

Investigating the Effectiveness of Reflective Teaching Activities in Secondary English Classes¹

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The aim of this study is to investigate the effects of reflective thinking-based teaching activities on academic achievement, retention and attitude towards English course in secondary school English classes. The research was carried out with pre-test-post-test design with experimental-control groups. The study was carried out in a private secondary school for 8 weeks in Konya, in 2016-2017 academic year. The study included a total of 35 students in the fifth grade, which included 18 students in the experimental group and 17 in the control group. In the experimental group, reflective teaching activities were used and in the control group the activities on the teacher's guide book based on the current curriculum were used. There was a significant difference between the post-test and retention scores of the experimental and control groups. However, experimental teaching practices did not lead to a significant difference in students' attitudes towards the course. It was found that reflective teaching practices had an impact on students' success and retention in secondary school English lessons.

Keywords: English teaching as foreign language, reflective teaching, academic achievement, attitudes towards English, attitude scale for English lesson

Introduction

In today's world, knowing one or more foreign languages, has been inevitably become a need in various areas of life. Everywhere in the world, millions of people spend huge amounts of energy, money and time in order to learn a foreign language. In the light of the developments in the world, great effort and money are being spent both as the state and as an individual in the field of language teaching/learning in our country. Despite this great effort to learn a foreign language, it is observed that the result obtained is far from being satisfactory and that the labour, energy and time are wasted (Ekinçi, 2019).

With the changes in the experience and perception of language learning, similar developments have not emerged in the area of language teaching. In schools, direct teaching approaches based on content and grammar with traditional methods, are widely practiced. However, rather than teaching the rules of grammar directly with a traditional approach, environments should be provided for students to be able to communicate using the language they are learning and use it in their

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lives effectively. In addition, cognitive, affective and dynamic areas should be considered together in language teaching. For this reason, in foreign language courses, focusing on the use of language rather than the structure, communication-oriented and appropriate course design are important for the students to be more successful in the course (cognitive) and take pleasure from the course (affective) and to increase their participation in the course. In this context, an effective foreign language teaching will increase interests and attitudes of students towards English lessons, and this will also play an important role in the success in the course. The development of cognitive, affective and psychomotor characteristics in English courses with student-centred and reflective learning environments will be possible with a holistic approach. In order to ensure that students acquire the required level of English, teaching-learning processes are of vital importance. Reflective teaching can be considered as an effective approach in terms of allowing teachers and students to reflect foreign language skills on the basis of learning.

Duban and Yanpar Yelken (2010) reported that the concept of reflective thinking has various definitions in the literature. Some of these are in-depth thinking (Gündođdu, 2009) and thinking meticulously (MEB, 2007). About a century ago, Dewey (1910, p. 6) defined reflective thinking as “active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusion to which it tends”. According to Ünver (2007), reflective thinking is a process of detecting positive and negative situations related to method and level in teaching and learning. According to Semerci (2007), reflective thinking is a way of thinking, which acts as a bridge between theory and practice, where emotions support the mental processes of individuals, which can solve all kinds of problems with effectiveness, determination and concentration and where the results can be shared as experience.

The concepts underlying reflective practice are much older. Examples of reflective teaching and practices can be found in ancient texts. In particular, the concept of reflective application was mentioned in the works of the Stoic philosopher Marcus Aurelius (Bolton, 2010; Schön, 1983). However, the scientist who systematically dealt with this concept was John Dewey at the beginning of the 20th century. Dewey introduced the first systematic contents about reflective practices with his discoveries of experience, interaction and reflection. Soon, learning psychologists such as Kurt Lewin, Vygotsky, Jean Piaget and Schön included the concept of ‘reflective’ in their approach to human learning and development (Kolb & Kolb, 2005; Schön, 1983). At the centre of reflective teaching was an increasing interest in the integration of theory and practice and the conscious application of what has been learned from experience. Since the 1970s, there is a growing literature focusing on experiential learning and the development and application of reflective practice (Dyment & O’Connell, 2014; Hébert, 2015; Kurnaz, 2007).

As mentioned above, according to Dewey (1910), reflective thinking is an active, persistent and careful thinking of a form of knowledge that supports any belief or knowledge and the achievement of the intended results. Reflective thinking activities enable students to define their own goals, be responsible for their own learning and see and correct their own mistakes (Ünver, 2003). Reflective

thinking gives the students the opportunity to develop strategies for thinking such as questioning the assumptions, asking questions, summarizing, selecting charts, making comparisons, etc. (Çubukçu, 2011).

Schaub-de Jong (2012) summarizes the reflective learning outcomes from different studies as follows: (1) Reflective learning is expected to enable students to have an in-depth understanding of experiences and a stronger capacity for using knowledge in new situations. (2) Reflective learning is expected to allow students to direct and monitor their own learning processes. (3) Reflective learning is expected to lead students to awareness of emotions or thoughts, which can encourage students to think in new ways and help them develop alternative explanations for experiences. (4) The learning outcomes of reflective learning are expected to help students develop self-awareness; participation in reflective learning is expected to show how a person is aware of their beliefs and how they differ from other people's beliefs.

When the research on reflective thinking is examined, it is seen that studies are mostly conducted on teacher dimension, the effect of reflective thinking on professional development of teachers (Altınok, 2002), the opinions and attitudes of teacher candidates and teachers towards reflective teaching (Duban & Yanpar Yenkel, 2010; Ekiz, 2003; Evans, 2009; Güney, 2008; Şahan, 2011; Tok, 2008), reflective teaching practices of teachers of different courses (Duban & Yanpar, 2010; Ekiz, 2003; Evans, 2009; Güney, 2008; Şahin, 2011; Tok, 2008), reflective thinking practices of school administrators (Dalgıç, 2011). From the theoretical perspective, studies mostly focused on reflective teaching, development of reflective thinking scales, among others. It has been observed that there is limited number of experimental studies (Baş & Beyhan, 2012) on English teaching based on reflective thinking on primary school students. It is thought that it is very important to determine the effectiveness of teaching by reflective thinking activities on primary school students. Determining the reflective thinking skills of primary school students, the effect of academic achievement, attitude towards the course and the effect on retention by developing activities based on reflective thinking is a problem.

With this study, it is of great importance to determine the success of the teaching practices in secondary school English lessons through reflective teaching activities, determine the level of retention, the students' opinions about reflective teaching activities and the strategies related to the subject. In this study teaching practices based on reflective thinking were planned and implemented according to the reflective teaching model developed by Sünbül (2010). It is expected that this study will contribute to literature on teaching English with reflective thinking activities and help teachers choose their applications within the renewed primary education program. In this context, the following questions were asked:

Is there a significant difference in the academic achievement levels between the experimental group in which the reflective teaching activities are used in English lessons and the control group in which the activities in the teacher's guide book based on the current curriculum are used?

Is there a significant difference between the experimental group in which reflective teaching activities are used in English lessons and the control group in which the

activities of the teacher's guide book based on the current curriculum are applied regarding levels of academic retention?

Is there a significant difference between the experimental group in which reflective teaching activities are used in English lessons and the control group in which the activities of the teacher's guide book based on the current curriculum are applied regarding levels of attitudes of the students towards English lesson?

Methods

The study investigated the effects of the reflective teaching methods on students' English language achievement and attitudes towards language course in grade 5 (10-11-year-old students) in secondary school, and used experimental method with pretest-posttest control group design. Within the scope of this study, in the experimental group, the grade 5 reflective teaching program of English course and in the control group, the current grade 5 English curriculum were used.

Prior to the research, grade 5 English course achievement test and the attitude scale for English course were given to the experimental and control groups as pre-test. The same measurement tools were used as post-test for both groups. 6 weeks after the post-test, English achievement test was administered as a retention test for both groups.

Research Group

The study was carried out in a private secondary school in Meram, Konya in 2016-2017 academic year. Factors such as the permission of the administrators of this school, the suitability of the research groups and the school environment, the equivalence of the education and the socio-economic status of parents, and the willingness of the teachers and administrators in the research were effective in selecting the groups in the research process. In order to determine the experimental and control groups of the study, general academic achievements of the students in all branches of the school in the previous academic year, the scores in English exams, the results of the test examinations in the school and the distribution of the classes according to gender variable were taken into consideration. In terms of all these variables, two grade 5 classes were chosen for the implementation of the quantitative methods of the study. These two classes were then assigned as experimental and control groups randomly. Below are the distributions of experimental and control groups according to gender, achievement and pre-test scores.

The experimental group which received reflective teaching consisted of 18 students. Of these students, 8 (44.4%) were female and 10 (55.6%) were male. The control group which received the regular curriculum program consisted of 17 students. Of these students, 8 were female (47%) and 9 (53%) were male. In general, experimental and control groups were balanced in terms of gender and the number of students.

Table 1. Comparison of Achievement Pre-Test Scores of Students in Experimental and Control Groups

	N	Mean Rank	Rank Sum	U	P
Experimental Group	18	19.86	357.50	-1.110	0.267
Control Group	17	16.03	272.50		

$p < 0.05$.

In Table 1, the results of the Mann Whitney U test of the pre-test scores of the students in the control group who received the activities in the teacher's guide book based on the current curriculum and the students in the experimental group who received reflective learning activities are shown. The analysis shows that 1.110 Z value was calculated between the pre-test mean scores of the two groups. Thus, there is no significant difference between the pre-test scores of the experimental and control groups. The students in the experimental and control groups had an equal level of success in English language pre-test before the experimental procedures of the study.

Table 2. Comparison of Attitude Pre-Test Scores of Students in Experimental and Control Groups

	Groups	N	Mean Rank	Rank Sum	U	P
Attit Pre-test	Experimental	18	18.19	327.50	0.116	0.909
	Control	17	17.79	302.50		

$p < 0.05$.

Table 2 shows the results of the analysis on attitude scores of the students in the experimental and control groups before the study. The results illustrate that Z value was calculated as 0.116 between the scores of the two groups. Thus, there is no significant difference between the attitude pre-test scores of the groups. It can be argued that at the beginning of the research, the attitudes of both groups towards English lesson have equal distribution.

Table 3. Grades in School Report Cards of the Students in Experimental and Control Groups

Group	N	Mean Rank	Rank Sum	U	p
Experimental	18	21.28	383	1.91	0.059
Control	17	14.53	247		

$p < 0.05$.

In Table 3, the results of the Mann Whitney U Test, which was calculated on school report cards of the students in the experimental and control groups are displayed. According to the analysis, Z value was calculated as 1.91 between the scores of the two groups. The difference is not significant. It is obvious that the two groups are equivalent in terms of school report cards.

Table 4. Grades of English Course in the Previous Semester of Students in Experimental and Control Groups

Group	N	Mean Rank	Rank Sum	U	p
Experimental	18	22.03	296.5	1.68	0.125
Control	17	13.74	233.5		

$p < 0.05$.

Table 4 shows the academic achievement of the English course in the previous semester of the students in the control group who received teaching based on regular program and the experimental group who received reflective teaching. Z value was calculated as 1.68 between the scores of the two groups. Thus, it is clear that there is no significant difference between the English levels of the students in both groups before the experimental procedures of the research.

Experimental Procedures

In the study, reflective teaching application steps planned by Sünbül (2010) were followed in the experimental group. In the control group, the current curriculum was applied. All the procedures in the study are given below;

- (1) Daily plans and study sheets were prepared for use in research from grade 5 English course-books and source books.
- (2) In order to familiarize the participants with their strategies, warm-up activities were done for 2 lesson hours (80 minutes) in the experimental group.
- (3) The pre-test and attitude scale were administered to the students in experimental and control groups. In this stage, reflective teaching was carried out in the experimental group and the activities in the teacher's guide book based on the current curriculum were carried out in the control group.
- (4) In the experimental group, reflective teaching activities are: Introduction Activities, Learning Contracts, Writing Learning Journals, Feedback-Correction, Reflective Journal, Building Concept Maps, Asking Questions, Participating in Reflective Discussions, Preparing Development File. These activities are organized as 8 weeks-8 sessions. In units 3 and 4 of the grade 5 English course book, reflective teaching practices are as follows.
 - (4.1) Introduction Activities: The course started with visual stimuli, open-ended questions and interesting information to attract students' attention to reflective teaching process, subject and activities, to arouse and stimulate curiosity.
 - (4.2) Learning Contract: learning is the participation of students in decisions regarding the learning process. Contracts were made with all classes or groups. Students have conducted applications such as signing contracts for taking responsibility for their own learning. In this phase, individual and students in groups put their contracts into effect. At this stage, they worked at different

- speeds, levels and tasks, focused on the common goals, and tried to develop independent learning and thinking skills.
- (4.3) Writing Learning Journals: They wrote diaries in which students recorded their personal responses, questions, feelings, changing opinions, thoughts, learning processes and content.
 - (4.4) Feedback-Correction: The teacher guided and provided information to the students about the level of activities and the level they reached.
 - (4.5) Reflective Journal: Through reflective journals, students reflected their own learning processes by establishing a higher level of relationship between theory and practice.
 - (4.6) Creating Concept Maps: At this stage, students tried to establish links between the concepts covered in the course. At this stage, the teacher guided, and the visuals and the concepts were created by the students. Relations and repetition of subjects and concepts were made through these maps.
 - (4.7) Asking Questions: During the reflective teaching activities, students tried to answer the following questions individually or in groups. At this stage, the students were provided with written questions and answers.
 - (4.8) “What do I know about this?” “What do I need to learn?” “How long will it take me to find out?” “What resources do I use?” “What should I do next?” “Did I get all the information I needed?” “Do I understand what I’m doing?” “Did I reach my goals?” “What methods did I use?” “What did I learn?”
 - (4.9) Participation in Reflective Discussions: Reflective discussions were made to ensure that students see similarities and differences in their practice. In these discussions, students were encouraged to make constructive peer assessment, to make peer correction, and to reinforce their learnings.
 - (4.10) Learning Contract-2: At this stage, the activities in learning contract-1 were repeated.
 - (4.11) Preparing Development File: This step was made as another writing-based activity. In this process created by the student, the students were asked to choose and review their studies, reflect on the projects they completed and review their old products.
 - (4.12) Self-assessment: At this stage, students were encouraged to self-assess and reflect on reflective thinking. This phase was encouraged to provide a critical perspective on student learning.
- (5) In the control group, the current curriculum provided by MoNE for grade 5 students was used. Both the experimental and control group had to cover the same subjects and gains in the same amount of time.
 - (6) As post-test for all groups, English achievement test and the attitude scale for English course scale were applied.
 - (7) 6 weeks after the application of the post-test, English achievement was administered to both groups simultaneously as a retention test.

Data Collection Tools

The attitude scale towards English and grade 5 English achievement test were used as data collection tools. Information about the data collection tools is given below.

Attitude Scale towards English

Attitude scale towards Grade 5 English Course was used in the pre-test and post-test attitude assessments during the research process. The students in the experimental and control groups were asked about their English language, emotions, thoughts and behaviour in the scale developed by the researcher to measure their affective tendencies. In the process of developing the scale, a group of students at secondary school were asked to write an essay about what they thought about English lesson, what they felt in the lesson and what they did related to English in the school or outside the school. The texts written by the students were examined by three academicians who had PhD in the fields of education programs, assessment and English education, and they were transformed into attitude statements. The frequencies of the sentences were rank ordered from most repeated to least repeated. As a result of the consensus of academicians, “16 attitude items” consisting of positive and negative sentences were determined. Then, the sentences were examined by an academician from Turkish Language Education field for proofreading. The scale prepared in the Likert type was transformed into a 3-grade scale regarding age and grade levels of the students based on expert opinions. The scale included options as, “yes”, “partly yes”, and “no”. The attitude scale towards English grade 5 was administered to 458 students in the same grade level. Exploratory factor analysis, item analysis and reliability analysis were performed on the data obtained. In order to test the validity of the scale, KMO and Bartlett tests were done initially. The results indicate that the KMO value of the English attitude scale was 0.90 and the Bartlett Test value was 1897.797 ($p < 0.01$). These findings indicate that the scale was suitable for the grade 5 and the factor analysis. The Eigen value was calculated as 1 as a result of Component Factor Analysis. It shows that the scale has a one-dimensional factor structure. This single dimension explains about 58% of the variance the scale wants to measure. In this respect, one factor structure of the scale provides a very high validity measurement. Subsequently, item factor loadings were calculated on a single factor of the attitude scale towards English course. In this respect, 14 items with a factor load of 0.40 and above in the attitude scale towards English, were determined. The factor loads calculated for the items in this scale vary between 0.51 and 0.69. In addition, the analysis showed that Cronbach Alpha Reliability Coefficient of Attitude Scale towards English was found as .87. This shows that the scale has a high internal consistency and reliability.

Grade 5 English Course Achievement Test

Grade 5 English Course Achievement Test was used in the pre-test, post-test

and retention test. In the process of development of this test, Grade 5 English Lesson Plan and Annual Plan with units were examined. At this stage, the opinions of experts from teachers from the field, researchers from education program development and assessment were used. Questions were selected from the units “3. Hello, Countries and Languages” and “4. Games and Hobbies” as these units were covered during the study. According to Grade 5 English language curriculum in the annual plan, Unit 3 and 4 had 10 learning objectives. 4 questions were asked to represent each objective. Thus, a four-choice test with 40 questions was created for English lessons in grade 5. At this stage, experts from educational assessment were consulted in terms of wording and spelling in questions and options. The test was administered to a group of students in grade 5 in the secondary school consisting of 284 students in the beginning of the research. After the results were obtained, item analysis was performed on the test. As a result of the item analysis, the items with a coefficient of item discrimination (r_{ij}) higher than 0.30 were included in the achievement test. Thus, an English achievement test consisting of 34 items with high item discrimination coefficient was obtained. Then, the reliability analysis was performed on the test items. The reliability coefficient as a result of the analysis performed by KR-20 technique was found to be as .86. This value shows that the test has a high reliability for use in the research process. The achievement test was administered to experimental and control groups three times for pre-test, post-test and retention test. The teacher accompanied the researcher during tests in the class. A lesson hour (40 minutes) was allocated for the application of the test. In practice, it was observed that the duration was sufficient. In the research process, the students were required to attend the pre-test, post-test and retention tests regularly and the delivery of the tests was completed on the same day in all groups. In English achievement test, the correct answer was coded as (1), and wrong and blank answers were coded as (0).

Data Analysis Techniques

Before analyzing the research data, it was tested to see whether it met the assumptions of normal distribution (Yurt & Sünbül, 2012). According to the Shapiro Wilk test analysis results, achievement and attitude measurements of the study did not show normal distribution. Therefore, non-parametric statistical techniques were used in the analysis of research data.

In this study, the Mann Whitney U test was used to compare the pretest and attitude scores and the post-test and attitude scores of the groups due to the lack of normal distribution of the data. According to Lehmann (2006), the Z value corresponding to the U value is included in the scientific tables in the analysis results of the Mann Whitney U technique. The significance level of $p=0.05$ is taken as the basis for the evaluation of the findings.

Results

The first research question of the study was “is there a significant difference in terms of academic achievement between the control group in which the activities of the teacher’s guide book based on the current curriculum were used and the experimental group in which reflective teaching activities were used. The findings related to the first research question are given in Table 5.

Table 5. Comparison of Post-test Scores of Students in Experimental and Control Groups

	N	Mean Rank	Rank Sum	Mann Whitney U/Z	p
Experimental Group	18	22.22	400.00	-2.536	0.011
Control Group	17	13.53	230.00		

$p < 0.05$.

The results of the Mann-Whitney U test on the post-test achievement scores of the students in the experimental group who received reflective learning activities and the students in the control group who received the activities in the teacher’s guide book based on the current curriculum are shown in Table 5. According to the analysis, Z value was found as 2.53 for the post-test mean scores of the two groups. Therefore, there is a significant difference between the post-test achievement scores of the experimental and control groups. When the mean scores of the groups were examined, the experimental group students who received reflective thinking activities had higher post-test achievement scores than their peers in the control group.

The second research question of the study was “is there a significant difference in terms of retention test scores between the experimental group in which the reflective teaching activities are used and the control group in which the activities in the teacher’s guide book based on the current curriculum are used?” The findings regarding the second research question of the study are given in Table 6 below.

Table 6. Comparison of Retention Scores of Students in Experimental and Control Groups

	N	Mean Rank	Rank Sum	Mann Whitney U/Z	p
Experimental Group	18	21.53	387.50	-2.100	0.036
Control Group	17	14.26	242.50		

$p < 0.05$.

Table 6 shows the results of the Mann Whitney U test performed on the retention test scores of the students in the control group who received the traditional teaching practice and the students in the experimental group who received reflective learning activities. According to the analysis, Z value was found as 2.10 for the retention test scores of the two groups. Thus, there is a significant difference between the retention test scores of the experimental and control groups. When the mean scores of the groups were examined, the students in the experimental group who received reflective thinking activities achieved

higher retention scores than their peers in the control group.

The third research question was “is there a significant difference with regard to attitudes towards English at the end of the teaching period between the experimental group in which reflective teaching activities are used in English course and the control group in which the activities of the teacher’s guide book based on the current curriculum are used?” The findings related to the third research question of the study are given in Table 7.

Table 7. Comparison of Attitude Post-test Scores of Students in Experimental and Control Groups

	Group	N	Mean Rank	Rank Sum	Mann Whitney U/Z	P
Comparison of Attitude Post-test Scores of Students in Experimental and Control Groups	1.0	18	20.67	372.00	1.60	0.118
	2.0	17	15.18	258.00		

$p < 0.05$.

Table 7 shows the results of attitude towards English score obtained from both groups. In the attitude post-test, the mean scores in the experimental and the control groups were as 20.67, 15.18, respectively. Although the mean scores of the students in the experimental group were high, the differences in scores of the groups were not significant ($Z=1.60$; $p < 0.05$). Thus, it could be argued that reflective teaching program used in the experimental group did not lead to a significant difference in students’ attitudes towards English compared to the control group.

Since there was no difference between the attitude post-test scores of the students in the experimental and control groups, the attitude pre-test and post-test scores were compared separately in both groups.

Table 8. Comparison of Attitude Pretest-Posttest Scores of Students in Experimental Group

	N	Mean Rank	Rank Sum	Wilcoxon Z	p
Negative Ranks	5 ^b	8.20	41.00	-1.945	0.052
Positive Ranks	13 ^c	10.00	130.00		

$p < 0.05$.

In Table 8, the Wilcoxon Z values for the pre-test and post-test scores of the students in the experimental group are displayed. According to the analysis, 1.94 Z value was calculated for the attitude pretest-posttest scores of the students in the experimental group. This finding is not significant at the significance level of 0.05. Therefore, there was no significant difference between the attitude pre and post scores of the participants.

The experimental practice did not lead to a significant difference in students’ attitudes towards English course. According to the findings, reflective teaching activities do not have a significant effect on the attitudes of the students towards

English lesson in groups receiving reflective teaching activities and the activities in the teacher's guide book based on the current curriculum.

Table 9. Comparison of Attitude Pre-Test and Post-Test Scores of Students in Control Group

		N	Mean Rank	Rank Sum	Wilcoxon Z	p
Attitude Scale Posttest-Pretest Scores	Negative Ranks	8 ^b	7.81	62.50	-0.668 ^c	0.504
	Positive Ranks	9 ^c	10.06	90.50		

p<0.05.

In Table 9, the Wilcoxon Z values calculated for the attitude pre-test and post-test scores of the students in the control group are displayed. According to the analysis, Z value was found as 0.666 for the attitude pre-test and post-test scores of the students in the control group. The results indicate that there was no significant difference between the pre-test and post-test scores of the students in the control group.

Discussion

According to the results based on research findings, reflective teaching activities are effective in increasing students' English achievement. It is thought that reflective teaching activities include student-centred, questioning, interactive activities and aims to develop foreign language skills by reflecting what students have learned and reflective thinking teaching increases the effect on students' learning achievement. Based on this, teachers should include student-centred educational practices during English language teaching, and ensure that students reflect what they have learned through questioning and interaction-based learning.

Numerous methods, techniques and activities have been employed to achieve high level cognitive and affective goals in the processes of teaching, planning, implementing and evaluating English based on reflective teaching practices. There was an increase in the foreign language levels of experimental students in reflective teaching environments where intensive communication and interaction was provided with both the teacher and the students. For this reason, it will be beneficial for English teachers to use techniques that provide intensive communication and interaction among students during teaching.

In Turkey, the studies show that reflective teaching is more effective than the proposed program in increasing the success of students in different schools and grades. Similar studies in the literature confirm the results obtained in this study (Bölükbaş, 2004; Ersözlü, 2008; Tok, 2008; Kırmık, 2010; Keskinçiliç Yumuşak, 2017; Uygun & Çetin, 2014). There is a parallelism between the results of previous studies and the findings of this study. According to Pitoniak et al. (2009), the continuity of development of language skills in foreign language is important. In this study, significant change was observed in the academic success of students in English and during the semi-structured interviews with both students. All these

findings confirmed the results of the research of Pitoniak et al. (2009).

Schön (1983), one of the pioneers of educational sciences in the field of reflective teaching, states that reflection involves an approach based on a close examination of what practitioners actually do. Questions like “Did my application work? Why did it work? Why didn’t it work? What else can be done?” were expressed by the students in the experimental group in individual and group sessions (reflection-on-action). The students’ answers to such questions have enabled them to learn the foreign language content in a meaningful way. According to Schön (1983), many experienced practitioners are able to reflect on their own applications by reflecting during practice (reflection-in-action). In reflection-in-action, the person conducting the practice has the opportunity to reflect on his/her experience for a longer time and more in detail because, in this type of reflection, the person analyzes his/her practice after the action and reaches results. In short, practitioners shape their future practice by questioning their own practice in both types of reflection. While reflection-in-action is shaping their work during practice, reflection-on-action helps them evaluate the practice by focusing on how known can lead to unexpected results in the practice (Schön, 1983; Ekiz, 2003). In this research, during the reflective teaching activities, the questions like “Did my practice work? Why did it work? Why didn’t it work? What else can be done?” have been on the agenda of the students and this has increased the students’ success in learning English. For this reason, in teaching English, teachers should work on the students’ reflective learning questions.

According to another result of the research, reflective teaching practices increase the permanence of success in English course. The retention test measures information about the behaviour and the retrieval of long-term memory. According to cognitive theorists, when the stimuli presented in the activities performed in a lesson are brought into experience and actively processed, it is easier to bring information back (Hergenhahn, 2009). In this study, the subject that was emphasized during the reflective teaching practice and activities was to make students understand foreign language content through their experiences, questions and interactions. All these applications provided effective learning and retention of knowledge in the experimental group. In retention test performed 6 weeks after the implementation, students’ scores in English declined compared to the post-test scores. The decline was higher in the control group. However, the mean retention test scores of the students in the experimental group were about 6 points higher than mean pre-test scores, and there was a high mean of scores in favour of the experimental group. According to Gass and Selinker (2001), transfer is the transfer of previously learned to new learning status. Transference can be interpreted as transferring what is learned to advanced learning or life. This situation provides the permanence of the learned. In this study, in the experimental group, activities related to real-life with a reflective and student-centred approach were included while teaching English language and rules. The words taught and reflective activities in order to make students learn foreign language permanently were repeated in the following activities to reinforce what they learned and it is provided to reinforce what they have learned by associating with daily life.

According to Baş and Beyhan (2012), teachers who can exemplify students

with their reflections, a curriculum that aims to develop reflective thinking skills of the students, to be a model for the students with their reflections, course content supporting students' reflective thinking skills and evaluation methods and tools that reveal the development of students are effective in equipping learners with reflective thinking abilities. All these processes allow them to process information permanently and learn indirectly. In order to transfer the reflective thinking to teaching process and English course in the experimental group of the study, first of all, it was tried to provide an environment to support basic thinking skills. Thus, in order to realize the reflective learning systematically, writing learning journals, reflective journals, preparing development files, creating concept maps, asking questions, participating in reflective discussions, learning contracts and self-assessment activities were carried out. These activities, which lasted for 8 weeks, provided an effective retention of the contents in the experimental group. Fergus and Richardson (1993) stated that the traditional foreign language teaching strategy does not improve students' foreign language skills. Accordingly, in order to ensure retention in the English course, transferring what is learned to the advanced learning and daily life through reflective teaching activities is effective in ensuring the retention of English learning. Studies revealed that groups receiving reflective teaching had higher levels of retention than groups receiving the regular program following the curriculum in courses like, geography by Yıldırım and Pınar (2015), social sciences by Ersözlü (2008), Turkish by Bölükbaşı (2004). The results of all these studies corroborate the findings of this study.

In reflective teaching approach, students can consciously determine their own learning objectives, control learning processes and ensure the continuity of learning performance (Altınok, 2002; Şahin, 2011; Ünver, 2003). All this contributes to students' taking responsibility for their own learning and doing what is needed. Our study corroborates the results of similar experimental studies which show that teaching activities based on reflective teaching practices increase the retention levels of what the secondary school students have learned in English lessons. In other words, reflective teaching practices increase the retention levels of English learning.

According to the results of the research, it is seen that reflective teaching practices have a similar effect on the positive development of students' attitudes towards learning English with current teaching practices.

Affective, as well as the cognitive, dimension of the learning process is an effective factor on many variables. One of the most important goals of all courses is the development of students' affective characteristics and the transfer of these characteristics to following teaching periods. The attitudes of the students towards foreign language lessons will determine their tendency towards second language learning in the future. Therefore, one of the most important objectives of this learning approach, in which a student-centred teaching paradigm is reflected in practice, is to develop positive affective characteristics of students. In most of the research on the effects of reflective teaching on student attitudes, it was found that in classes and courses using these teaching methods and techniques, students' attitudes were more positive than the ones in groups receiving traditional teaching (Baş & Beyhan, 2012; Güney, 2008; Wilson & Wing Lesley, 1993). In literature,

it was observed that student-centred reflective teaching practices, rather than traditional and current teaching practices, increased the sense of sacrifice among students and had a positive attitude-enhancing effect on subject area and the studies showed that such groups showed higher motivation, attitude and success. In this study, it is expected that reflective teaching practices will positively affect students' attitudes towards learning English. However, the results obtained were different from those in the literature. During the research process, the same teacher taught English in the experimental and control groups. Attitudes towards the course can be influenced by affective factors related to teachers. According to the researcher's observations, the English teacher's attitudes and behaviours in a private secondary school motivated student. In both the experimental and the control groups, a significant increase was observed in the post-test scores in the attitude scale. The increase in the attitude scores of both groups did not lead to a significant difference. This may be due to the fact that the attitudes have a long-lasting nature (Genç & Şahin, 2015; Aslan Efe, 2015), that the students do not reflect their attitudes as they are, and that the duration of the research is not sufficient for this change. Testing the effects of reflective teaching practices on the affective tendencies of students in English course in further research will contribute to the field.

Conclusions

The aim of this study is to investigate the effects of reflective thinking-based teaching activities on academic achievement, retention and attitude towards English course in secondary school English classes.

The application and analysis conducted in the study and the finding that teaching activities based on the reflective teaching approach increase the foreign language course success of secondary school students are similar to the results of many studies conducted on this subject and variables in the literature. In other words, reflective teaching practices increase students' success.

As a result of the experimental applications carried out, the finding that teaching activities based on reflective teaching practices increase the retention of what secondary school students learn in English lessons is in line with the results of similar studies in the literature. In other words, reflective teaching practices increase the permanence of what is learned in English lessons.

In parallel with the results of the literature, it was expected that student attitudes would increase compared to the other group due to the intense student-centered practices in this study. However, this result was found to be inconsistent with other research results. This may be due to the fact that attitudes are characteristics that change in a long time, they do not reflect the attitudes of students in their measurement and the duration of the research is not sufficient for this change.

Recommendations

According to the results obtained based on research findings, reflective teaching activities are effective in increasing students' English achievement. Similar studies can be carried out with all learning objectives, learning areas and contents for the whole academic year. Thus, the effects of reflective instruction on the development and teaching of all foreign language skills can be tested.

- (1) Teachers of foreign language courses at secondary level may be advised to include more reflective teaching activities or to use the entire reflective teaching application steps arranged by Sünbül (2010) in the planning and implementation phase. Reflective Thinking Activities such as Learning Contract, Writing Learning journals, Feedback-Correction, Reflective Journals, Creating Concept Maps, Questioning, Participation in Reflective Discussions and Preparing Development File could be suggested to be used effectively in lessons. Before starting the practice, the students should be informed in detail about the reflective practices and the application process should be planned carefully.
- (2) Student workbooks, teaching materials and tools in accordance with the reflective teaching approach and techniques can be developed in foreign language teaching programs at secondary level. In this context, English teachers can be given trainings on reflective teaching practices and the use of materials. In service training on reflective teaching can be provided for teachers to facilitate them with a better knowledge to apply reflective teaching method in their classes.
- (3) Reflective teaching materials for English classes can be prepared in cooperation with the other colleagues, and these materials can be shared online. Every teacher may contribute and use the materials developed for a specific topic.
- (4) Future longitudinal (observational) research can be carried out to demonstrate the long-term effects of reflective teaching practice. Conducting research to demonstrate the effect of reflective teaching in different language skills and at all levels of acquisition in foreign language will reveal important results in a holistic approach.
- (5) In the findings of the study, it was found that reflective teaching activities did not lead to a significant difference in the attitudes of students in the experimental group receiving reflective teaching towards English course in comparison to the control group. In this context, more comprehensive qualitative and quantitative research can be done on the effects of reflective teaching practices on students' affective learning products. Teachers' and students' opinions about reflective teaching and learning can be examined.
- (6) Further studies are recommended to be conducted in order to obtain relevant data to facilitate the effective use of reflective teaching in other classes other than English course to reach the goals and objectives of a lesson.

- (7) Finally, it is recommended to develop scales to measure teachers' reflective teaching skills in relation to the variables implemented in the experimental process of this study.

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