Development of English Paragraph Writing Self-Efficacy Belief Scale*

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Abstract

In this study, it was aimed to develop a scale to determine English paragraph writing self-efficacy beliefs of university students. The scale was developed in three stages. In the first stage, literature review was conducted and expert opinions were taken. A trial form consisting of 45 items in Likert-type was prepared. Moreover, a pilot study was performed. In the second stage, the validity analyses were conducted on the data obtained from 428 university students. In the selection of the sample group to apply the scale, convenience sampling method was used. The construct validity of the developed scale was determined by the *Explanatory Factor Analysis (EFA).* The results supported a structure with two factors consisting of 33 items. The first factor was named as *"Writing Process and Rules"* and the second factor was named as *"Self-Regulation".* Additionally, *Confirmatory Factor Analysis (CFA)* was conducted to test whether the factors were correlated or uncorrelated. In addition, Pearson's coefficient of correlation analysis was used to find the relationship between all the factors of the English paragraph writing self-efficacy belief scale. In the last stage, reliability study was conducted. The Cronbach Alpha reliability coefficient for the first factor was found as .97, and .96 for the second factor. The total reliability coefficient for the scale was as .99. After all the analyses, the English paragraph writing self-efficacy belief scale consisting of 33 items and two factors was developed. The results showed that the scale is a valid and reliable measurement tool.

Keywords: Belief, English, Scale Development, Self-Efficacy, Writing

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INTRODUCTION

In the process of teaching English as a foreign language, it is aimed that English learners acquire four language skills, namely listening, speaking, reading and writing, and they should have sufficient knowledge in grammar. Although all skills are important in this process, writing skill is seen as the most complex skill (Ellis, 2003) since it develops later than the other language skills (Kucer, 2005). However, this does not mean that this skill is less important. On the contrary, writing is an important skill that enables individuals to communicate with each other in various ways (Huy, 2015). Compared to other skills, writing skill has a unique importance in foreign language teaching. Developing writing skill improves language learning skills and thinking skills; strengthens logical reasoning; allowing individuals to write meaningful statements, lines and paragraphs. It also includes the expression of thoughts (Gautam & Kumar, 2020). Moreover, writing skill is considered as a secondary skill that supports listening and reading skill practices and improves speaking skill (McNiff, 2014). As can be seen, development of English writing skill allows the development of other language skills and thus enables students to express themselves better.

Writing skill is not just writing words on a piece of paper; on the contrary, it is an effective communication tool that enables complex ideas to be conveyed using the simplest words (RahmtAllah, 2020). For students to develop their writing skills, other language skills must be developed at a certain level. For example, it is expected that various rules such as grammar, spelling, and punctuation marks should be applied together for the act of writing (Defazio et al., 2012). In this process, learners first combine their ideas and thoughts. Then they organize them into sentences and transform the sentences into a coherent text. In this mental writing process, sub-skills such as drafting, editing, reviewing and rearranging are applied (Afrin, 2014). In addition, writing process can be effective when students have knowledge about the writing process and the subject of writing, have the ability to draft a text at a certain level, and be willing to write (Graham & Perin, 2007; Kellogg & Raulerson, 2007). Moreover, in obtaining a good writing product, learners are expected to use grammatically correct structures and regularly transform these structures into paragraphs or compositions (Yulianti, 2014). Learners should also be competent in forming the main idea, supporting their views, summarizing the views on a particular topic, and making good connections between sentences (Suastra & Menggo, 2020). Additionally, the writing product should include an arrangement that includes the introduction, development and conclusion sections (Javadi-Safa, 2018). As seen, writing skill includes many sub-skills. In order for students to develop their English writing skills and to produce effective writing products, they need to have a certain level of knowledge about other language skills and writing process.

Development of writing skill provides many opportunities for students. Although developing writing skill is a challenging process, it helps students to increase their academic success, to improve their vocabulary, and to develop other language skills such as reading, listening and speaking (Javed et al., 2013). In addition, writing skill offers learners opportunities to express themselves by improving their communication skills, thinking skills, and their ability to make logical and persuasive arguments (Klimova, 2013). On the other hand, students' achievement at both academic and professional levels depends on the development of their writing skills (Durga & Rao, 2018). In the school setting, the act of writing is a skill in which various strategies (e.g. planning, evaluating and reviewing the text) are used to achieve various goals, such as writing a report or providing an opinion. In addition, the act of writing means expanding and deepening the student's knowledge (Sperling & Freedman, 2001).

When the literature is examined, it is seen that various studies have been conducted and teaching models have been developed to explain writing skill and the writing process. However, in the earlier research on writing, affective factors such as motivation, attitudes, feelings or social factors were neglected. Instead, emphasis was on skills and processes of writing (Kathpalia & Heah, 2011). Among the models, the best known and most universally applied in process-oriented classrooms was developed by Flower and Hayes (1980). They developed the cognitive writing process theory in order to explain the cognitive processes in the writing process in detail. Hayes (1996) rearranged the writing teaching model within the framework of the constructivist approach. In this new model, there was

greater emphasis in the role of working memory in writing, visual-spatial dimension was added, motivation and affect were integrated with the cognitive processes, and the cognitive processes were reorganized with greater emphasis on text interpretation processes in writing (Eryaman, 2008). Therefore, in this model, "problem solving" and "motivation" processes were added to the mental process (Hayes, 1996). As a result, affective aspects of writing as well as the linguistic and cognitive aspects have gained importance.

Writing is an active and rigorous productive skill requiring both a certain amount of linguistic knowledge and thinking strategies (Pratama et al., 2018). The purpose of teaching writing is to encourage students to communicate effectively through writing. However, it is seen that some learners are more reluctant to engage in writing activities (Bonyadi, 2014). This reluctance can be attributed to students' perceptions and attitudes, which may cause them to be less interested in writing. In this case, students may conclude that they cannot make progress in their writing classes (Popham, 2005). Writing skill is also considered as difficult to master since affective factors such as attitude, motivation and self-efficacy are effective in the process of acquiring this skill (Wu & Wu, 2008). Similarly, Kathpalia and Heah (2011) stated that affective dimension is self-oriented (e.g. like/dislike, enjoyment, satisfaction, surprise, challenge, confidence etc.), task-oriented (e.g. easy/difficult) and tutor oriented (e.g. appreciation, praise etc.) in relation to writing courses. For this reason, in the studies conducted in the last century, affective factors as well as cognitive factors affecting writing skills have been examined (Zimmerman & Reisemberg, 1997; Boscolo & Gelati, 2007).

Among the factors affecting English writing skill, self-efficacy variable has an important role (Schunk & DiBenedetto, 2016; Sabti et al., 2019). In various studies (Mills et al. 2007; Hsieh & Schallert, 2008; Tılfarlıoğlu & Çiftçi, 2011), it has also been pointed out that self-efficacy belief is the most important factor determining foreign language learning performance (Magogwe & Oliver, 2007). The concept of self-efficacy emphasized in Bandura's Social Cognitive Theory is defined as *"an individual's self-judgment about his/her capacity to organize the activities necessary to show a certain performance and to do it successfully"* (Bandura, 1991). Self-efficacy is the beliefs of individuals in using their skills effectively to perform actions (Pajares, 2002). When acquiring a new skill, self-efficacy belief is considered to be more effective than other factors (Graham & Weiner, 1996), which enables learners to set goals for learning a language. It is also stated that self-efficacy belief increases student success in foreign language learning (Raoofi et al., 2012). Therefore, students' self-efficacy beliefs should be at high level for being successful in the English learning process and reaching the specified instructional goals.

Writing self-efficacy refers to students' belief in their ability to successfully complete English writing tasks. Such tasks include writing compositions, using punctuation marks correctly, and creating grammatically correct writing examples (Bandura, 1994). A strong sense of writing self-efficacy expresses a strong sense of confidence for a writing task. Therefore, students' self-confidence in subjects such as the use of grammar, mechanical writing skills, and punctuation should be examined in determining their beliefs about writing skill (Shell et al., 1989).Writing self-efficacy belief is also directly related to writing anxiety, note-taking anxiety and expected learning outcomes (Pajares, 2003) and is an important predictor of writing achievements regarding different writing tasks (Pajares & Johnson, 1994; McCarthy et al.,1985). This belief directly affects individuals' way of thinking, feeling, behavior, self-confidence, perception towards writing, and their decision to avoid or fulfill a task assigned to them. When learners have high level of self-confidence and belief in doing the writing task given to them, they will make more effort and try to complete the given task (Hetthong & Teo, 2013). Similarly, Chea and Shumow (2017) are of the opinion that English writing self-efficacy beliefs and goal orientation are directly related and students' writing self-efficacy beliefs, and these factors affect their ability to set goals in writing. Therefore, it is seen that self-efficacy is a determinant of learners' writing performance.

In assessing the self-efficacy beliefs of the students, scales are widely used. Bandura (2006) has provided a clear and valuable guideline for researchers related to how self-efficacy beliefs should be operationalized and measured. Although there have been various writing self-efficacy scales to

measure writing self-efficacy of students (Shell et al., 1989; Zimmerman & Kitsantas, 2002; Erkan & Saban, 2011; Yanar & Bümen, 2012; Bruning et al., 2013; Setyowati, 2016; Teng et al., 2018), it is seen that these scales are developed to determine the self-efficacy beliefs of students in terms of essay writing. In addition, the existing scales are more appropriate to assess the writing self-efficacy beliefs of the students at higher English levels levels such as intermediate and upper intermediate. Therefore, it can be said that there is a lack of scales used to measure the paragraph writing self-efficacy beliefs of students and aimed at measuring the writing products of the students at lower English levels such as beginning and elementary levels.

Paragraph is the basic unit of academic writing in English. All other types of academic writing such as essays, reports, research papers, compositions are based on paragraphs. Therefore, students who want to be successful in academic writing process, especially at college and university, should learn how to write a well-designed paragraph (Boardman & Frydenberg, 2008). Similarly, when students master paragraph writing, they can easily write essays. On the contrary, it becomes very difficult for students who do not have the practical knowledge on paragraph writing to write a cover letter, an academic essay, thesis or dissertation (Wali & Madani, 2020). It is also stated that one of the major issues in the writing is organization of ideas in a paragraph to convey the desired sense (Siddiqui, 2020). As can be understood, paragraph writing is a precondition of writing a well-designed essay, research paper and even thesis studies. Therefore, paragraph writing skill of the students should be improved especially in lower levels and therefore their writing skills at higher competence levels can be enhanced. Based on this, in this study, a valid and reliable measurement tool that will help to measure the English paragraph writing self-efficacy beliefs of university students who study at lower grade levels is aimed to be developed.

METHODOLOGY

In this study, general survey model was employed to develop a scale that can be used to determine the English paragraph writing self-efficacy beliefs of university students.

Sample of the Study

In this study, EFA and CFA studies were carried out on the same group. The sample of the study consisted of 428 university students. Among these students, 61.2% were female and 38.8% were male. In addition, 35.7% of the students reported that they had received training/course on writing in English before, while 64.3% did not take any training/course.

There are various opinions in the literature regarding the minimum number of participants that should be reached for the results obtained in the scale development process to be more meaningful and reliable. While Kline (2011) stated that the number of samples should be at least 100, Hutcheson and Sofroniou (1999) stated that the number of samples should be between at least 150 and 300. In line with these explanations, it was deemed sufficient to reach 428 people, taking into account the number of items in the study. While determining the scale development group, convenience sampling method was used based on the volunteering basis (Yıldırım & Şimşek, 2011). Within the scope of this study, students in the target group were studied. Therefore, the scales were applied to students who took English preparatory class education at various universities in Turkey.

Procedure

Two approaches, deductive and inductive, are used in scale development studies. The deductive approach focuses on the conceptualization of theory and previously established structure. This method is very useful when the structure under consideration is known and this structure is sufficient to form the initial item pool. On the other hand, the inductive approach is used when there is uncertainty in the definition and dimensioning of the structure under consideration (Tay & Jebb, 2017). Based on this, in this scale development study, the deductive approach was used since there was no uncertainty about the structure and dimensioning of the concept of self-efficacy belief in

writing in English. The scale was developed in three stages. In the first stage, the generation of the item pool and the content validity were conducted. In the second stage, EFA and CFA were conducted. In the third stage, reliability analyses were conducted.

Item Pool Generation

In the first stage, the literature review on self-efficacy concept and the related studies were examined. In line with this information, various national and international articles and thesis studies on the self-efficacy, self-efficacy belief and self-efficacy belief in English writing, were examined and a detailed literature review was made on the subject (McCarthy et al., 1985; Shell et al., 1989; Zimmerman & Bandura, 1994; Huang & Chang, 1996; Zimmerman, 2000; Zimmerman & Kitsantas, 2007; Pajares, 2003; Bandura, 2006; Tılfarlıoğlu & Cinkara, 2009; Zheng et al., 2009; Erkan & Saban, 2011; Yanar & Bümen, 2012; Bruing et al., 2013; Büyükikiz et al., 2013; Erkan, 2013; Honeck, 2013; Ho, 2016; Holmes, 2016; Setyowati, 2016; Chea & Shumow, 2017; Khosravi et al., 2017; Teng et al., 2018). In this way, a general framework was formed about the belief in English writing self-efficacy.

In scale development process, specifying the number of possible components or dimensions that make up the structure is also important. The dimensionality of a structure can best be understood whether it consists of a single variable (one-dimensional) or a combination of a number of different sub-components (multidimensional) (Tay & Jebb, 2017). As a result, in this study, it was examined how the dimensions of the English paragraph writing self-efficacy belief scale were made as a result of the literature review. It was seen that self-regulation, idea generation, punctuation and spelling issues are given importance in writing self-efficacy scales.

Bandura (2006) emphasized that in scale development studies for self-efficacy beliefs, items related to what is thought should be included. Similarly, DeVellis (2003) indicated that in scale development process, "what is intended to be measured" should be clearly defined. Therefore, the theoretical structure of the variable to be measured and related variables should be revealed in detail. Based on this, in this study the items related to English paragraph writing were included. In line with the information presented in the literature, an item pool consisting of 45 items was created to measure the English paragraph writing self-efficacy beliefs of university students. Each item was written based on the literature. Likert scaling is widely used to assess the beliefs, options and attitudes. Therefore, the present scale is designed as 5-point Likert format, as "completely disagree=1, disagree=2, somewhat agree=3, agree=4 and completely agree=5".

Content Validity

After the item pool is created, the items need to be reviewed. For this, feedback from experts, pre-test application, cognitive interviews and pilot tests can be carried out. In this way, items are evaluated in terms of written language, item validity, scale design and model structure (Carpenter, 2018). Based on this, after the item pool was created, expert opinion was taken. For this purpose, two experts from the Curriculum and Instruction department, two experts from the Department of Foreign Language Education, an expert from School of Foreign Languages, and an English teacher were consulted. In addition, the opinions of one expert from the Turkish Language Education Department were obtained on the items in terms of language accuracy. In addition, the draft form was applied to 15 students studying at A2 level at Yalova University School of Foreign Languages and a pilot study was conducted. Necessary adjustments were made in line with the opinions of the experts and the pilot application, and the number of items was reduced to 36.

Data Analysis

In the study, firstly EFA and then CFA were performed. However, before factor analysis was performed on the collected data, it was checked whether there was any missing data in the obtained data set, and it was seen that there was no missing data in the data set. Then, it was examined whether

the data showed normal distribution and whether there were extreme values. For this purpose, skewness and kurtosis coefficients were examined. In the study, it was seen that the data showed a normal distribution and there were no extreme values.

After the required checks were made regarding the assumptions, EFA analysis was conducted to determine the construct validity of the scale. For this purpose, IBM–SPSS program was used. "Principal Component Analysis", which is a most common technique for factor analysis, was applied. "Kaiser-Meyer-Olkin (KMO)" and "Bartlett's Sphericity" tests were applied and the appropriateness of the obtained data for factor analysis was determined. The KMO coefficient ranges from 0 to 1, and 0.50 is considered as the lowest acceptable limit. On the other hand, the Bartlett less than .05 indicates that there is a sufficient relationship between the variables for factor analysis (Durmuş et al., 2011).

EFA was applied to characterize the structural validity. Factor analysis is used to identify items that measure the same construct and to identify items that do not measure the same item. There are some criteria to be taken as a basis in determining whether the factors measure the same structure. Firstly, factor loads should be examined. Items with factor loading values below .40 should be excluded from the analysis (DeVilles, 2003). Additionally, items should have a high value under a single factor. An item can only measure one thing. Therefore, factors with close values under more than one factor should be excluded from the analysis. The difference between factor loadings should be lower than .10 (Büyüköztürk, 2010).

The item-total test correlations were analyzed to determine the reliability of the items in the scale. It was examined whether there was any difference between the lower 27% and upper 27% groups, which were formed according to the total mean scores. For this purpose, independent groups t-test analysis was performed. Correlation analysis was used to find the relationship between all the factors of the English paragraph writing self-efficacy belief scale.

The model was also tested with CFA. CFA is used to verify the correlation between observed variables and latent variables. It also shows how items are associated with each other (Joreskog & Sorbom, 1993). For this, Jamovi (The Jamovi Project, 2019) software was used. The fit indexes of $\chi^{2/}$df, RMSEA, CFI, RMR, NNFI, and TLI were used in the study for the model tested in CFA.

After conducting the validity studies, the reliability of the items in the scale were analyzed. For this purpose, the Cronbach's Alpha values were interpreted. An alpha value greater than .70 indicates the internal consistency (Büyüköztürk, 2010).

FINDINGS

Findings Related to the Validity of the Scale

Exploratory Factor Analysis

Kaiser-Meyer-Olkin (KMO) and Bartlett's Sphericity tests were applied to determine the appropriateness of the obtained data for factor analysis. The obtained results are presented in Table 1.

Table 1. KMO and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.977
Bartlett's Test of Sphericity	Approx. Chi-Square	16549.479
	df	630
	Sig.	.00

In the study, KMO value for the 36-item scale was calculated as .97. Additionally, the Chi-square test statistic obtained from the Bartlett's test were found to be significant, $\chi 2 = 16549{,}479$; df =

630, p <0.05. As a result, it was concluded that the obtained values meet the basic hypotheses at a good level and the factor analysis could be conducted.

In the next step, EFA was conducted. After the analysis, the 36-item scale was reduced to 33 items. 3 items were removed from the draft scale because their factor loads were below 0.40 or because they had high values under more than one factor. In addition, the items with the Eigen value greater than 1.00 were included in the scale. It was observed that these items were grouped under 2 factors. The explanatory total variance analysis showed that the items of the scale explain the 70.246% of the total variance.

Table 2. Total variance explained table of English paragraph writing self-efficacy belief scale

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	20.731	62.821	62.821	20.731	62.821	62.821	12.489	37.846	37.846
2	2.450	7.425	70.246	2.450	7.425	70.246	10.692	32.401	70.246

Factors with Eigen-values of 1 and above 1 are considered important. As a result of the varimax rotation, it was determined that these factors explained 70.246% of the total variance. The first factor explains 37.846% of the total variance of the scale, and the second factor explains 32.401%.

The scree plot drawn according to the eigenvalues of the factors was also examined to determine the number of factors. The obtained Scree Plot graph is given in Figure 1.

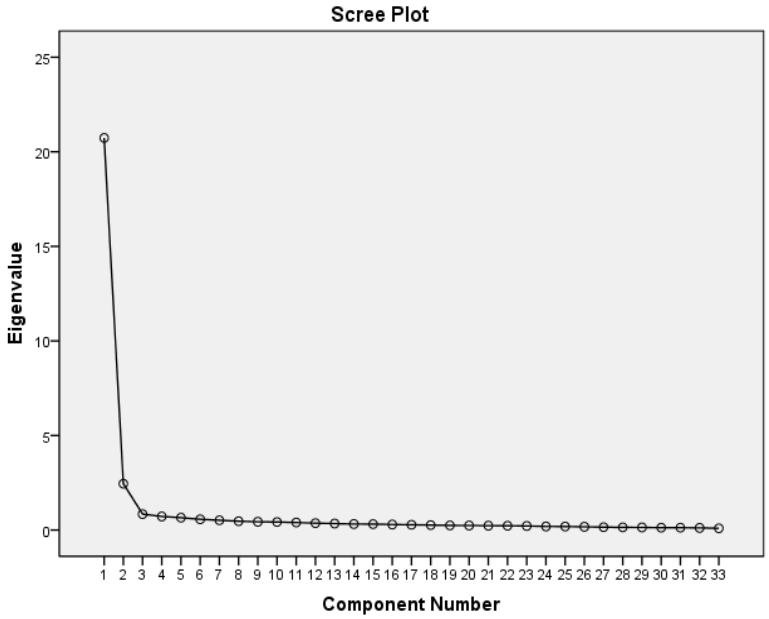

Figure 1. Scree plot as a result of EFA

In the next step, the rotated components matrix was conducted and the results are obtained as follows:

Table 3 . Factor loadings of English paragraph writing self-efficacy scale

Items	Factor 1	Factor 2
I5	.847	
I7	.821	
I6	.819	
I11	.805	
I12	.804	
I3	.799	
I2	.792	
I14	.789	
I4	.776	
I16	.754	
I19	.750	
I8	.747	
I1	.740	
I15	.732	
I13	.703	
I9	.703	
I10	.685	
I28		.802
I30		.792
I27		.774
I35		.757
I24		.754
I26		.752
I31		.744
I23		.723
I25		.712
I34		.712
I29		.696
I32		.692
I22		.662
I33		.650
I21		.626
I20		.625
Eigen Value	37.846%	32.401%

As seen in Table 3, a scale consisting of two factors were obtained. The first factor consists of 17 factors and the second factor consists of 16 factors. The factor loads of the items in the first factor vary between .847 and .685 while the factor loads vary between .802 and .625 in the second factor. The items in the first factor include statements about the writing process and rules. The items in the second factor include statements about self-regulation in the writing process. Based on this, the first factor was named as "writing process and rules" and the second factor was named as "self-regulation". The first factor consists of the items related to process and rules applied in paragraph writing. Some of the items in this factor are as follows: *"I can write paragraphs in English that fit the main idea." "I can write supportive sentences when writing paragraphs in English." "I can use spelling rules correctly when writing a paragraph in English."* On the other hand, in the second factor, there are items related to writing process such as planning, self-assessment, self-check, etc. Some of the items in this factor are as follows: "*Before I start writing, I can do research on the subject I will write." "I can check my English writing and find and correct my mistakes" "I can evaluate whether my writing is good or bad."*

Table 4 presents the comparisons of t-values of the lower and upper 27% groups of the scale, "item-total correlations" and "item-remainder correlation" values.

Table 4: Item Analysis Results

Items	Item-Total Correlation	Item-Remainder Correlation	t	P
I 1	.819	.806	7.41	.00
I 2	.832	.820	7.60	.00
I 3	.796	.781	7.90	.00
I 4	.764	.748	6.22	.00
I 5	.821	.808	8.76	.00
I 6	.811	.796	9.03	.00
I 7	.859	.848	9.98	.00
I 8	.853	.841	8.02	.00
I 9	.816	.803	7.65	.00
I 10	.791	.776	8.11	.00
I 11	.841	.830	9.96	.00
I 12	.783	.768	10.08	.00
I 13	.845	.834	7.60	.00
I 14	.804	.789	7.00	.00
I 15	.798	.784	6.09	.00
I 16	.808	.794	7.38	.00
I 19	.829	.817	8.62	.00
I 20	.768	.751	7.36	.00
I 21	.782	.767	6.01	.00
I 22	.801	.787	6.50	.00
I 23	.837	.826	6.86	.00
I 24	.791	.777	5.06	.00
I 25	.670	.648	3.14	.00
I 26	.787	.771	3.94	.00
I 27	.805	.792	5.22	.00
I 28	.682	.662	3.17	.00
I 29	.694	.675	5.63	.00
I 30	.730	.711	3.69	.00
I 31	.803	.790	7.48	.00
I 32	.797	.784	6.24	.00
I 33	.809	.796	6.83	.00
I 34	.718	.701	3.96	.00
I 35	.762	.746	6.04	.00

The factor analysis results showed that the item-total correlations of the remaining items in the scale were between 0.859 and 0.670. It was also found there was a significant difference between the lower and the upper 27% groups ($p<.01$). This significant difference is considered as an indicator of the internal consistency of the test (Büyüköztürk, 2010).

Finally, Pearson's coefficient of correlation analysis was conducted to find the relationship between all the factors of the English writing self-efficacy belief scale and the results are presented in Table 5.

Table 5. Inter correlations for the Scale Factors

Factors	*1*	*2*	*3*
1.Writing process and rules	1	.80**	.95**
2.Self-regulation		1	.94**
3.Total score			1

n =428 **p*<.05, ** *p*<.01

Table 5 shows that there is a significant, high level and positive relationship between the total mean score and the factors of the English writing self-efficacy belief scale. A correlation between 0.70-1.00 indicates a high relationship, and a range between 0.00-0.29 indicates a weak relationship (Büyüköztürk, 2010).

Confirmatory Factor Analysis

CFA was performed to examine the construct validity of the English paragraph writing self-efficacy scale. For this, Jamovi (The Jamovi Project, 2019) software was used. As a result of the analysis output, factor load estimations, standardized factor load estimation values, standard errors, critical ratio value and significance values are shown in Table 6.

Table 6. Factor Load Values of English Paragraph Writing Self-Efficacy Belief Scale

Factor	Item	Standard Estimation	Standard Error	Estimation	Z	P
Factor 1	I1	.842	.043	.839	21.6	< .001
	I2	.867	.044	1.001	22.6	< .001
	I3	.841	.046	1.007	21.5	< .001
	I4	.804	.044	.901	20.1	< .001
	I5	.882	.046	1.071	23.2	< .001
	I6	.866	.049	1.108	22.6	< .001
	I7	.905	.045	1.093	24.3	< .001
	I8	.872	.045	1.033	22.8	< .001
	I9	.820	.045	.931	20.7	< .001
	I10	.792	.045	.901	19.6	< .001
	I11	.878	.043	.993	23.1	< .001
	I12	.827	.044	.949	21.0	< .001
	I13	.841	.041	.898	21.5	< .001
	I14	.839	.044	.950	21.4	< .001
	I15	.815	.045	.926	20.5	< .001
	I16	.826	.043	.917	20.9	< .001
	I17	.845	.044	.957	21.7	< .001
Factor 2	I1	.759	.050	.937	18.4	< .001
	I2	.786	.045	.874	19.4	< .001
	I3	.813	.045	.923	20.4	< .001
	I4	.865	.044	.994	22.4	< .001
	I5	.838	.044	.955	21.3	< .001
	I6	.712	.047	.804	16.9	< .001
	I7	.724	.046	.966	20.8	< .001
	I8	.849	.043	.946	21.8	< .001
	I9	.753	.046	.837	18.2	< .001
	I10	.724	.045	.782	17.3	< .001
	I11	.786	.046	.905	19.4	< .001
	I12	.842	.042	.917	21.5	< .001
	I13	.804	.042	.874	20.6	< .001
	I14	.804	.044	.881	20.2	< .001
	I15	.763	.044	.827	18.6	< .001
	I16	.808	.043	.875	20.2	< .001

In order to make the scale model acceptable, a series of model goodness-of-fit indexes were examined using the Jamovi statistical program. These indices are *Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Standardized Root Square Mean Index of Errors (SRMR), Root Mean Square Errors of Approximation (RMSEA), Chi-Square Value* and *Degrees of Freedom (df)* and are listed in Table 7.

Table 7. Error and Fit Index for English Paragraph Writing Self-Efficacy Belief Scale

Fit Index	Values of the Scale	Good Fit Index Values	Acceptable Fit Index Values
$\chi 2$ /df	4.18	$0 \leq \chi 2$ /df ≤ 5	$2 < \chi 2$ /df ≤ 5
RMSEA	.08	$0 \leq$ RMSEA $\leq .05$	$.05 <$ RMSEA $\leq .08$
Comparative Fit Index (CFI)	.90	$.95 \leq$ CFI $\leq .97$	$.00 \leq$ CFI < 1.00
Standardized RMR	.04	$.05 \leq$ SRMR $\leq .08$	$.00 <$ SRMR ≤ 1.00
NNFI	.93	$.95 \leq$ NNFI ≤ 1.00	$.90 \leq$ NNFI $< .95$
Tucker-Lewis Index (TLI)	.88	$.0 \leq$ TLI $\leq .95$	$.00 \leq$ TLI < 1.00

As seen in the table, x^2/sd ratio (x^2=2065 and df=494, x^2/df 4.18) is in an acceptable range (Tabachnick & Fidell, 2007). On the other hand, Jöreskog and Sörbom (1993) state that $\chi 2$ detects

many problems when the sample group is large, and therefore x^2/df may indicate a weak fit. In this study, the sample size is large enough. Also, MacCallum (2003) emphasizes that models can never be perfect and inevitably contain minor errors. In addition, the RMSEA value was found to be .08 and within an acceptable range. The other fit index value were found as follows: CFI=.90, SRMR=.04, NNFI=.93 and TLI=.88., which shows acceptable fit with these indices (MacCallum et al., 1996).

Reliability Analysis

Findings related to the reliability of the scale were analyzed with the internal consistency method. Cronbach Alpha coefficients related to the factors of the scale are given in Table 8.

Table 8. Reliability Statistics of English Paragraph Writing Self-Efficacy Belief Scale

Factors	Cronbach Alpha
Writing process and rules	.97
Self-regulation	.96
Total mean score	.99

The Cronbach Alpha reliability coefficient was obtained as .97, for the first factor and as .96 for the second factor. The total reliability coefficient for the scale was found as .99. Since an alpha value higher than .70 is an expected condition for internal consistency (Büyüköztürk, 2010), in this study the internal consistency coefficients of the scale were found to be sufficient and the scale had good internal reliability (α= .99).

After all the analyses, the English paragraph writing self-efficacy belief scale consisting of 33 items and two factors was developed. The items, factors and characteristics of the items in the scale are presented in Table 9.

Table 9. Factors, Items and the Characteristics of the English Paragraph Writing Self-Efficacy Belief Scale

	Items	Reverse Item	Maximum Score	Minimum Score
Writing process and rules	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 ve 17	No	85	17
Self-regulation	18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33	No	80	16

CONCLUSION

In this study, a process of developing English paragraph writing self-efficacy scale for the students at lower grade levels was discussed. In this process, a detailed literature review was conducted, and expert opinion was taken. Firstly, an initial item pool consisting of 45 items was prepared. Based on the expert opinion and the pilot study, the number of the items was reduced to 36.

The 36-item trial form of the scale was applied to 428 university students. Before conducting factor analyses, KMO value was examined and it was calculated as .97. Additionally, the Chi-square test statistic results obtained from the Bartlett's test were found to be significant, $\chi 2 = 16549.479$; df = 630, $p < 0.05$. Therefore, it was concluded that the obtained values met the basic hypotheses at a good level and the factor analysis could be conducted.

The factor analysis revealed a two factor structure. In the first factor, there are items related to process and rules applied in writing a paragraph, and the second factor consists of the items related to the self-regulation process. Therefore, the factors were labeled as writing process and rules and self-regulation. Pearson's coefficient of correlation analysis was used to find the relationship between all the factors of the English paragraph writing self-efficacy belief scale and it was seen that there was a

significant, high level and positive relationship between the total mean score and the factors of the English paragraph writing self-efficacy belief scale.

CFA was applied to make the scale model acceptable. After these analysis, x^2/sd ratio (x^2=2065 and df=494, x^2/df 4.18) was found to be in an acceptable range. In addition, the other fit index values were found as follows: CFI=.90, SRMR=.04, NNFI=.93 and TLI=.88, which shows acceptable fit with these indices. The Cronbach's Alpha value for the first factor was found as .97, and .96 for the second factor. Moreover, Cronbach's Alpha value for overall scale was found to be .99. Based on the conducted analyses, a valid and reliable tool that can be used in determining the English paragraph writing self-efficacy beliefs of the students is obtained.

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