Development of the Writing Exam Anxiety Scale for Students Learning Turkish as a Foreign Language

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ABSTRACT

It is important to improve the literacy skills of students who learn Turkish as a foreign language. Especially the development of writing skills has a vital role in gaining literacy skills. Therefore, the aim of this study is to develop a scale that can measure the writing anxiety of students who learn Turkish as a foreign language. For this purpose, firstly the literature was reviewed. As a result of the review, a pool of 43 items was created. After examining the expert and student opinions, a trial scale with 41 items was generated and administered to the students. The participants consisted of the students studying at İnönü University in the spring semester of 2019 at B2 and C1 levels. SPSS 20 program was used to examine the validity and reliability of the scale, which was applied to 189 students on a voluntary basis. As a result of the tests, a scale consisting of 18 items and 3 factors (writing self-efficacy, cognitive and environmental factors) was created with the removal of items that reduce internal consistency and have co-loading. The overall reliability (alpha = 0.904) of the scale created as a result of the test was found to be very high. According to the alpha and explained variance values related to its reliability, it was concluded that the scale is a valid and reliable test to measure the writing anxiety of students who learn Turkish as a foreign language.

Key words: Turkish as a Foreign Language, Anxiety, Scale, Writing Exam

INTRODUCTION

Anxiety is defined in Advanced American English Longman (2007, p. 58) as "a feeling of wanting to do something that may happen or may have happened, so that you think about it all the time or is a feeling of wanting to do something very much, but being very worried that you will not succeed." According to Daly and Wilson (1983), writing anxiety, avoiding writing with the thought that the individual will be evaluated; MacIntyre and Gardner (1994) define it as the fear that occurs when individuals who do not feel competent in a foreign language will use them to express themselves.

Horwitz et al. (1986) state that the foreign language learning is a complex process involving many different elements including perceptions, beliefs, emotions and learning environment. This difficult and complex process that a student experiences while expressing oneself in a foreign language causes anxiety in students. Many studies have been conducted on second language acquisition and anxiety, especially examining four language skills. They have done research on listening anxiety in foreign language (Chang, 2010; Christenberry, 2003; Kim, 2000), reading anxiety (Hadidi & Bergazar 2015; Jafarigohar, 2012; Jalongo, Hirsh 2010), writing anxiety (Cheng, 2002; Cheng, 2004, Lin & Ho 2009),

speech anxiety (Juhana, 2012; Mak, 2011; Occhipinti 2009; Woodrow, 2006). Writing anxiety that occurs while students express him/herself in written form during the foreign language learning process has also become one of the topics emphasized and studied in the literature.

Writing education has an important place in foreign language learning and teaching process. The purpose of developing writing skills in foreign language teaching is to enable the individual to transmit their thoughts in writing in accordance with the structure and rules of the target language learned. Foreign language learners use the writing skill in education, official correspondence, meeting their daily needs and using social media. Writing process is influenced by the individual's self-efficacy beliefs, interests, values and reactions to his/her writing (Troia et al., 2012). The student is faced with some problems during the acquisition of writing skill. These problems experienced by students cause them to develop a negative attitude towards writing and consequently, writing anxiety in students.

The ability to express oneself in writing in a foreign language is a cognitive activity that covers more than one area, such as paying attention to word selection, knowing and applying grammar and spelling rules, and being able

to convey ones thoughts. Since this process involves more than one affective and cognitive domains, it causes anxiety in students. Tsui (1996) states that writing in a foreign language is product-oriented and more individual work is required compared to other skills. Tsui also states that when students express themselves in writing, they think that they are deprived of help and support, causing them anxiety.

Studies show that expressing oneself in a foreign language in writing is difficult for students. This sense of strain seen in students while writing causes anxiety towards this skill. Writing anxiety may arise in cases when writing assignment, in daily correspondence that should express oneself in writing, or in the face of a question that should be answered in the exam.

According to Horwitz et al. (1991), foreign language learning anxiety includes three different types of anxiety. These are "communication fear", "test/exam anxiety" and "fear of negative evaluation". Fear of communication is a type of shyness that manifests itself through the fear of communicating with people. The fear of being evaluated arises when the individual thinks that they will be evaluated negatively. Exam anxiety is defined as a type of performance anxiety arising from the fear of failure in academic assessment environments. Daly and Wilson (1983) stated that students' anxiety arises when writing is compulsory, such as writing during a writing assignment or an exam. The first scale prepared to measure writing anxiety was prepared by Daly and Miller in 1975. In this scale prepared, there are sub-factors for individuals' perceptions of their own writing anxiety, their tendency to like or dislike writing, and the evaluation of what is written by different groups. Another scale prepared for writing anxiety with 21 items in the five-point Likert type under six factors belongs to Stacks et al. (1983). Petzel and Wenzel (1993) developed a scale to measure writing anxiety in two stages.

There are scales prepared to measure the writing anxiety of students who learn Turkish as their native language. However, it is seen that the writing anxiety scale studies for students learning Turkish as a foreign language are not at a sufficient level. In the process of teaching Turkish as a foreign language, measurement means prepared in this field are needed in order to evaluate the teaching process more effectively. The aim of this study is to develop a measurement means for the anxiety of those who learn Turkish as a foreign language in the writing exams in line with the identified needs.

METHODOLOGY

This research is a scaling-based research designed to determine the construct validity and internal consistency of the Writing Exam Anxiety Scale for those who learn Turkish as a foreign language. In order to create a pool for the developed scale, the related literature was scanned and the scales previously prepared on this subject were examined. In addition, in the literature review conducted, no scale was found to measure the writing exam anxiety of learners of Turkish

as a foreign language. A scale draft of 43 items were created as a result of scanning the relevant literature to create an item pool. While preparing the items in the scale, attention was paid not to have more than one judgment / thought in the items and to express the items in a language that students in the study group could understand.

Before the preliminary testing of this scale, it was presented to the opinions of three lecturers of İnönü University who are experts in the field of Turkish Education and four lecturers working at İnönü TÖMER. In line with their views, the items in the scale were rearranged and the number was reduced to 41. Content validity of the scale was provided in line with the expert opinions received. The scale with the validity of the scope was transformed into a Likert type form and these items were arranged in 5-intervals ranging from "Always (5)" to "Never" (1).

As a result of the opinions and directions of the experts, the trial form of the "Writing Exam Anxiety Scale" was applied to 18 students who know Turkish at B2 level. At the end of the implementation, the items that students had difficulty understanding were determined and corrected. It was also found that the 41 items in this scale were answered within a period of approximately 30-35 minutes. With this application, it was revealed that the time factor does not affect internal reliability. The validity and reliability studies of the scale form prepared as a draft were carried out and the implementation phase was started.

Exploratory factor analysis was conducted to determine the construct validity of the scale. Then, the factor structure of the scale determined by exploratory factor analysis was tested with confirmatory factor analysis. The construct validity of the scale was determined with the analysis regarding the confirmatory factor analysis.

The Cronbach's Alpha internal consistency coefficient was used to calculate the reliability of the scale, which was finalized after factor analysis. In addition, the analysis of the scale was made using SPSS 20.0.

WORKING GROUP

The working group of the research was selected from the students at İnönü University TÖMER in the 2018-2019 academic year at B2 level and above. The descriptive characteristics of the students participating in the study are given below in a table.

According to Table 1, 114 (60.3%) of the student's gender are female and 75 (39.7%) are male. According to the

Table 1. Descriptive characteristics of the students participating in the research

Groups	Frequency (*f*)	Percentage (%)
Gender		
Female	114	60.3
Male	75	39.7
Nationality		
Syria	155	82.0
Other	34	18.0

nationality of the students, 155 (82.0%) are distributed as Syria and 34 (18.0%) as other.

FINDINGS

Validity and reliability studies were conducted for the 41-item trial scale in line with the opinions of experts and students. First of all, the explanatory factor analysis method was applied to reveal the construct validity of the scale. For this purpose, Barlett test was applied. As a result (p = 0.000 <0.05), it was found that there was a relationship between the variables included in the factor analysis. As a result of the test (KMO = 0.913> 0.60), it was seen that the sample size was sufficient for the factor analysis to be applied. In factor analysis application, varimax method was chosen and the structure of the relationship between factors was kept the same. As a result of factor analysis, variables were grouped under 3 factors with a total explained variance of 52.358%. Items that decreased internal consistency and had co-loading were removed from the scale. The overall

reliability of the scale was found to be very high as alpha = 0.904. According to the alpha found for its reliability and the variance value explained, it was understood that the writing anxiety scale was a valid and reliable tool. The factor structure of the scale was shown in Table 2.

The factor structure of the Writing Exam Anxiety Scale is given in Table 2. Then, the factor structure of the scale determined by exploratory factor analysis was tested by confirmatory factor analysis. The diagram for the confirmatory factor analysis for the construct validity of the scale was given below.

Figure 1 shows the diagram regarding the confirmatory factor analysis of the scale. The criteria for the confirmatory factor analysis of the scale are given below.

Confirmatory factor analysis index table (Table 3) was prepared according to some criteria described in different studies (Hooper et al., 2008; Schumacker & Lomax, 2010; Şimşek, 2007; Sümer, 2000; Tabachnick & Fidel, 2007; Waltz et al., 2010; Wang & Wang, 2012). According to Table 3, it was determined that the results of the analysis

Table 2. Factor structure of the writing exam anxiety scale

Factor	Item	y	Factor loading
F1 Writing Self-Efficacy Eigenvalue = 6.943 Explained Variance = 23.625 Alpha = 0.871	1. I don't know how to write, I get anxious in the writing exam.	14	0.667
	2. My anxiety level increases in writing exam because I make mistakes in the spellings	19	0.647
	3. I am concerned in the writing exam because I do not know the writing methods and techniques.	4	0.647
	4. I am concerned in the writing exam because I do not know the writing methods and techniques	19	0.647
	5. I worry most about the writing exam.	26	0.632
	6. My anxiety level increases in the writing exam because I have difficulty writing in Turkish.	8	0.626
	7. I'm worried that I will write impromptu in the exam.	7	0.579
	8. When I cannot remember the Turkish equivalent of the word I want to write, I get anxious in the writing exam.	18	0.559
	9. Because I don't know which punctuation mark to use, I get anxious in the writing exam.	35	0.555
	10. Because I don't know how to start writing, my anxiety increases in the writing exam.	13	0.540
	11. Before the writing exam, I get anxious that I will not understand the topic of writing.	6	0.524
F2 Cognitive Factors Eigenvalue = 1.325 Explained Variance = 15.291 Alpha = 0.723	12. When I can't find the main idea in the writing exam, I get anxious.	39	0.752
	13. When I don't understand the topic in the writing exam, I get anxious.	41	0.705
	14. I get anxious in the writing exam because I am not doing my writing assignments.	22	0.645
	15. If I cannot express anything that comes to my mind in my native language into Turkish, my anxiety level increases in the writing exam.	36	0.549
F3 Environmental Factors Eigenvalue = 1.156 Explained Variance = 13.442 Alpha = 0.722	16. The fact that I think that my other friends' writing is better than me increases my anxiety in the writing exam	30	0.813
	17. I get anxious in the writing exam because of the points I will get.	3	0.649
	18. I am concerned when I have to write on a topic that I am not interested in.	24	0.638
	19. My anxiety level increases when I think the question is difficult in the writing exam.	9	0.493

Total Variance = 52.358%; Overall Reliability (Alpha) = 0.904

and the fit statistics calculated by the confirmatory factor analysis were in an acceptable level with the previously determined factor structure of the scale. Standardized factor loadings, t-values and explanatory (R^2) values formed by the items were given below.

In Table 4 when the coefficients standardized according to are examined, it is determined that the factor loads are high, the standard error values are low, the t values are significant ($p <.001$), and the R^2 values are high. These results confirm the construct validity of the predetermined factor structure.

Table 3. Writing exam anxiety scale confirmatory factor analysis index values

Index	Normal Value	Acceptable Value	Reasons for Forgetting Words
χ2/sd	<2	<5	1.50
GFI	>0.95	>0.90	0.90
AGFI	>0.95	>0.90	0.90
CFI	>0.95	>0.90	0.94
RMSEA	<0.05	<0.08	0.05
RMR	<0.05	<0.08	0.08

Table 4. Scale factor loads and regression coefficients for items

Substances		Factors	B	Std. β	S.Error	t	p	R^2
Y6	<---	F1	1.000	0.638				0.431
Y13	<---	F1	1.121	0.668	0.143	7.820	p<.001	0.335
Y35	<---	F1	1.050	0.608	0.145	7.243	p<.001	0.586
Y18	<---	F1	0.984	0.659	0.127	7.733	p<.001	0.257
Y7	<---	F1	0.879	0.590	0.125	7.056	p<.001	0.477
Y8	<---	F1	1.007	0.609	0.139	7.250	p<.001	0.374
Y26	<---	F1	0.812	0.530	0.126	6.435	p<.001	0.386
Y19	<---	F1	1.035	0.656	0.134	7.706	p<.001	0.335
Y4	<---	F1	1.013	0.651	0.132	7.657	p<.001	0.544
Y14	<---	F1	1.220	0.737	0.144	8.458	p<.001	0.423
Y39	<---	F2	1.000	0.579				0.430
Y41	<---	F2	1.076	0.622	0.170	6.317	p<.001	0.281
Y22	<---	F2	1.146	0.612	0.183	6.250	p<.001	0.371
Y36	<---	F2	1.153	0.691	0.171	6.741	p<.001	0.348
Y30	<---	F3	1.000	0.507				0.434
Y3	<---	F3	1.367	0.765	0.218	6.269	p<.001	0.370
Y24	<---	F3	1.024	0.579	0.186	5.493	p<.001	0.446
Y9	<---	F3	1.145	0.657	0.195	5.877	p<.001	0.407

Figure 1. Diagram for confirmatory factor analysis
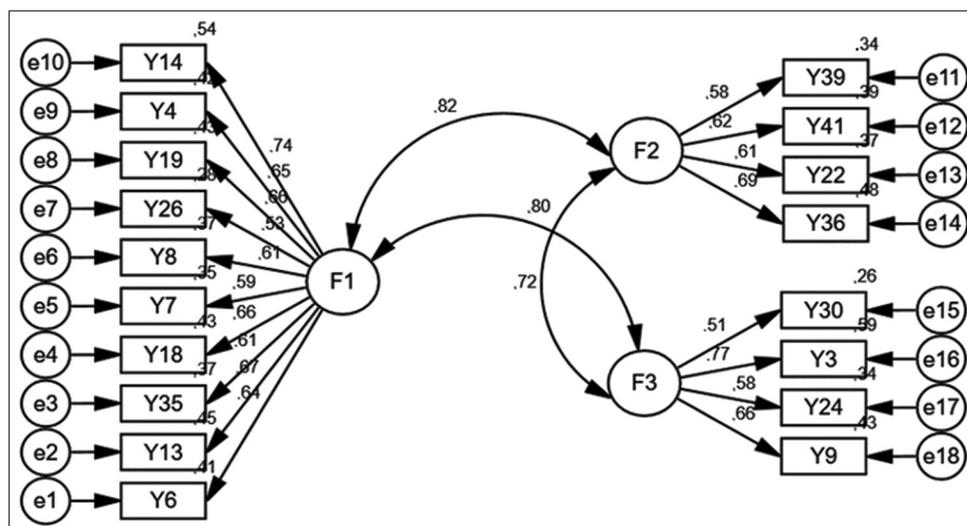
Table 5. The average of scale scores by lower 27%-upper 27% groups

Groups	Lower%27 (n=51)		Upper %27 (n=51)		*t*	*p*
	M	**Ss**	*M*	**Ss**		
F1	2.106	0.407	4.145	0.379	-26.194	0.000
F2	2.142	0.546	3.990	0.642	-15.657	0.000
F3	2.338	0.602	3.912	0.583	-13.416	0.000
Writing Anxiety General	2.166	0.294	4.059	0.357	-29.231	0.000

Table 6. Scale score averages

Groups	N	*M*	**Ss**	**Min.**	**Max.**
Writing Self-Efficacy	189	3.050	0.863	1.300	5.000
Cognitive Factors	189	3.019	0.900	1.000	5.000
Environmental Factors	189	3.044	0.860	1.000	5.000
Writing Anxiety General	189	3.041	0.762	1.440	5.000

The difference between the lower 27% group and the upper 27% group regarding the discrimination of the scale was examined. This situation is shown in the table below.

According to Table 5, scale scores differ significantly between the upper 27% and the lower 27% groups (*p* <.05). From these results, it was determined that the scale made sensitive measurements to distinguish the differences.

According to Table 6, the average of students "Writing Self-Efficacy" is medium 3.050 ± 0.863 (Min = 1.3; Max = 5), average "Cognitive Factors" is 3.019 ± 0.900 (Min = 1; Max = 5), the average of "Environmental Factors" is 3.044 ± 0.860 (Min = 1; Max = 5), the average of "writing exam anxiety" was determined as average 3.041 ± 0.762 (Min = 1.44; Max = 5).

In line with the findings, it can be said that the "Writing Exam Anxiety Scale" is a valid and reliable measurement tool. This study also contributes to literacy skills of students who learn Turkish as a foreign language.

DISCUSSION AND CONCLUSION

In this study, we developed a scale to measure the writing exam anxiety of students who learn Turkish as a foreign language. During the scale development process, while creating the item pool, the literature was reviewed. The draft scale was arranged by submitting the prepared scale to expert opinion. Exploratory and confirmatory factor analyses were conducted to ensure the construct validity of the scale. Karakuş Tayşi (2018) developed a scale to determine writing anxiety of students who learn Turkish as a foreign language. The scale was administered to 183 students learning Turkish at B1 and B2 levels. Factor analysis was conducted on the collected data and a three-factor scale was developed comprising 19 items, explaining 44.668% of the total variance. In the internal consistency study conducted to determine the reliability of the scale, the Cronbach's Alpha Internal Consistency coefficient of the scale was found to be very high as alpha = 0.904. Internal consistency coefficients of the scale were found to be alpha = 0.871 for the "Writing Self-Efficacy" dimension, alpha = 0.723 for the "Cognitive Factors" dimension, and alpha = 0.722 for the third dimension, "Environmental Factors". In this respect, it is possible to say that the items are consistent with each other and reflect the attitude they want to measure. According to the alpha found for its reliability and the variance value explained, the "Writing Exam Anxiety" scale was found to be a valid and reliable tool. Şen and Boylu (2017) developed a scale to determine writing anxiety for students who learn Turkish as a foreign language. Their scale had 13 items in two dimensions with Cronbach's alpha reliability coefficients of .84 and .70, respectively. The two dimensions explained 46.82% of the total variance. Aytan and Tunçel (2015) developed a writing anxiety scale for students who learned Turkish as a foreign language. Based on their results, the internal reliability of their scale was .86. Their four-factor instrument explained 67% of the total variance. The total variance explained by the 3 factors in our study was 52.36%. Our study also exhibited that the discriminating power of the scale and factors was significant (*p* <.05). According to these results, it was determined that the scale made sensitive measurements to distinguish the differences. Scale mean scores were determined as a result of the analysis made in the last form of the scale.

This scale can help Turkish as a foreign language teachers who wish to help their students. The instrument can help the teachers diagnose the levels and types of foreign language anxiety in their students. Then based on this information, they can help their students reduce the anxiety that these students feel in writing exams, which in turn, may enable the students to perform more successfully in their exam. Thus, teachers who teach Turkish as a foreign language will be able to measure the anxiety situations of students in the writing exam. Teachers can get help from this scale to make students less anxious and successful in writing exams. For students with high anxiety about writing exams, teachers can design alternative writing assessments instead of the traditional writing exams. In addition, students can see their own anxiety levels and seek help to reduce these anxiety. Therefore, this scale is an important contribution to Turkish as a foreign language literature for its ability to determine the students' writing anxiety.

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