurdugül, H. (2005). Ölçek geliştirme çalışmalarında kapsam geçerliği için kapsam geçerlik indekslerinin kullanılması, XIV. Ulusal Eğitim Bilimleri Kongresi, Pamukkale Üniversitesi Eğitim Fakültesi, 28–30 Eylül Denizli, 27.12.2020 tarihinde http://yunus.hacettepe.edu.tr/~yurdugul/3/indir/PamukkaleBildiri.pdf adresinden alınmıştır.