

The Effects of Animation Supported 5E Model on Teaching 'Indicative and Subjunctive Moods' in 7th Grade Turkish Lesson

Mehmet Fatih Özcan^{1*}, Latife Kirbaşoğlu Kiliç²

¹Department of Social Sciences and Turkish Education, Faculty of Education, Ağrı İbrahim Çeçen University, Turkey

²Department of Social Sciences and Turkish Education, Faculty of Education, Erzurum University, Turkey

Copyright©2017 by authors, all rights reserved. Authors agree that this article remains permanently open access under the terms of the Creative Commons Attribution License 4.0 International License

Abstract This study is to investigate the effects of animated 5E method on the success, attitude and opinions towards the course in teaching of 'subjunctive and indicative moods' subject of 7th grade Turkish course. The study was conducted with 60 seventh grade students of a state-run secondary school in Palandöken district of Erzurum during the first semester of 2014-2015 academic years. The experimental group and the control group consist of 30 students each. Subjunctive and indicative moods were taught at experimental group with activities enhanced through animations suitable for 5E method; on the other hand, the same subjects were taught at control group with current teaching method. The study employed mixed method in which both qualitative and quantitative methods were used together. As data collection tools, Personal Information Form, Language Proficiency Level Test, the Scale of Attitudes towards Turkish Course, the use of technological devices in grammar course, Student Interview Form, Student Interview Form for Computer Assisted Grammar Teaching, the Scale of Attitudes towards Grammar Activities, Student Interview Form for the Use of Animation in Grammar Courses, Teacher Interview Form for Grammar Courses have been used. In the quantitative analysis of the data, parametric analyses (t-test and regression analysis) have been employed as well as frequency and percentage which are descriptive computations. Content analysis has been used in order to analyze the data of the interviews. Data analysis has revealed that the level of academic success has increased for both groups, yet the comparison of the methods revealed that 5E method enhanced with animations is more effective than the current programme. According to the findings obtained from attitude scales and student opinions, 5E method enhanced with animations have a significant effect on students' attitudes towards grammar topics; and students enjoy grammar and they are more active while doing these activities.

Keywords 7th Class Turkish Lesson, Grammar, Subjunctive and Indicative Moods, 5E Learning Model, Mixed Method, Animation

1. Introduction

In the 21st century, when it is realized that educated brains are more important than physical strength, we see that countries should regulate their education policies in this direction too. Along with the increase in the importance of education in this direction, individual's expectations have also changed in the form of creativity and self-improvement, producing and developing knowledge, approaching the events with a multi-faceted perspective (Küçükylmaz, 2003).

As through the training given within the present education system, the students cannot completely or can faultily grasp the subject. The efficiency of the what's been learnt is short-term the present education system cannot achieve the desired achievements at the desired level, using methods in which the students are active is recommended instead of a method in which the student is inactive and the misunderstandings are not corrected (Özmen and Kolomuç 2004).

Recently, the Ministry of National Education (MoNE) has started to reconstruct its teaching programs in order to make our country adapt to developing societies with its Turkish Education program. According to changing teaching programs, the goal is not to be able to teach but to enable learners to learn. To achieve this goal, educational curricula are structured according to the constructivist approach, which means "construction of knowledge" (Duman, 2007). When the related literature is examined, it is seen that the "teaching model" which is the class-adapted version of the learning theory is used in class environment

by structuring as 3E, 4E, 5E, 6E, 7E. The most useful of these E models is model 5E (engaging, exploring, explaining, elaborating and evaluating) (Keser, 2003). It has been seen that in the literature the applications of 5E teaching model increased the learning levels of the students and their interest in the lesson. By transferring 5E, a model of the constructivist approach, to the computer environment through animations and simulations, the student-information relation is embodied to make the learning more permanent. Usta (2011) explains that "the use of Computer-assisted Instruction (CAI) materials with animation and simulation in teaching abstract concepts makes interpretation of problematic concepts easier in the mind". The use of computers in the classroom allows students with short-term memory to assimilate the knowledge of the given information and convey it to the long-term memory in the form of individualized learning.

1.1. Constructivist Approach 5E Learning Model

One of the ways of adapting constructivism, conceptual change and interrogative learning into the classroom environment is the 5E learning model and this learning model includes five stages: engaging, exploring, explaining, elaborating and evaluating (Bybee & Landes, 1990). These stages are:

- (1) In the engaging stage, the teacher's task is to attract the attention of the students and motivate them, to reveal their pre-understandings and to encourage them to ask questions. At this stage, students are not expected to find the right answer, but they are expected to be ready to do the activity by putting forward different ideas.
- (2) At the exploring stage, students try to find a solution to the problem given by the teacher according to their individual experiences and effectively discover ideas that include their own thoughts.
- (3) In the explaining phase, students share their findings with others. The explanations in this step should be related to the experiences of the previous two stages and the explanations of the students. At this stage, a learning environment is provided which encourages students to explain their own ideas and understandings.
- (4) In the elaborating stage, students apply information or problem solving approaches they have acquired together to new events and situations. At this stage, students are given the opportunity to apply new concepts to other general situations at this stage; students are expected to use the new scientific terms and definitions correctly in the new situations they encounter.
- (5) The final stage of the 5E learning model, the evaluating phase, is the phase in which students are expected to change their ideas or beliefs. At this

stage, students are encouraged to question their own concepts. In other words, students assess how much they learn new concepts and skills. Therefore, they make different inferences using the information and skill they have acquired until this stage (Bybee, 1997, Keser, 2003, Özmen, 2004).

1.2. Transferring Grammar Topics into Computer-assisted Instruction According to Model 5E

In order to be able to apply the constructive learning approach in educational environments and to put science ahead, teachers need to take advantage of technological developments because the use of educational technologies in educational environments causes students to be drawn to the center of the learning. In this way, abstract concepts become concrete, and events that are impossible to observe becomes understandable through simulations (Hırça, 2008; İşman, Sevinç. & Altığ, 1998).

According to Özbay (2006), in the teaching of grammar topics, teachers teach grammar, as they have been taught so, using traditional theories and unaware of contemporary theories. Particularly the use of new methods and techniques, and the choice of methods and techniques that appeal to more than one sensory organ at the same time will provide more qualified and more permanent learning.

It is necessary to apply the information which constitutes the structure of Turkish and defines the rules of operation in grammar activities related to speaking, writing and listening. Therefore, grammar teaching must be based on practice rather than on theoretical knowledge.

Korkmaz (2003) stated that teaching only the rules and vocabulary of grammar rules will cause these rules to be forgotten in a short time. In order to prevent this, the rules to be given must be selected from literary works and written texts. This increases both permanence and literary satisfaction.

One of the most effective programs for creating such animations that can be used in demonstrating the dynamic processes that need to be made persistent and enjoyable is the Flash program. In addition to the advantage of preparing Flash program for animating, it is a factor that increases the usability of the program, especially the presence of the Flash player on almost all computers with internet access, and the display of Flash files with ".swf" extension in Internet Explorer browser program even on computers without Flash player. For this reason, in order to be able to display software prepared in the Flash program, it is not necessary to install the program to the computer on which the software will be used.

1.3. Preparation of Computer-assisted Instructional Material (CAI) and Teacher's Guide Material Used in the Study

Prior to the development of the CAI material used in the

teaching of the "Indicative and Subjunctive mood" topic, the content of the subject was determined by making use of 7th grade Turkish textbooks and other related written sources. After the content had been determined, the content and animations to be placed on each page of the CAI material were identified. Firstly, page designs were made on paper, and then created by a computer specialist in the Flash program, and the first development process of the CAI material was completed. Thus, the material was given its initial form prior to its pilot scheme to identify the deficiencies and the necessary regulations do be done on it. Animations that were developed before pilot scheme were discussed with three teachers and five field education experts and necessary arrangements were made. During the development of the material, the animations were designed by taking into consideration the subject titles and the sequence (content) in the Turkish curriculum. The first consideration during design is ease of use of the material. The menus in the material were designed to be easily understood and used by the students. The student can watch the animations at any time and control it with the buttons

nearby. In the material developed, the students had to focus on the material continuously to follow the guidelines in the activities and answer the questions asked. This has provided follow-up of the course and prevented disconnection.

Teacher guide materials were prepared on how to implement the "Indicative and Subjunctive mood" topic teaching process. The prepared guide materials guide the teachers in what ways they should use the alternative concepts of the subject and how they should use the teaching materials presented to them. The prepared guide materials guide the teachers in which stages of the teaching process and how they should use the teaching materials presented to them, and the students to eliminate the alternative concepts related to the subject. The contents of the teacher guide materials were arranged to include all the information that the teacher can use and need in teaching the subject. The content of the prepared teacher material differs from the traditional course or unit plans. An example of teacher guide material used in the study is shown in table 1.

Table 1. Teacher's Guide Material

Name of the Course	Turkish
Grade	7 th
Name of the Unit	Okuma Kültürü-Atatürk
Acquisition	
Suggested Time	2 Class hours
Teaching-Learning-Methods and Techniques	5 step (5e Model) structuralist teaching strategy, animation supported teaching, question and answer, discussion
Used Educational Technologies-Tools, Equipment • Teacher • Student	Verbs, infinitive, finite verb concepts, animations
Learning-Teaching Activities	
	Ask your students to launch the flash application for the first step "engaging" in our animations, which is prepared according to model 5E of indicative and subjunctive mood. Project it on the board.
ENGAGING	<p>Ask your students to register their name and surname. It is told that the video on g-1 should be watched carefully. Then it is told that the g-1 video is watched again with the subtitles. The students are asked to pass to the g-2 activity. Students are asked to read sentences written in red. Students are asked the question "What is the difference of the word yaz in terms of meaning?" and they are asked to write their answer to the section right below and click the save button. They are asked to pass to G-3 activity. Note: The verb definition here is not appropriate for 5E method. But, as in the "Indicative and Subjunctive mood" topic, first thing to do is to teach verbs, pre-reminder was done. Ask your students to do silent reading. Then ask a student you choose to read out-loud. Pass to G-4 activity. Ask them to read the question part of the activity and to write answers considering the example. Ask your students who are done to click the "save and finish" button and wait. Pass G-5 activity. (purpose: with this activity, it will be checked whether the student distinguishes the difference between infinite and finite verbs regarding the table the student has filled in G-4 activity.) Pass to G-6 activity. There is also a table in this activity. Ask the students to read the directive first and then to study the table. Ask them to read Question-1 and to write their answers to the section below. Ask them to read the question related to the 1st part of the table in Question-2 and to check the necessary checkbox. Continue to the next page by clicking the continue button. State that the Question-3 and Question-4 are related to the table and ask them to read Question-3. After answering, ask them to pass question-4 and finish the course with finish button.</p>

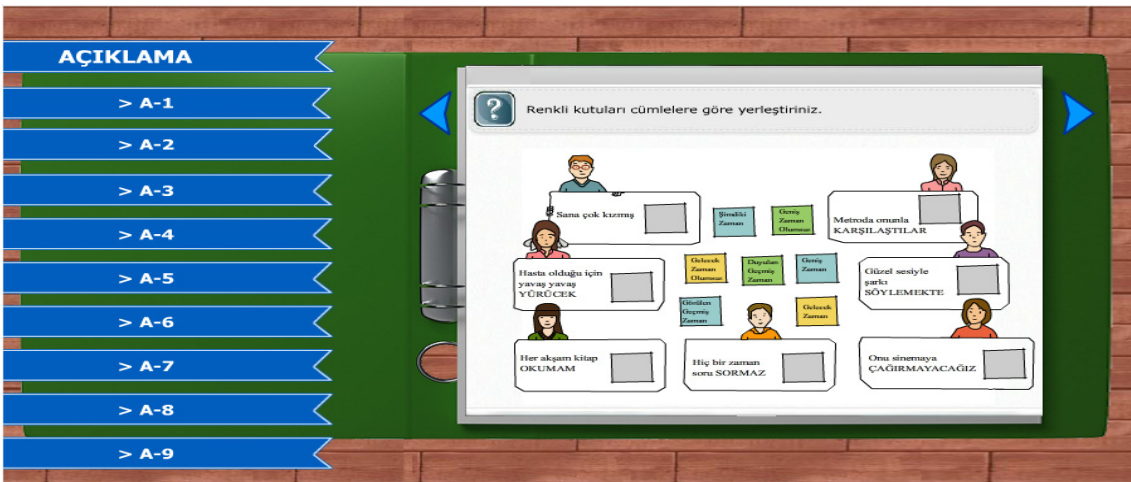
1.4. Steps in Developing Guide Material

In this section, the steps followed during the development of the materials used in the study are presented in detail. These are:

1. Step: Identification of alternative concepts and learning difficulties, student semantics on "Indicative and Subjunctive Mood", studies on alternative concepts and computer-assisted instruction were analyzed.
2. Step: Identification of alternative concepts and learning difficulties, by reviewing the reports containing misleading statements about the concepts of "indicative and subjunctive mood" by the teachers, their views of the teachers were gathered about what might be the reasons that students have the misleadingness mentioned. It has been determined what the probable causes are included in the literature studies related to the fact that students have alternative concepts or difficulty in understanding certain topics.

3. Step: CAI materials used in the teaching process which aimed at providing the conceptual change were developed according to the 5E model considering the alternative concepts and their probable causes in the development of the CAI material, study sheets and teacher guide materials. Each material in the curriculum based on the developed worksheets and animations was analyzed by five field education specialists and five teachers and their opinions were taken into consideration and the necessary arrangements were made in the materials.
4. Step: Conducting the pilot scheme of the teaching materials: Pilot scheme of the developed materials were conducted in a classroom consisting of 20 students and Classroom observations, student and teacher views were considered and the missing or disrupted aspects in the process were determined and then eliminated.

Designing the Research (Application examples)



1.5. Determination of the Design Program

Following the determination of the level and the subject, an open-ended questionnaire conducted on 5 Turkish teachers in 2014-2015 academic year was used in order to be able to have an idea about the characteristics of the teaching material to be conducted. The answers of the teachers to the question "What qualities do you want to have in the teaching material to be developed for the Turkish lesson?"

1. Embodying the information to be taught
2. It should arouse students' interest

3. It should keep the attention of the students for a long time.
4. It should make the students active
5. Its use should be easy for the teachers
6. It should be corresponding to technology
7. The students should perceive it as a game

As it is seen above, the expectations of the Turkish teachers for the material to be used in the Turkish lesson are that it should embody the subjects, arouse interest, be easy to use for the teacher, integrated with technology and allow to use the time efficiently. Teaching material is designed based on these qualifications.

1.6. Implementation steps of the research

Table 2. Implementation Steps of the Research for the Experimental Group

Classroom to be researched	7/E (Experimental Group)
Implementation 1 st Week	TDBT Pre-test application DBBT Pre-test application KBF application
Implementation 2 nd Week	In the engage step, "finite and infinite verbs" topics were taught with animations according to 5E model.
Implementation 3 rd Week	In the explore step, "indicative and subjunctive mood" topics were taught with animations according to 5E model.
Implementation 4 th Week	In the explain step, "tenses" topics were taught with animations according to 5E model.
Implementation 5 th Week	In the elaborate step, activities were done with animations to reinforce the topics.
Implementation 6 th Week	TDBT post-test application DBBT post-test application Student interview form of computer-assisted grammar teaching Grammar activities attitude questionnaire The views of the students related to the use of technological tools in grammar course Teacher interview form of grammar course Students view form of animation use in grammar course

Table 3. Implementation Steps of the Research for the Control Group

Classroom to be researched	7/D (Control Group)
Implementation 1 st Week	TDBT Pre-test application DBBT Pre-test application KBF application
Implementation 2 nd Week	"Finite verb-mood distinction" was taught with direct instruction and question-answer methods.
Implementation 3 rd Week	"Indicative and subjunctive mood" topics were taught with direct instruction and question-answer method.
Implementation 4 th Week	"Tenses" topic was taught with direct instruction and question-answer method.
Implementation 5 th Week	"Questions in tenses-interrogative" topics were taught with direct instruction and question-answer method.
Implementation 6 th Week	TDBT Post-test application DBBT Post-test application

1.7. Application of the Program

1. Reviewing the literature on the topic over a large period.
2. Selecting the units and the topics to be implemented under the supervision of an expert.
3. Developing Grammar Academic Success Test to be applied during the study with the support of an expert.
4. Finding the Turkish Lesson Attitude Scale developed by Ministry of National Education.
5. Calculating the reliability and validity coefficients of Grammar Academic Success Test and Turkish Lesson Attitude scale.
6. Selecting the animations prepared on the topic with the supervision of an expert from the sites www.morpa.com, www.vitamin.com, www.egitimhane.com, www.turkcede.org, www.turkcedersi.gen.tr, www.dil-bilgisi.net, www.dersimizturkce.gen.tr and redesigning them for the topic to be studied.
7. Preparing lecturing supported with motion videos, images and audio files by the researcher.
8. Informing the teachers and the students about the scientific research.
9. Applying Grammar Academic Success Test and Turkish Lesson Attitude Scale as pre-test on the groups selected randomly.
10. Lecturing the experimental group with animation-assisted constructivist approach, lecturing the control group with only constructivist approach about the related topic under the supervision of assistant professor for 6 weeks.
11. Re-demonstrating the animations to the students at any time and at any number.
12. Applying the related success test and attitude scale as a post-test to the groups,
13. Re-applying the same success test as a retention test four to five weeks after the post-test,
14. Mentioning the importance of the applied retention test to students,
15. Entering the obtained data in Excel and making the related analysis with SPSS package program,

16. Making the related evaluations by taking the opinions of the experts in the field as a result of the analysis made.

2. Method

This study was carried out within the scope of the master thesis study with 60 students in a secondary school located in the Palandöken district of Erzurum province, affiliated to the Ministry of National Education, in the 1st period of 2014-2015 academic years. The experimental and control groups of the study are the seventh-grade students. The experimental group among these two groups were taught "Indicative and Subjunctive mood" topics with activities prepared on the basis of animation-assisted applications enriched with 5E model for 6 weeks, and in the control group, the lessons were conducted with question-answer and direct instruction methods as well as the activities in the student textbooks and workbooks of Ministry of National Education. The pre-test was conducted on the first week, the implementation was applied until sixth week, the post-test was conducted on the sixth week and the delayed post-test was conducted after four weeks.

In the analysis of the quantitative data obtained in practice, the frequency and percentage from descriptive analysis and the parametric (t-test and variance analysis) analysis were used. In the analysis of the data obtained from the interview forms, content analysis technique was used.

Converging the parallel pattern, a mixed method designs, was used in this study. Parallel converging pattern "quantitative and qualitative phases of the research process", simultaneously the same occurs with the application in a stage. This pattern gives equal priority to the method. During the analysis, these phases were kept separate from each other and then combined the results when interpreting general. The researcher will collect qualitative and quantitative data separately but together makes a comparison to determine whether the findings analyze the data and verify each other (Creswell, 2013; 219).

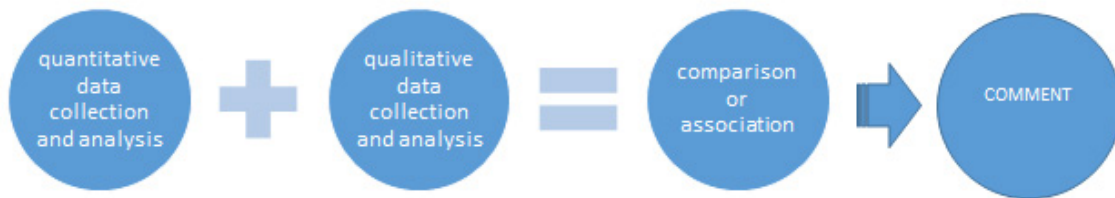


Figure 1. Converging parallel mixed-method pattern

2.1. Research Problem

How effective is teaching of "Indicative and Subjunctive Mood" to elementary school 7th grade students in Turkish lesson with animation-based activities prepared in the direction of 5E teaching method on their academic success and on the development of their attitudes towards the lesson?

2.2. Data Collection Tools

This section provides information on the preparation process of the data collection tools used in the study and the pilot scheme of the research. The data of the research are collected with;

- Turkish Lesson Attitude Scale,
- Grammar Success Test,
- Use of Technological Tools in Grammar Lesson Interview Form,
- Student Interview Form of Computer-assisted Grammar Teaching,
- Grammar Activities Attitudes Scale,
- Student Interview Form of Use of Animation in Grammar Lesson,
- Teacher Views Form on Grammar Lesson.

3. Findings

In this study which is conducted to determine effects of teaching of "Indicative and Subjunctive Mood" to elementary school 7th grade students in Turkish lesson with animation-based activities prepared in the direction of 5E constructivist approach on their academic success and on the development of their attitudes towards the lesson, the findings obtained from the analysis and statistical analysis of the data obtained in this study are given below.

Table 4. First test of the experimental and control group t-test results

	N	\bar{X}	SS	t	p
Experimental	25	56,96	48	,524	,753
Control	25	54,64	47,99		

The results of the experimental and control group before the application of the first test in order to determine whether they are statistically significant a t-test was applied. $T_{48}=,524$ and $P=,753$, $p>0.05$ it is observed that the significance level is meaningless. This finding is a significant difference between the experimental and control group before the implementation of value orientations does not suggest that.

Table 5. The final test of the experimental and control group t-test results

	N	\bar{X}	SS	t	p
Experimental	25	78,56	48	2,223	,007
Control	25	70,08	41,678		

The results of the experimental and control group after the application of the final test in order to determine whether they are statistically significant a t-test was applied. $T_{48}=2.223$ and $P=,007$ $p<0.05$ for significance, it is observed that significant level. After the application of this finding experimental and control groups indicate that there is a significant difference between the levels of the value of winning.

In this part of the study, it is aimed to investigate the effect of the 5E learning model on the students' attitudes towards the Turkish grammar lesson and their success. For this purpose, the research was carried out with the participation of 60 students who attended a secondary school in Erzurum. A questionnaire consisting of 20 items and a success test consisting of 25 questions were applied to these students to measure their attitudes about Turkish lesson. The reliability and validity of the test to be used were tested by pilot study conducted on 40 students before starting the application. The attitude scale used in the study is the measure prepared by the Ministry of National Education's Education Research and Development Department (EARGED) and published in the Turkish Lesson Curriculum (2005).

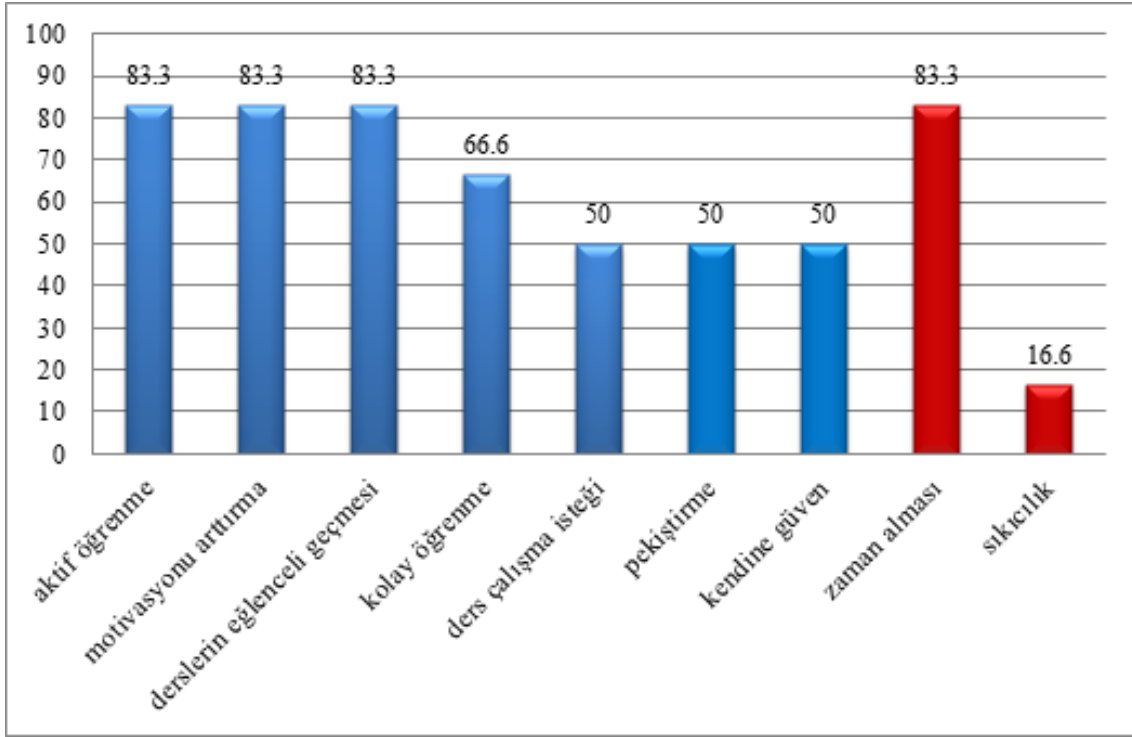
The test and questionnaire questions were repeated twice before and after the 5E learning model was applied, and it was analyzed whether there was a statistical difference between these two repetitions. In order to better understand whether there is such a difference, the sample was divided into two groups, control and experimental group. The control group was taught with the existing curriculum and an animated 5E learning model was applied to the experimental group. The statistical difference between the pre-test and the post-test was made in two ways, both as a question-oriented and as an overall score. In this respect, a comparison between the answers given to the questions in the pre-test and post-test could be made, as well as a comparison of the general scores of the students. During the interviews conducted with the students, the effects of the activities prepared for the grammar, the computer-assisted education and the linguistic-technology interaction were asked. In addition, teachers were interviewed about the grammar-technology interaction. The answers were analyzed with content analysis technique and the themes were created and presented in tables together with the frequency values.

It has been observed that the students in the study group of the research liked doing activities during the lesson. We can say from the answers that it is easier for students to participate in class by making animated activities.

The categories created by the descriptive analysis of semi-structured interview data prepared to identify student views on the animated 5E application are presented in Table 6 as two main headings: "advantages" and "disadvantages".

Table 6. Students' View on Grammar Activities

Students' View on Grammar Activities	%	Themes
Advantages	83,3	Active learning
	83,3	Increasing motivation
	83,3	Having fun and enjoyable lessons
	66,6	Easy learning
	50,0	The desire to study
	50	Reinforcement
	50	Self-confidence
Disadvantages	83,3	Takes time
	16,6	Boringness



Graph 1. Student opinion categories chart about animated 5E method applications

During the interviews with the students, first, points that they like in the teaching of the grammar topics were asked. It was seen that the students in the experimental group of the research had a better understanding of the grammar and enjoyed the grammar by playing games during the lessons.

It can be interpreted from the responses that students can better understand the grammar rules by participating in the lesson with activities.

Some sample statements are shared below from the answers of the experiment group students to this question;

"Playing games, watching videos, understanding the reasons for the rules"

"I thought more, I attend the class willing, if all the lessons are like this"

The opinions of some of the students in the experiment group in terms of as negative results of computer use are;

"The computer distorts our eyes, emits radiation, is addictive, I do not know how to use a computer"

On the other hand, the students in the control group of the study responded to the same question that they liked writing, solving the test, and teacher's instruction. Students' answers showed that they were receiving one-sided lessons with teacher-centered methods during the lesson and were not interacting with each other. In addition, the expression of a student's pleasure in group work during the lesson can be interpreted as the students enjoying the interactive lesson with the teacher or friends.

Some sample statements from the control group students' responses to this question are as below;

"Writing about the subject, the teacher's explaining the subject in detail"

"Doing a test about the subject, doing group study during the class"

The concept map resulting from the analysis of the answers to this question is given in Figure 2:

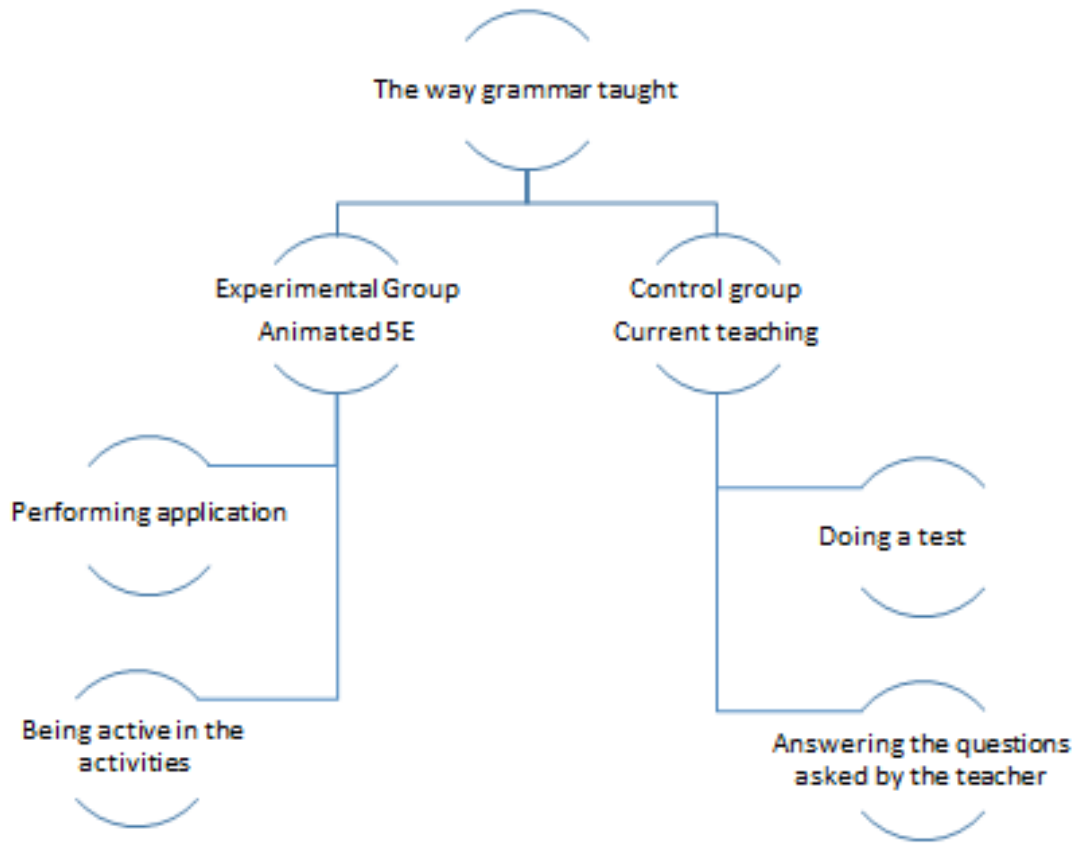
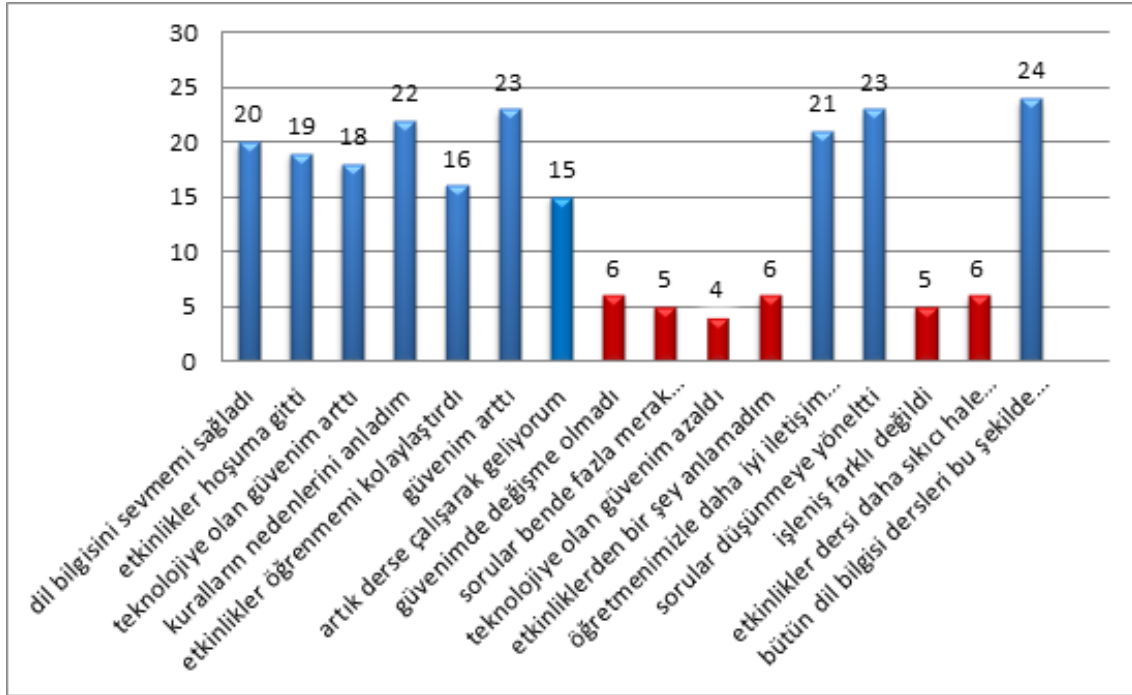


Figure 2. Points that students like in teaching grammar topics



Graph 2. Student opinion categories chart about animation method applications

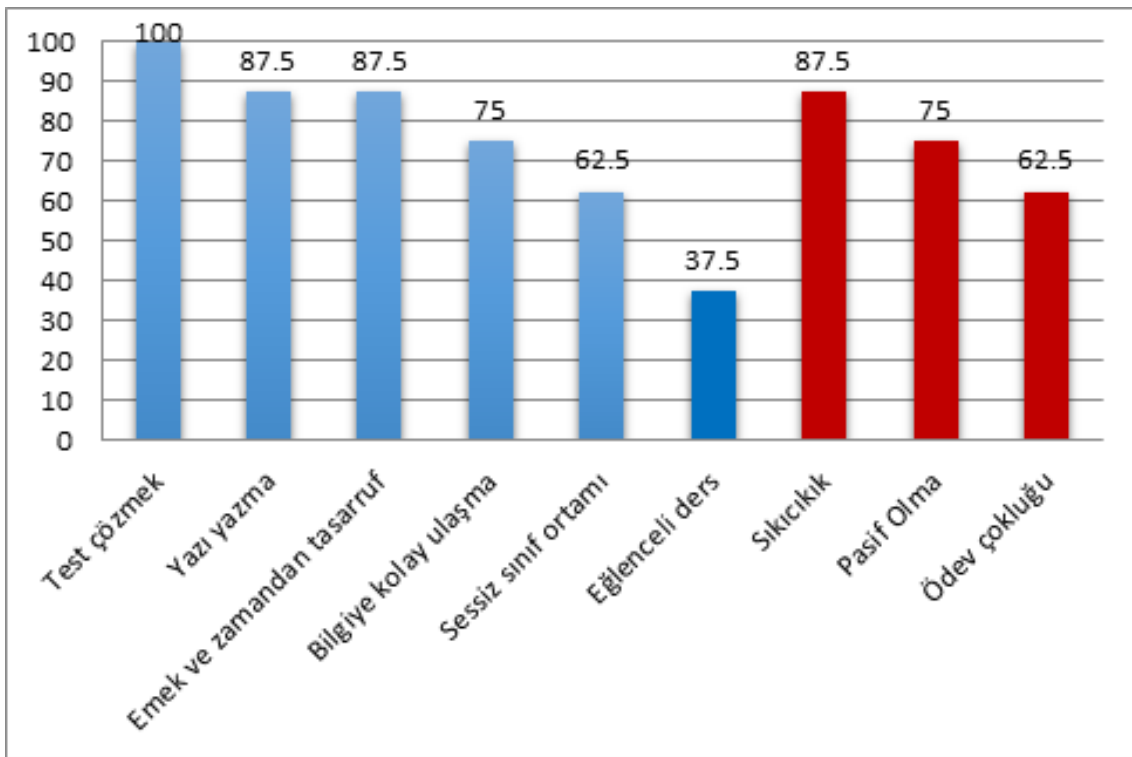
The following sample sentences contain the dimension of ensuring the learning of all students with activities such as lecturing with activities, thinking, commenting and discussion in the lessons.

Student 1: ... during the course, we have constantly done activities on the computer. I think an activity must be done in each course. The grammar topics are just as well, because we cannot learn from the teacher's instruction and our writing.

The categories formed by the descriptive analysis of open-ended questionnaire data for presenting student views on current educational methodologies are presented in Table 7 as two main headings: "advantages" and "disadvantages".

Table 7. Student's Opinion Categories on Current Education Method Practices

Views on current education method	%	Themes
Advantages	100,0	Doing a test
	87,5	Writing
	87,5	Saving Labor and Time
	75,0	Reaching the information easily
	62,5	Quiet classroom environment
	37,5	Enjoyable course
Disadvantages	87,5	Boredness
	75,0	Being passive
	62,5	The much amount of homework



Graph 3. Student's opinion categories graph on current training method practices

Table 8. Opinions of students about open-ended question: What happened to your mind when you encountered animations in grammar topics? And Percentage and frequency values of these opinions

Codes	Student expressions	f	%
Positive Feelings	<ul style="list-style-type: none"> When I encountered animations in grammar topics, I thought that I could understand and succeed in grammar subjects better. I thought that the grammar topics will be a lot of fun, that I will enjoy this course and that my imagination will develop. I was very happy when computer was involved in the course and I thought I would understand the topics better. I was bored of the grammar topics before. When I saw the animated activities, I thought my interest in grammar would increase and the lessons would not be boring anymore. 	17	57
Negative feelings	<ul style="list-style-type: none"> I thought I could not use the computer when I saw that the grammar would be taught by computer and I was afraid. I did not know what the animation was and I was excited. I thought I could not do. I had a moment of surprise and was excited because we had never had a lecture in which we played a game. 	13	43

57% of the students responded positive and 43% of the students responded negative to the open-ended question: "What happened to your mind when you encountered animations in grammar topics?". Students who responded positive stated that animation-assisted grammar would be fun, that they would enjoy the course, that their imagination could develop, and that they could understand the subjects better. The students who responded negative stated that they do not have any information about animation since they have never been taught with animations before, and that this situation will bring about failure in grammar subjects.

Opinions of students about open-ended question "Did using animation in grammar topics affect your success? Why?" and percentage and frequency values of these opinions are indicated in Table 9.

Table 9. Opinions of students about open-ended question "Did using animation in grammar topics affect your success? Why?" and percentage and frequency values of these opinions

Codes		Student expressions	f	%
Yes	Permanence Repetition Understanding Imagination Interest Attention Participation	<ul style="list-style-type: none"> • Animations stick in my mind when we have animation-assisted lessons. That's why I remember things easily. • Animations come alive in front of my eyes. Because it's like a game. That's why I did not forget what I learn. • When I solved the grammar questions, I remembered the activities and I answered the questions easily. • Animation-assisted activities are more permanent. • I immediately remember the activities we have had a lot fun while working on grammar. I remember the topic immediately. • It made it easier for me to do repetition. • Repeating grammar is no longer boring. • Animation-assisted activities make us understand the subject better. • My interest in grammar increased. For this reason, I have worked more on grammar topics and started to like the grammar. I came prepared for the classes. • I overcame my excitement. • Animation enabled my attention to focus on lessons. 	29	97
No	distraction	<ul style="list-style-type: none"> • I could not pay attention to the course because there was a computer. 	1	3

To the open-ended question "Did using animation in grammar topics affect your success? Why?", 29 of the students stated that the animation use affected their success positively and one of the students stated it affected negatively. That 97% of the students stated positively can be interpreted that the animation enables learning to be permanent and repeatable, helps build meaning, develops imagination, increases attention, interest and participation in the lesson.

4. Result

Before the implementation;

1. There was no significant difference between the groups when the attitudes scores of the two groups towards Turkish course were compared before the implementation. This suggests that pre-implementation attitudes are similar in both groups.
2. It was seen that there was no significant difference in the pre- and post-practice attitude scores of the control group in which the current teaching program was applied.
3. A significant difference was found in the pre- and post-practice attitude scores of the experimental group in which the animation-assisted 5E application was used

After the implementation;

1. As a result of the experimental study, DBBT was applied to both groups as a final test. When the final test success scores of the experimental group and the control group were analyzed, it was seen that they were close to each other, but in the correct numbers, the students in experimental group showed a significant increase. According to these results, 5E method supported with animations in general can be considered to be more effective in increasing success.

If we look at the discussions and conclusions about the analysis of student opinions;

- What are the thoughts of the implementation students about the effectiveness of the teaching materials used in the study?
- Does the Animation Technique have an effect on the students' academic achievements and attitudes towards the course?
- How effective is the practical applicability of the teaching materials (animations) prepared according to model 5E of structuralist teaching in terms of teacher and students' opinions, taking into account the topic "Indicative and Subjunctive Mood"?

The results related to the questions above are explained below:

That the experimental group students' motivation for the grammar activities is increased, the lessons are more fun and enjoyable, they learn easily, they have the will to study and they feel confident about themselves shows that the implemented method is effective (Arıcı and Dalkılıç, Daşdemir, Kurt (2006), İskender (2007), Çelik (2007), Özcan (2008), Karaduman, Yakışan (2008), Karaçöp et al., Kolomuç (2009), Öztürk Taşkale (2011). Positive subcategories such as "permanence, repetition, understanding, imagination, interest, attention, participation" were formed for the students.

According to the students' answers from the grammar forms we had and so did Wilder and Shuttleworth (2005, cited by: Öztürk, 2008: 46), it was seen that 5E model provided conceptual development of students and motivated them. **Question: What is the difference between this course we are studying and other courses (or grammar course)? Answer: I understood the grammar rules and concepts better.**

1. As a result of the findings obtained from "Use of Technological Tools in Grammar Lesson Interview Form, Student Interview Form of Computer-assisted Grammar Teaching, Grammar Activities Attitudes Scale, Student Interview Form of Use of Animation in Grammar Lesson, Teacher Views Form on Grammar Lesson", it was determined that the status of the control group students on starting the lesson was almost the same as before the practice. It was determined in the experimental group that the status of the students on liking the lesson, having fun, expression opinions, learning easily in class, self-learning, willingness to participate in the lesson was increased compared to the pre-implementation.
2. **That the student responded to the question "Using the technological tools in grammar lesson increased my interest in the lesson. Because..." as "It makes the course more fun. And as the course is conducted with technological tools, our interest in the course increases more."** supports the finding of Lord (1999) which is "using 5E and technology makes the course more enjoyable and interesting", and the finding of Boddy, Watson and Aubusson (2003) which is "Their trial of a unit study based on the 5E Model was found to be interesting and funny by the students."
3. The answer of the teachers "It facilitates learning a foreign language" to the question "Why should grammar be taught?" in the Teacher Views Form on Grammar Lesson supports the finding of Stoffel's (1990) study, in accordance with the conditions of Turkey, that the subjects preferred the expression that grammar teaching "helps foreign language learning."

In the results and discussion of retention test; According to the results of the Retention Test applied to

the groups five weeks after the end of the implementation; it was determined that the retention scores of the experimental group students were significantly higher than those of the control group students. In other words, the 5E method supported with animations used in the experimental group became more effective in ensuring the permanence of the information that the students get, as found in Kurt (2006), Karaduman (2008), İnanç (2010), Daşdemir and Doymuş (2012).

The reason for the success of the 5E teaching method used in the experimental group in increasing the success and attitudes of the students compared to the conventional teaching can be listed as follows;

- 5E teaching method activates students' prior knowledge,
- It provides the opportunity to the students to construct information,
- It enables the students to reach the information themselves and gives them the opportunity to learn by living and learning within the process.

It was determined that the teaching material prepared in the research realizes the differentiation in conceptual structures as desired and makes this differentiation permanent in the student mind. In the study conducted, the result of the animated 5E learning model was found to be effective in increasing the achievements and attitudes of the students compared to the current teaching.

When studies on different disciplines in the last 10 years are examined, it is seen that computer-assisted applications, 5E method and animations increase academic success in the courses. Given this positive impact on access level, it was determined that such studies should be conducted more and more in the educational environment.

It can be recommended for the new studies in the direction of findings obtained in the research;

- When considering the difficulty of teaching and the richness of the grammar topics in Turkish language, it is necessary to use different methods and techniques with many activities and examples in order to get as far away from abstract as possible.
- In the curriculum, it appears that the grammar topics are handled and assessed in pieces. Instead, the topics should be handled with a holistic approach and be transformed into acquisition by making them non-exam based.
- The students should know why they need to learn grammar and they should be encouraged to stay away from memorizing.
- As a result, that grammar is not just a set of rules should be considered in teaching programs, in teacher training programs, in academic environments in which materials are developed. To achieve this, it is necessary to design grammar lessons not based on memorization, with an approach which grasps the rules of language,

creates awareness, and with which language competencies are acquired at the level of a habit with activities.

REFERENCES

- [1] Aubusson, P., Boddy, N., and Watson, K. (2003). A Trial Of The Five Es: A Referent Model For Constructivist Teaching And Learning. *Research in Science Education*, 33, 27-42.
- [2] Akçay, H., Feyzioğlu, B., Tüysüz, C., ve Oğuz, B. (2008). Bilgisayar tabanlı ve bilgisayar destekli kimya öğretiminin öğrenci tutum ve başarılarına etkisi. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 4(2), 169-181.
- [3] Baydar, A. S. E. (2003). İlköğretim Okullarının İkinci Kademesinde Dil Bilgisi Öğretimi. *Türk Dili*, 87 (624), 779-783.
- [4] Bybee, R.W. vd. (2006). *Clinical study of the BSCS 5E instructional model*, <http://www.bsos.org/researchevaluation/research/projects/5eres.html>. 02.03.2016'da alınmıştır.
- [5] Creswell, J. (2013). *Nitel, nicel ve karma yöntem yaklaşımları araştırma deseni*. Eğiten Kitap Yayınları.
- [6] Coştu, B., Çepni, S. & Yeşilyurt, M. (2002). *Kavram Yanılıklarının Giderilmesinde Bilgisayar Destekli Rehber Materyallerin Kullanılması*. 5. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, ODTÜ, Ankara.
- [7] Daşdemir, İ. (2006). *Animasyon kullanımının ilköğretim fen bilgisi dersinde akademik başarıya ve kalıcılığa etkisi*. Yayınlanmamış yüksek lisans tezi, Atatürk Üniversitesi Fen Bilimleri Enstitüsü, Erzurum.
- [8] Duman, B. (2008). *Öğrenme-Öğretme Kuramları ve Süreç Temelli Öğretim*. Ankara: Anı Yayıncılık.
- [9] Hırça, N. Çalık M., & Seven, S. (2011). 5E modelinin "iş, güç ve enerji" ünitesiyle ilgili kavramsal değişime etkisini inceleme. *Journal of Turkish Science Education*, 5(1), 139-152.
- [10] İşman, A., Sevinç, V., & Altıntığ, E. (1998). *Fen bilgisi öğretiminde eğitim teknolojilerinin uygulamaları*. 2. Fen Bilgisi Öğretimi Konferansı. Karadeniz Teknik Üniversitesi, Trabzon.
- [11] Keser, Ö. F. (2003). *Fizik eğitimine yönelik bütünleştirici bir öğretim ortamı tasarımı ve uygulaması*. Yayınlanmamış doktora tezi. KATÜ Fen Bilimleri Enstitüsü. Trabzon.
- [12] Kolomuç, A. (2009). *11. sınıf "kimyasal reaksiyonların hızları" ünitesinin 5e modeline göre animasyon destekli öğretimi*, Yayınlanmamış doktora tezi, Atatürk Üniversitesi Fen Bilimleri Enstitüsü, Erzurum.
- [13] Korkmaz, Z. (2003). *Türkiye Türkçesi grameri*. Ankara: TDK Yay
- [14] Kurt, C. (2005). *Bilgisayar destekli eğitim yöntemlerinin öğrenciler üzerindeki etkilerinin incelenmesi*. I. uluslararası mesleki ve teknik eğitim teknolojileri kongresi'nde sunulan bildiri, Marmara Üniversitesi, İstanbul.
- [15] Küçükıylmaz, E.A., 2003. *Fen bilgisi dersinde öğrenme halkası yaklaşımının öğrencilerin akademik başarılarına ve hatırlama düzeylerine etkisi*. Doktora tezi. Eskişehir, Anadolu Üniversitesi.
- [16] Özbay, M. (2007). *Türkçe özel öğretim yöntemleri II*. Ankara: Öncü Kitap.
- [17] Özmen, H. (2004). Fen öğretiminde öğrenme teorileri ve teknoloji destekli yapılan yapılandırmacı (constructivist) öğrenme. *The Turkish Online Journal of Educational Technology* 3(1), 100-111.
- [18] Öztürk, Ç. (2008). *Coğrafya öğretiminde 5e modelinin bilimsel süreç becerilerine, akademik başarıya ve tutuma etkisi*. Yayınlanmamış doktora tezi, Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.
- [19] Stoffel, J. A. 1990. Are they teaching grammar in the junior high? (Do they want to?) *Contemporary Education* 61, 4 summer: 190-4.
- [20] Usta, E. & Korkmaz, Ö. (2010). Öğretmen adaylarının bilgisayar yeterlikleri ve teknoloji kullanımına ilişkin algıları ile öğretmenlik mesleğine yönelik tutumları. *Uluslararası İnsan Bilimleri Dergisi*, 7(1), 1335-1349.
- [21] Yılmaz, H. (1996). *İlkokul Beşinci sınıf Türkçe ders kitaplarının kelime ve cümle kadrosu*. Yayınlanmamış yüksek lisans tezi. Gazi Üniversitesi Sosyal Bilimler Enstitüsü, Ankara.