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Adaptation of Teaching Approaches Scale to the Kosovo Culture – A Validity and Reliability Analysis

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Abstract

Investigating the teaching approaches that teachers adopt in the education process has gained significant importance. Various scales have been developed to determine teachers' teaching approaches. Cultural differences may cause the scales to yield different results. Therefore, adapting the scales to different cultures contributes to the use of such scales by those cultures. Accordingly, the Teaching Approaches Scale developed by Michael Prosser and KeithTrigwell (2006), which was adapted into Turkish by Tezci (2017), was adapted to the Kosovo culture. In the present study, whether the Albanian, Bosnian and Turkish versions of the scale support the same factor structure was investigated using the quantitative research method. Firstly, the Teaching Approaches Scale was translated into Albanian and Bosnian and the opinion of an expert was taken. The scale was applied to 200 teachers working in schools where the teaching languages are Albanian, Bosnian and Turkish. The scale comprised 22 items and 2 factors. The present study was carried out in Kosovo, therefore linguistic equivalence was particularly prioritized. Confirmatory Factor Analysis was utilized to confirm the suitability of the two-factor structure of the scale. Analyzes were carried out separately for each language and acceptable fit indices were determined. The reliability analysis yielded satisfactory results.

Keywords: teaching approaches, adaptation, teachers.

1. Introduction

Qualified teaching is associated with the knowledge gained by the students. Teaching that facilitates students to achieve the quality and quantity of their learning can be expressed as qualified teaching (Ramsden, 2003). Teaching preferences used by teachers, which enable students

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to reach desired and expected learning outcomes, are the most essential elements. Chan and Elliott (Chan, Elliott, 2004: 818) have stated that the concept of teachers' understanding of teaching and learning refers to "teachers' beliefs about their preferred ways of teaching and learning." It indicates that these beliefs include the meaning they attribute to the concept of teaching and learning and the roles of teachers and students (Kervan, 2017). The term, which we refer to as the teaching understanding, but described as the teaching approach in teaching, is the teacher's beliefs in the classroom (Aypay, 2011; Cheng et al., 1992; Tang, Cheng, 2009). Various classifications related to the teaching approach have been discussed in the literature. In the literature review, it has been seen that the most common classifications include teacher-focused/student-focused, subject-focused/student-focused, teacher-focused/interactive, objectivist/constructivist, disciplinary/integrated, individual/ cooperative, indirect or directed/direct (Chan, Ellitot, 2004; Gow, Kember, 1993; Kember, 1997; Trigwell, Prosser, 1996, Trigwell, Prosser, 2004).

The approach that forms the basis of this research was the classification made by Trigwell and Prosser (2006). In this classification, information transmission is a teacher-focused approach while conceptual change is the student-focused approach. Based on this understanding, it can be argued that there are five different approaches to teaching developed by Trigwell, Prosser, and Taylor (1994: 78). These include (1) a teacher-focused strategy that aims to convey information to students, (2) a teacher-focused strategy that intends students to acquire (disciplinary) concepts in a particular field, (3) a teacher-student-interaction-based strategy that aims to enable students to acquire (disciplinary) concepts in a particular field strategy, (4) the student-focused strategy aimed at developing students' concepts, and (5) the student-focused strategy aimed at changing students' conceptual understanding. Knowledge-based-teacher-focused strategy is based on traditional objectivist understanding. It can be argued that the student-centered-conceptual change-focused strategy is based on the constructivist approach (Tezci, 2017).

A traditional teaching approach is a teacher-focused approach, and the teacher decides what to teach and how to evaluate the student (Gök, 2006). In traditional classrooms, the student is seen as an empty bucket (Genç, 2004) and there is an understanding of transferring information by the teacher, filling the empty bucket, and the student memorizing the transferred information. Johnson and Johnson and Smith (1995) stated that the teacher-focused teaching method is based on John Locke's assumption that the untrained student mind is like a blank piece of paper waiting for the teacher to write something on it. Therefore, the content is structured by the teacher. Student differences are not taken into account. Every student is born a clean slate, whatever is written on the first pages substantially influences the further pages. Students' readiness, experiences, cultures, genders, learning strategies are not taken into account (Gibbs, Coffey, 2004; Jonassen, 1999; Tezci, 2017; Tezci, Gürol, 2003).

On the other hand, student-focused approach, is based on a constructivist understanding. Constructivism “adopts an approach to how students construct” (Erdem, Demirel, 2002: 82). Constructivist learning is a key concept defined as “constructing knowledge, taking a more active role in creating and developing the knowledge that students have” (Erstad, 2002: 429). “Acquiring knowledge is an adaptation process that regulates the life of the individual. Knowledge constructs individually and socially” (Olssen, 1996: 276).

It has been thought that the physical characteristics of the classroom environment in schools where knowledge is structured and teaching is carried out are important in terms of cultural diversity as well as in terms of constructivist learning. In terms of constructivism, the physical characteristics of the classroom should be student-focused and include flexible learning environments. Students from a multicultural society "come to the classroom with characteristics such as different learning styles, beliefs, values, and social preferences". These features affect students' knowledge structuring (Özer, 2001: 164).

Teachers who adopt the constructivist approach can apply different designs while organizing the classroom environment. Accordingly, students from different cultures interact, collaborate, and share. Also, the Constructivist teacher should be a person who acts as a guide to the students.

"School and learning-teaching environments should prepare students for real-life so that individuals can solve the problems they will encounter in life" (Duckworth, Julyan, 1996: 56). Therefore, learning environments should be arranged in a way that resembles real life. Considering that individuals living in a multicultural society will encounter cultural differences in the society since the main purpose of education is to prepare individuals for real life, it is possible with the

teaching strategies they use to create awareness about cultural differences in schools, to organize activities to get to know different cultures and to ensure that all kinds of characteristics of different cultures are respected.

Therefore, it is seen that a series of scales, both field-dependent, and field-independent, have been developed to determine the teaching approaches adopted by teachers. One of the commonly used scales in the field is the "Teaching Approaches Scale" developed by Michael Prosser and KeithTrigwell (2006), which was adapted into Turkish by Tezci (2017). The scale consists of 22 items in a 5-point Likert structure. The scale consists of two factors: "teacher-focused approach" and "student-focused approach".

Ensuring the validity of the scales in different cultures is important for the use of the scale. Accordingly, the present study aimed to adapt the Teaching Approaches Scale to Kosovo culture, which was developed by Michael Prosser and KeithTrigwell (2006) and adapted into Turkish by Tezci (2017). The answer to the question, "Does the Teaching Approaches Scale, which was adapted to Turkish culture by Tezci (2017) in the research, produce similar valid and reliable results in Kosovo culture?", was sought. Adapting the scale to the Kosovo Culture will contribute to the use of the Turkish version of the scale in countries with different cultural structures. In Kosovo, a scale adaptation that can be used to measure teachers' approaches to teaching in multicultural education has not been previously made. Kosovo is a country where different cultures live together (Koro, 2008; Yıldırım 2016). In Kosovo, Albanians, Serbs, Bosnians, and Turks reside as well as citizens with ethnic identities such as Askali and Gorani. As official languages, Albanian, Serbian, Bosnian, and Turkish are widely spoken languages, especially in regions with a predominant population. Depending on the density of the population, Albanian, Turkish and Bosnian languages are taught in schools (Yıldırım, Yıldırım, 2012).

2. Method

2.1. Sampling

The Teaching Approaches Scale developed by Michael Prosser and KeithTrigwell (2006), adapted into Turkish by Tezci (2017), was applied in Turkish, Albanian, and Bosnian in Kosovo. As Kosovo is a multilingual country, the scale was first translated into Albanian and Bosnian languages and an expert opinion was sought for the study to determine the teaching approaches of teachers. Then, it was applied to a total of 200 teachers working in schools that provide education in at least two different languages. Of the teachers, 60 were Turkish, 50 were Bosnian, and 90 were Albanian. Also, in terms of gender, 127 of the teachers were female and 73 were male. In terms of professional seniority, 35 teachers with 1-5 years, 39 teachers with 6-10 years, 20 teachers with 11-15 years, and 106 teachers with 16 years and above professional seniority participated in the study. Among the teachers participating in the application, 7 were preschool teachers, 75 were classroom teachers, and 118 were other branch teachers (6-9 classes). In terms of educational status, teachers attending associate degree, undergraduate, and graduate education participated. The number of teachers with associate degree education was 34, the number of teachers with undergraduate education was 152, and the number of teachers with postgraduate education was 14. Before the application, teachers were informed about the content of the scale and an application was made on how to answer it.

2.2. Data collection tools

The Teaching Approaches Scale was first developed by Trigwell and Prosser in 1996 (Trigwell et al., 1999). Subsequently, new items were added to the scale and a revised version consisting of 22 items was developed (Prosser, Trigwell, 2006). The scale was used to measure teachers' teaching approaches in different fields (Postareff, Lindblom-Ylanne, 2008; Stes et al., 2010). The Teaching Approaches Scale developed by Michael Prosser and KeithTrigwell (2006), which was adapted into Turkish by Tezci (2017), was used to determine the teaching approaches of teachers. The scale is in a 5-point Likert structure with 1 = Never, 2 = Sometimes, 3 = Occasionally, 4 = Often, 5 = Always.

In the adaptation study carried out in different countries, different factor structures were determined. Firstly, the linguistic equivalence study of the scale, which was adapted into Turkish, was carried out. The linguistic equivalence and reliability validity analyses of the scale for the Turkish Sample were made by Tezci (2017). As a result of confirmatory factor analysis, it was determined that was is a scale consisting of four sub-dimensions, two-dimensional (teacher and

student-focused teaching approach) and two sub-dimensions of both dimensions (two factors). The scale had two dimensions as "teacher-focused/Information Delivery Strategy" and "Student-Focused/Conceptual Change Strategy" and each dimension had11 items. The Teacher-Focused/Information Delivery Strategy had two factor structures: "teacher-focused strategy" consisting of five items and "Information Delivery Strategy" consisting of six items. In the "Student-Focused/Conceptual Change" dimension, there are two factor structures: "conceptual change" consisting of six items and "Student-Focused Strategy" consisting of 5 items. According to the result of the Cronbach's Alpha reliability analysis based on the four factor structure of the scale, the Teacher-Focused Strategy was 0.84, Information Transmission-Focused Approach was 0.89, the Student-Focused Strategy was 0.93, and the Conceptual Change-Oriented Strategy was 0.93. It was determined that the scale explained 49.911 % of the variance.

2.3. Data Analysis

The Confirmatory Factor Analysis (CFA) was performed on the data obtained from the application. It can be argued that CFA is the analysis used to determine the construct validity. This analysis can be used to determine whether the latent variables of a scale whose factors have been determined before, can be explained by the observed variables (Büyüköztürk et al., 2014). As a result of CFA, a series of fit indices are obtained. With the help of these indices, a decision can be made about the suitability of the structure revealed. In the present study, Confirmatory Factor Analysis was performed to test the Teaching Approaches Scale, which has two factor structures adapted into the Turkish Culture, into the Kosovo Culture with the determined factor structures (Ding et al., 1995; Gomez, Fisher, 2003). The results of the analysis require the examination of a series of indices (Bayram, 2010; Jöreskog, Sörbom, 1996; Tabachnick, Fidell, 2007). x^2 Since the index is affected by the sample size, it was evaluated together with the degrees of freedom. Although the fit values in CFI (comparative fit index), GFI (goodness of fit index), and NFI (Normed Fit Index) NNFI (Non-Normed Fit Index) has been ideally desired to be close to 1, 0.90, and above have been regarded acceptable (Bentler, Bonett, 1980)) while Hu and Bentler (1999) have stated that 0.95 and above indicate a good fit. RMSEA (root mean square error of approximation) 0.08 and below is sufficient, but a value of 0.06 indicates a better fit (Hu, Bentler, 1999).

For the reliability analysis of the scale, Cronbach Alpha, Omega Reliability, and Combined Reliability were calculated. Combined Reliability (CR) is used to measure the internal consistency of factors and 0.70 and above is accepted as a good value (Hair et al., 2010). The Cronbach Alpha analysis in the context of inner consistency is not considered sufficient when there is more than one factor structure. It is also recommended to calculate the Omega Confidence coefficient (Dunn et al., 2014).

In the reliability analysis, Cronbach's Alpha Coefficient was used since the scale was the Likert type. As a result of the analysis, the results of the scale's item-total correlations and averages were also observed.

3. Results

3.1. Findings Related to the Linguistic Translation Process

Since the validity and reliability of the scales were made in the Turkish Culture and the present research was carried out in Kosovo, firstly, a linguistic equivalence was ensured. The linguistic equivalence of the Turkish-Bosnian and Turkish-Albanian versions of the scale were examined since the research included Albanian and Bosnian teachers besides Turkish teachers. The scale forms prepared in Turkish were translated into Bosnian and Albanian languages with the help of experts. After taking the opinions of Bosnian and Albanian language experts, it was applied to 10 teachers who spoke and wrote Turkish-Albanian, Turkish-Bosnian, Bosnian-Albanian. The application was made face to face to each teacher and it was observed whether there were necessary corrections and they were asked to read the scale aloud and mark it. The correlation obtained from the Turkish-Albanian version was 0.90, the correlation obtained from the Turkish-Bosnian version was 0.92, and the correlation obtained from the Albanian-Bosnian version was 0.91. Also, the percentage of adaptation was found to be 90 % and above. In the present study, no correction was made in any item and it was concluded that the scales could be applied to other languages.

3.2. Findings Related to Confirmatory Factor Analysis of the Teaching Approaches Scale

As a result of the translation of the scale into other languages, Confirmatory Factor Analysis was performed to test the accuracy of the factor structures. The scale was applied to 200 teachers. As a result of the Confirmatory Factor Analysis performed on the data obtained from the application, it can be used to determine whether the implicit variables of a scale whose factors were determined beforehand can be explained by the observed variables (Büyüköztürk et al., 2014). The fit indices obtained as a result of the analysis are given in Table 1.

Table 1. Confirmatory Factor Analysis Fit Indices

X^2	SD	RMSEA	NFI	NNFI	CFI	IFI	SRMR	GFI	AGFI
350.09	204	.060	.93	.97	.97	.97	.052	.86	.83
Perfect	X^2/sd=1.71 Perfect		Good	Good	Good	Good	Good	Low	Low

As a result of the analysis, a perfect fit index was obtained with X^2/Sd= 1.71. A Good fit index was obtained in the RMSEA, NFI, NNFI, CFI, IFI, IFI, SRMR indices. A low level of fit index was observed in the GFI and AGFI indices. The proposed modifications did not improve any fit index. It can be argued that the low level of coefficients obtained in some of the fit indices may be due to the fact that the sample consists of a different culture.

Confirmatory factor analysis is illustrated with a path diagram. This diagram is given in Figure 1.

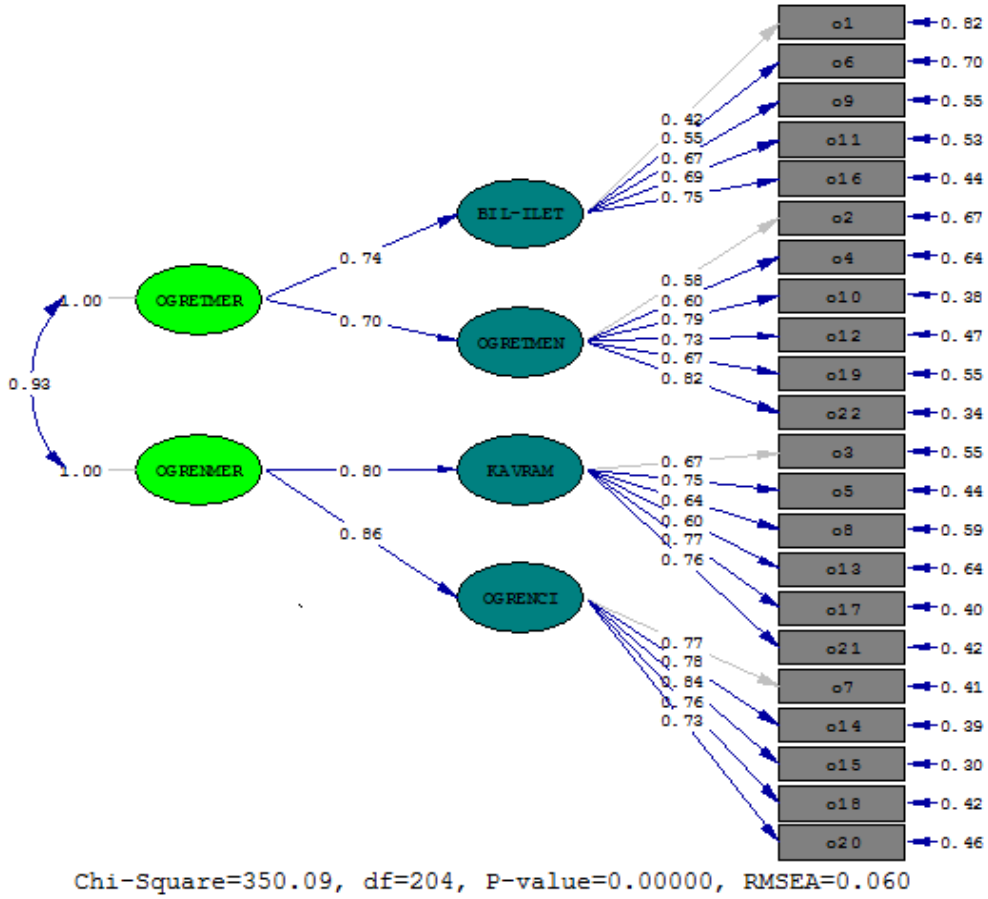

Fig. 1. Confirmatory Factor Analysis of the Teaching Approaches Scale Standardized Path Analysis Diagram

According to the results of the confirmatory factor analysis of the Teaching Approaches Scale, item 16 in the Information Transmission factor of the teacher-focused approach dimension had the highest factor load with 0.75 whereas the lowest factor load was determined to be in item 1 with 0.42. In the teacher factor of the Teacher-Focused Approach, item 22 had the highest factor load with 0.82 whereas the lowest factor load under this factor was found in item 2 with 0.58. Item 17 in the Conceptual Change factor of the Student-Focused Approach had the highest factor load with a value of 0.77. The lowest factor load in the third factor was in item 13 with 0.60. Item 15 in the Student-centered factor of the Student-focused Approach had the highest factor load with a value of 0.84. The lowest factor load in the third factor was in item 20 with 0.73.

3.4. Findings Related to the Reliability Analysis of the Teaching Approaches Scale

The reliability study of the scale, which was prepared to adapt the scale of teachers' approaches to teaching in multicultural education, was determined based on the findings obtained from the group of 200 people. In the reliability analysis, Cronbach's Alpha Coefficient was used since the scale was a Likert type. The analysis results of the findings obtained from the teaching approaches scale are given in Table 2.

Table 2. Teaching Style Scale Cronbach Alpha Reliability Analysis Results

Sub-dimensions	Number of Items	Cronbach Alpha
Teacher-focused approach	11	.84
Student-focused approach	11	.90
Entire Scale	22	.90

When the analysis results in Table 2 are examined, the Alpha reliability coefficient of 11 items in the Teacher-Focused Approach sub-dimension of the teachers was calculated as 0.84. The Alpha reliability coefficient of a total of 11 items in the Student-Focused Approach sub-dimension of the scale was determined to be .90. The Alpha reliability coefficient calculated for the overall scale consisting of 22 items was 0.90. With the coefficients obtained for both the sub-dimensions and the general scale, it was seen that the scale was perfect in terms of reliability. As a result of the analysis of the scale, the results of the item total correlations and mean values are presented in Table 3.

Table 3. Results on Item Total Correlations and Mean Values

	Scale average when the item was deleted	Scale variance when the item is deleted	Item-total correlation	Scale reliability when the item is deleted
01	7.2350	6.794	.382	.760
06	7.1300	6.727	.464	.728
09	7.2750	6.170	.579	.687
011	7.4750	6.080	.588	.683
016	7.3450	6.368	.600	.682
02	9.5300	15.356	.587	.877
04	9.6450	15.466	.645	.866
010	9.8350	15.274	.752	.849
012	9.7500	15.394	.707	.856
019	9.6400	15.036	.657	.864
022	10.0000	14.593	.802	.840
03	9.6800	13.545	.634	.838
05	9.8250	13.482	.714	.825
08	9.4000	13.437	.593	.847

013	9.4850	13.457	.558	.855
017	9.7550	13.432	.723	.823
021	9.7550	13.563	.712	.825
07	8.0100	13.337	.776	.891
014	8.0600	13.876	.755	.895
015	8.1200	13.322	.814	.882
018	8.0250	13.713	.770	.892
020	8.0850	13.807	.754	.895

As a result of the reliability analysis, the highest correlation in the analysis of the correlations of the scale items was in item 15 with 0.814 Whereas t lowest was in the item was 1 with 0.382. Correlations of other items were between these values. Most of the item total correlations showed moderate correlation.

4. Results and discussion

The present study aimed to adapt the Teaching Approaches scale to Kosovo culture. The scale was first translated into Albanian and Bosnian and the linguistic equivalence was provided. No changes have been made to these languages. It is clear that when the scale is applied in a different culture and a different language if linguistic equivalence is not ensured, it may cause problems in the fit indices and model adaptation obtained as a result of CFA. Stes, De Mayer, and van Petegem (2010) have mentioned the problems caused by language and cultural differences in their adaptation studies on scale adaptation. Therefore, it was deemed appropriate to make linguistic equivalence to minimize the problems arising from linguistic problems (Kervan 2017). In the present study, it was stated that the scale, which was intended to be adapted from Turkish to Albanian and from Turkish to Bosnian, was translated by expert translators and then applied to 10 teachers who teach in Turkish, Albanian, and Bosnian versions in these languages. As a result of this application, it was determined that the linguistic meanings of the scale expressions of the experts were the same in all three languages. When the reliability analysis results based on the two factor structure of the scale were examined, the Alpha reliability coefficient of 11 items in the teacher-focused approach sub-dimension was calculated as 0.84. In the student-focused approach sub-dimension of the scale, the Alpha reliability coefficient of 11 items was determined to be 0.90. The Alpha reliability coefficient calculated for the overall scale, which consists of 22 items was 0.90. The coefficients obtained for the sub-dimensions of the scale and the overall scale reflected that the scale was perfect in terms of reliability. It was observed that the reliability coefficients obtained from the present study were similar to the reliability coefficients obtained in the research conducted by Tezci (2017). In some intercultural scale studies, different structures emerge in the scales in some cultures while similar structures are seen in some intercultural studies (Kervan, 2017). In the adaptation study of the scale to Kosovo culture, since the reliability coefficient of the 22-item scale was high, no item was removed and the scale was applied with 22 items. In general, such studies show that scale development and adaptation studies should be analyzed by considering cultural differences.

Confirmatory Factor Analysis DFA Fit Indices revealed that a perfect fit index was obtained with $X^2/Sd= 1.71$ in RMSEA. A good fit index was obtained in the NFI, NNFI, CFI, IFI, and SRMR indices. A low level of fit index was observed in the GFI and AGFI indices. The proposed modifications did not make any improvements in any of the fit indices. It can be argued that the low level of coefficients obtained in some of the fit indices may be due to the fact that the sample consists of a different culture.

It can be argued that the linguistic equivalence of the scale can be an important result in supporting the same results with the original factor structures in the Kosovo culture. In cases where linguistic equivalence cannot be achieved in studies conducted in different cultures, the probability of having different factor structures may increase. Stes et al. (2010) and Meyer and Eley (2006) examined the effect of language differences on scale factor structures. Beaton et al. (2000) discussed different approaches to scale adaptation in cross-cultural studies and pointed out the importance of adaptation for studies to be conducted in linguistically and culturally different countries. Even

though Kosovo culture is similar to Turkish culture in terms of some features, the fact that the languages of instruction of the teachers participating in the study are Turkish, Albanian, and Bosnian, it is considered very important that the factor structures do not change in the fit indices and sub-dimensions.

In this study, Tezci (2017) emphasized that the scales in which data are collected from teachers working in different disciplines can give different results in different measurements and at different times due to cultural and linguistic differences. Therefore, the school policy regarding the place where the teachers live, the culture they live in, the institution they work at, the type of education they receive, and the field of education they receive should be taken into consideration in the studies. This shows that the scale can be used in both pre-service and in-service training in Kosovo.

5. Conclusion

Considering that teaching approaches are very important from the philosophical perspectives of the teachers to the pre-service education to the methods and techniques they use in the service process, it is a fact that a culture can affect all the bases in the preparation of education policies and programs. Considering the programs prepared on the basis of the constructivist approach, which puts the student at the center in the programs in recent years, the successful implementation of these programs in the classroom environment showed that the teaching approaches used by teachers are of great importance (Brownlee et al., 2001; Tezci et al., 2016). In conclusion, it is suggested that such studies should be carried out by increasing the number of teachers participating in such studies.

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