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THE EFFECTS OF ACTIVE LEARNING ON FOREIGN LANGUAGE SELF-CONCEPT AND READING COMPREHENSION ACHIEVEMENT

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ABSTRACT

The purpose of this study was to investigate the effects of active learning on foreign language self-concept and reading comprehension achievement. This research was carried out through an experimental design with experimental and control groups. In the Spring Term of 2005-2006 Academic Year, 182 male college students formed the experiment and the control groups which were all randomly chosen. Active learning techniques were applied to experiment groups for 13 weeks while the control groups were educated through traditional methods in teaching English. The data of the research were gathered by the Foreign Language Self-Concept Scale which is developed by the researcher and a reading comprehension placement test. The results demonstrated that the researcher-mediated learning environment, i.e. the group engaged in active learning techniques, was successful in enhancing reading comprehension achievement. On the other hand, the effect of active learning on foreign language self-concept was found to be insignificant. Furthermore, there is no significant correlation between foreign language self-concept and reading comprehension scores according to the types of high schools the students have graduated from.

Key Words: Active learning, reading comprehension achievement, foreign language self-concept.

INTRODUCTION

The twenty first century is a new era shaped by a rapid change affecting both the individuals and organizations. In this new era educators and educational institutions are faced by the challenge of meeting the rapidly changing new demands of their communities and fulfilling the needs of the new generation learners. Traditional lectures which have been the form of learning and teaching for decades turned out to be insufficient in providing learning opportunities to the students and teachers. Therefore educational institutions aiming at graduating students who are learning constantly instead of memorizing academic or encyclopedic information abandoned the traditional methods in learning environments.

Traditional form of teaching is a reflection of behaviorism which shaped educational practices for nearly 50 years from 1920s until 1970s. Focusing on the observable and measurable human behavior, behaviorists concerned with the behavior of organisms and committed to the thesis that behavior can be explained without reference to non-behavioral mental (cognitive, representational, or interpretative) activity. Throughout the

behaviorist reign, mental processes are all ignored and process of teaching is regarded as a black box that cannot be explored. So, behaviorists focused on the process-product paradigm (Romizowski, 1981).

Cognitive psychology has emerged as a reaction to behaviorism since the early 1970s. Based on the major premises of cognitive psychology, constructivists, unlike behaviorists, think that learners construct their own knowledge. Regarding the human as the "meaning maker" and "knower", constructivists claimed that knowledge is not independent of people and constructing knowledge means that students are active participants in a learning process by seeking to find meaning in their experiences (Sener, 1997). In addition, according to the constructivists knowledge is constructed in the socio-cultural context within the framework of the learners' experiences and their present knowledge. Constructivism regards the individual learner as the core element of learning process and learners build the knowledge by forming links to the ground to which former knowledge structures are attached. In other words, learners transfer new knowledge structures to their own mental schema by taking advantage of their prior knowledge and experiences and ability to create meaningful structures by synthesizing old and new.

Traditional approach to teaching views the instructors as omnipotent actors of the classroom responsible for transferring the pre-planned content to the students. In this respect, the learners are expected to be passive objects of the learning process. On the other hand, contemporary approach to learning points out the importance of deep learning and rejects the idea of memorizing the information presented by the instructor. For the constructivists, the learner is not the passive recipient of the transferred knowledge but he is the active participant of the learning process. So, constructivist instructors' main concern is providing the learners with leaning environments in which they can engage in meaningful interactions and be an active participant of the process conducted by the instructor. (Steffe and Gale, 1995) According to constructivists, learner has an active role in teaching-learning process. Constructivist classroom environment, therefore, is not a place to transfer the information, is a place where students' active participation is ensured, inquiry and research are conducted and problems are solved. So, classrooms should be designed in such a way that the learners interpret and construct meaning based on their own experiences and carry out research to find solutions to the problems they encounter in the learning process Thus, students will be allowed to live rich learning experiences (Demirel, 2002).

Jean Piaget, an important figure in the development of constructivist theory, points out the learners' attempts to create meaning and defines intelligence as the ability to adapt the environment. According to Piaget, in order to ensure intellectual growth and survive in an environment human beings constantly revise and reorganize their mental structures. So, constructivist educators should help the learners to encounter situations leading to cognitive development instead of presenting the content in a pre-determined order (Bybee and Sund, 1990).

Vygotsky is also a constructivist whose theories stress the fundamental role of social interaction in the development of cognition. He believed that community plays a central role in the process of teaching and learning. He claimed that cognitive development is directly proportional to the degree of social interaction in the community.

The conception of learning as an inherent process mediated by cognitive processes rather than environmental factors led to changes in the perception of learning which in return changed the perception of teaching. As a result, studies in the field of education have focused on cognitive processes and their roles on learners (Açıkgöz, 1996).

Active Learning

Constructivists concerned with the issue of learning and interested in the nature of knowledge and factors influencing cognition process. Constructivist theory explains how students learn but does not state the

teaching procedures to be applied in constructivist classrooms. Active learning model developed on the principles constructivist theory sets techniques and procedures to apply constructivist theory in the classroom. Active learning is a student centered approach to learning and it assigns the responsibility of learning to the student. In order to ensure active learning in classrooms students should be self regulated and have an active role in decision making process while engaged in cognitively challenging academic tasks. Active learning enhances the quality of student learning as students learn by creating meaning rather than memorizing information transmitted by the teacher. Active learning as a means to achieve qualitative, that is ''deep,'' learning has become an accepted form of learning and teaching in higher education (Haack, 2008). In order to promote active learning in classrooms using student-centered instructional strategies is a must. At that point the question that should be asked is "Which instructional strategies should be used to facilitate active learning?" Enabling the instructors to use active learning strategies in classes, cooperative learning techniques are widely used to actively involve students with course concepts and issues.

Cooperative learning as a form of active learning is a general title for a set of classroom teaching methods where students work in small groups to help one another study academic subject matter (Tan, Sharan & Lee, 2006: 4). Cooperative learning can be considered as students' learning process by working in small groups and helping each other. Students' effort to develop both themselves and their friends to the end of their capacity is what makes group works cooperative learning. This is quite different from students' learning alone. During cooperative learning activities students are held accountable for their contribution, participation and learning. Students are also provided incentives to work as team in teaching others and learning from others (Slavin, 2000). In a cooperative lesson, students are involved in the process of learning in an active way: Learning requires students' direct and active involvement and participation i.e. learning is something students do, not something that is done to students (Johnson, Johnson&Holubec, 1994: 4). Not all group works are cooperative learning and working in small groups is not enough for students to realize cooperative learning. It is only under the following conditions that a group work can be cooperative learning;

1. Group Award: To be successful it is a must for members to have a group with success. In other words groups must be successful in order to be members of the group to be successful.
2. Positive Interdependence: Creates a situation that individuals combine their efforts for reward and common purpose. Each group member has a unique contribution to make to the joint effort because of his or her resources and/or role and task responsibilities.
3. Individual Accountability: Group success depends on each individual's learning. Each student should have the responsibility of learning all the material and doing what is s/he is expected to do.
4. Face-to-Face Interaction: Group members encourage each other and facilitate each other's effort.
5. Social skills: Students should be taught how interpersonal relations should be and they should be encouraged to use them.
6. Evaluation of Group Process: It should be decided which member acts of the group contribute to reach the group goals and which of them should be changed or eliminated.
7. Equal Opportunity for Success: Contribution of students by developing their own performances. Scoring individual efforts can be used to ensure this goal (Açıkgöz, 1992).

Educational research has shown that academic achievement is positively influenced by the amount of active participation of students in the learning process (Gardner et al., 1994). Shimazoe and Aldrich (2010) reports benefits of cooperative learning for students such as promoting deep learning of materials, achieving better grades, learning social skills and developing positive attitudes toward autonomous learning. Richard M. Felder-North Carolina State University Department of Chemical Engineering Faculty Instructor, Gary N. Felder-Stanford University Department of Physics Instructor and E. Jacquelin Dietz-North Carolina State University Department of Statistics Instructor carried out a research exploring the use of active learning practices in higher education in 1990. This study carried out in North Caroline State University, USA and lasted for five consecutive semesters in five field courses given by the same instructor. Participants of the study were 123 chemical engineering students. The aim of the research was to determine the degree of effectiveness of active

learning practices on chemical engineering students' academic performance and their attendance to the program. In the study participants are assigned to control and experimental groups. Experimental group students received intensive active learning practices whereas the control group students are taught via traditional teaching methods. The researchers concluded that active learning practices of which effectiveness are proven by numerous researches led to positive learning and teaching experiences for the participants (Felder, Felder, and Dietz, 1998).

Active Learning in Turkish Air Force (TuAF) NCO College

In an era where the success is directly related to the extent which one keeps up with the rapid developments in science and technology, it is a must to learn a foreign language. Turkish Armed Forces, being quite aware of this fact, set mandatory English prep classes for military high schools and for higher education institutions i.e. military academies and NCO colleges English became a core course in the curriculum. TuAF NCO College is a two-year educational institution offering associate degree to the Air Force NCOs majority of whom will take part in multinational task forces right after graduation. Assuming the responsibility of educating those cadets, establishing the curriculum of the college the decision makers spared the first year for English. With a 27 class hours per week program the freshman class was almost a prep class for the cadets.

In order to maximize the impact of the curriculum, it was a must to abandon the traditional lecture method which was dictated by the obsolete course books. So, active learning practices in the form of cooperative learning techniques would be a solution to the problem. Teachers play a major role in starting up a new program and adopting an innovation in an institution teacher readiness is one of the basic determinants of success. In the NCO College, in order to apply active learning techniques successfully, it was a must to teach the academic staff. So, all the teaching staff participated in this study attended an active learning in-service training program. Active learning training program comprised the theoretical background, discussion of theory and practice teaching sessions followed by discussions. This program totally lasted three months. This study aimed at determining the effects of active learning practices on the students' reading comprehension achievement and foreign language self-concept. It is also expected to enable the educational administrators to compare the present and proposed educational practices in the light of valid research data.

METHODOLOGY

Research Design

In this research, pretest-posttest experimental design with control group was employed. Language teaching based on the techniques of active learning was used in the randomly chosen experimental groups whereas traditional language teaching methods were used in the randomly chosen control groups. Participants for the research were 182 male cadets enrolled in the TuAF NCO College in 2005-2006 Academic Year. In the Spring Term of 2005-2006 Academic Year, five groups (n=92) formed the experimental groups, and five groups (n=90) formed the control groups. The data of the research were gathered by a five point likert type scale and a reading comprehension placement test. Participants' academic self-concept scores were measured by the Foreign Language Self-Concept Scale (FLSCS). The scale consisted of 34 items and developed by the researcher. Cambridge Preliminary English Test (PET) made of 35 items was given as the pre-test and post-test to measure the participants' level of reading comprehension. Following the pre-test administration of FLSCS and PET, active learning techniques were applied to experimental groups for 13 weeks while the control groups got traditional English language teaching methods. At the end of the experiment, the same FLSCS and PET were administrated as posttests.

Table 1: The Process of Research Design

Group	Pre-Test	Process	Post-Test
Experiment Group	Foreign Language Self-Concept Scale (FLSCS)	Active Learning	Foreign Language Self-Concept Scale (FLSCS)
	Reading Comprehension Test (PET)		Reading Comprehension Test (PET)
Control Group	Foreign Language Self - Concept Scale (FLSCS)	Traditional Lecture	Foreign Language Self-Concept Scale (FLSCS)
	Reading Comprehension Test (PET)		Reading Comprehension Test (PET)

Participants

The subjects participated in this study were 182 male students from TuAF NCO College. They were all freshman cadets at English Learning Level B[1]. Distribution of the participants in the experiment and control groups is shown in Table 2.

Table 2: Distribution of the Participants by Gender

Gender	Group	n
Male	Experiment	92
	Control	90

As it is shown on Table.2, since it is a military college the participants of the research are all male. They are all high school graduates and their ages ranged from 17-19. The subjects in the experiment and control groups are equally distributed by the high school they have graduated from.

Table 3: Distribution of the participants by high school they have graduated from

Group	High School	n
Experiment	General	28
	Vocational	64
Control	General	55
	Vocational	35

Instruments

The data in this research was collected by means of Foreign Language Self-Concept Scale (FLSCS) and Reading Comprehension Test-*Preliminary English Test (PET),* an intermediate-level test developed by University of Cambridge Local Examinations Syndicate (UCLES). FLSCS consisted of 34 items and was developed by the researcher. FLSCS comprising Likert Scale Type of questions with five choices from 1 to 5 (1=Strongly Disagree (SD), 2= Disagree (D), 3=Undecided (U), 4=Agree (A) and 5=Strongly Agree (SA). The first form of FLSCS had 60 items and it was applied to group of 360 students having the same properties with the study groups. As a result of the data obtained, it was established that the reliability of FLSCS i.e. Cronbach's Alpha was 0,955.

Data Analysis

Data of the research is derived from two sources. The first group of data gathered through the administration of the Reading Comprehension Test (PET*)* to the students to determine their proficiency levels in reading

[1] English Learning Level B: Pre-intermediate level to which graduates of vocational and general high schools placed based on their placement test scores. The cadets at this level are required of having at least an American Language Course Placement Test (ALCPT) score of 35

English. Second group of data is obtained from the application of the Foreign Language Self-Concept Scale which is a measurement tool used for determining students' self-concepts. Evaluating the participants' responses to the scale the scores on the negatively worded items were reversed in order to ensure that high scores meant agreement with the truth of the statements. Two-way Repeated Measures ANOVA which is used to determine the possible differences occurring in two or more groups was employed in the study. ANOVA is the most traditionally and widely accepted form of statistical analysis (Balian, 1994). The Statistical Package for Social Sciences (SPSS) was used for the purpose of data entry, manipulation, and analysis. Descriptive statistics (means and standard deviations) were used to describe the study sample. Comparison of means was done using t-test. The level of significance selected for this study was $p< 0.05$ level.

FINDINGS

The research hypotheses of this study and the findings related to these hypotheses are as follows. The first research hypothesis of this study is stated as, "Reading comprehension test achievement of the experiment group students are higher than the control group students' Reading comprehension test achievement". Dependent variable of this hypothesis is students' reading comprehension test achievement levels, and independent variable is the techniques employed in the experiment. Findings related to this hypothesis are presented below. Descriptive statistics of the control and experiment groups are shown in Table 4.

Table 4: Reading comprehension Test Achievement of Control and Experiment Groups
Descriptive Statistics (Whole Group)

	Group	n	$\overline{X}$	sd
Pre-test	Experiment	92	19.08	4.20
	Control	90	19.91	3.98
	Total	182	19.49	4.10
Post-test	Experiment	92	21.99	4.23
	Control	90	21.01	4.70
	Total	182	21.51	4.48

92 students in the experiment group and 90 students in the control group enrolled in this study. The total number of participants of the study is 182. Pre-test and post-test mean scores of these two groups are presented in Table 4. In order to find out the interaction effect between the groups Two-Way Repeated-Measures ANOVA was done. The results of this analysis are presented in Table 5.

Table 5: Reading Comprehension Test Achievement of Control and Experiment Groups
Two-Way Repeated-Measures ANOVA (Whole Group)

Source	**SS**	**df**	**MS**	**F**	**p**
Group	0.465	1	0.465	0.016	0.898
Achievement (pre-test)	366.33	1	366.33	43.79	0.000*
Achievement *group	74.77	1	74.77	8.94	0.003*
Error (achivement)	1505.70	180	8.37		

*p < 0.05

According to the Two-Way Repeated-Measures ANOVA results, the control and experiment groups' Reading comprehension test achievements can be interpreted as follows;

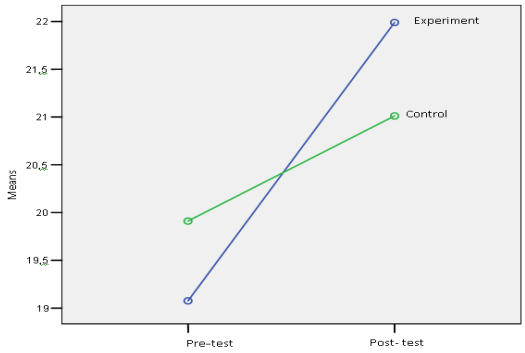

Figure 1: Reading Comprehension Test

1. The analysis based on the group variability, no statistically significant difference is detected (p=0.898).
2. The analysis carried out ignoring the group variability and taking only the achievement variability pointed out that there is a statistically significant difference (p=0.000).
3. The analysis carried out considering both the pre-test/post-test and the control/experiment groups interaction showed that there is a statistically significant difference (p=0.003)

Graphical display of the control and experiment groups' Reading Comprehension Test achievement means is presented in Figure 1. Comparing the difference between the whole control and experiment groups' Reading Comprehension pre-test and post-test scores to the control groups, considering the time elapsed, an interaction of the plots is observed. The lines diverging from being parallel, shows the stronger interaction of the effect of active learning practices carried out in experiment groups on their reading achievement.

The second research hypothesis of this study and the findings related to this hypothesis are as follows. The second research hypothesis of this study is stated as; "Foreign Language Self-Concept Scale (FLSCS) points of the experiment group students are higher than the control group students' Foreign Language Self-Concept Scale points". The dependent variable of this hypothesis is students' FLSCS points, and independent variable is the techniques employed in the experiment. Findings related to this hypothesis are presented below. Descriptive statistics of the control and experiment groups are shown in Table 6.

Table 6: FLSCS Points of Control and Experiment Groups Descriptive Statistics (Whole Group)

	Group	**n**	$\overline{X}$	**sd**
Pre-test	Experiment	92	112.7	25.46
	Control	90	115.81	20.88
	Total	182	114.27	23.30
Post-test	Experiment	92	119.02	24.64
	Control	90	117.99	22.63
	Total	182	118.51	23.60

The total number of participants of the study is 182. Pre-test and post-test mean scores of these two groups are presented in Table 6. Foreign Language Self-Concept Scale pre-test points are lower than the post-test points in both groups. In order to find out the interaction effect between the groups Two-Way Repeated-Measures ANOVA was done. The results of this analysis are presented in Table 7.

Table7: FLSCS Points of Control and Experiment Groups Two-Way Repeated-Measures ANOVA (Whole Group)

Source	SS	df	MS	F	p
Grup	91.583	1	91.583	0.15	0.698*
FLSCS	1615.68	1	1615.68	3.25	0.073*
FLSCS *Group	377.22	1	377.22	0.76	0.385*
Error (FLSCS)	89629.20	180	497.94		

*p < 0.05

According to the Two-Way Repeated-Measures ANOVA results, the control and experiment groups' Foreign Language Self-Concept Scale points can be interpreted as follows;

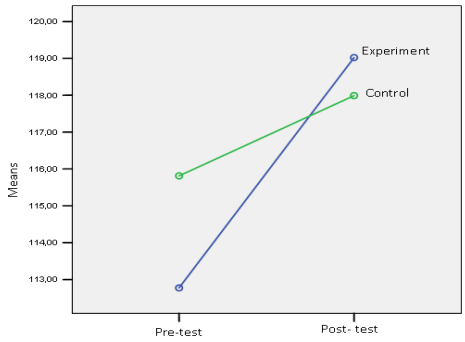

Figure 2: Foreign Language Self-Concept

1. The analysis based on the group variability, no statistically significant difference is detected (p=0.698).
2. The analysis carried out ignoring the group variability and taking only the achievement variability pointed out that there is no statistically significant difference (p=0.073).
3. The analysis carried out considering both the pre-test/post-test and the control/experiment groups interaction also showed that there is no statistically significant difference (p=0.385).

Graphical display of the control and experiment groups' Foreign Language Self-Concept Scale points' means is presented in Figure 2. Comparing the difference between the whole control and experiment groups' Foreign Language Self-Concept Scale pre-test and post-test scores to the control groups, considering the time elapsed, an interaction of the plots is observed. The lines slightly diverging from being parallel, shows that the active learning practices carried out in experiment groups did not create a significant effect on their Foreign Language Self-Concept.

The third research hypothesis of this study and the findings related to this hypothesis are as follows. The third research hypothesis of this study is stated as; "Considering the high school the students have graduated from, there isn't a significant difference between Reading comprehension test achievement of the experiment and control group students." Descriptive statistics of the control and experiment groups are shown in Table 8.

Table 8: Reading Comprehension Test Achievement of Control and Experiment Groups by High School Graduated Descriptive Statistics (Whole Group)

	Group	High School	n	$\overline{X}$	sd
Pre-test	Experiment	General	28	19.57	4.34
		Vocational	64	18.86	4.15
		Total	92	19.08	4.20
	Control	General	55	19.95	4.11
		Vocational	35	19.86	3.82
		Total	90	19.91	3.98
	Total	General	83	19.82	4.17
		Vocational	99	19.21	4.04
		Total	182	19.49	4.10
	Group	**High School**	**n**	$\overline{X}$	**sd**
Post-test	Experiment	General	28	22.68	4.76
		Vocational	64	21.69	3.98
		Total	92	21.99	4.23
	Control	General	55	21.13	4.77
		Vocational	35	20.83	4.64
		Total	90	21.01	4.70
	Total	General	83	21.65	4.80
		Vocational	99	21.38	4.22
		Total	182	21.51	4.48

The total number of participants graduated from general high schools and enrolled in the study is 83. The distribution of these students to the groups is as 28 students in the experiment group and 55 students in the control group. On the other hand, the total number of participants graduated from vocational high schools and enrolled in the study is 99. The distribution of these students to the groups is as, 64 students in the experiment group and 35 students in the control group. Pre-test and post-test mean scores of these two groups are presented in Table 8. In order to find out the interaction effect between the groups, Two-Way Repeated-Measures ANOVA is done. The results of this analysis are presented in Table 9.

Table 9: Reading Comprehension Test Achievement of Control and Experiment Groups by High School Graduated Two-Way Repeated-Measures ANOVA (Whole Group)

Source	SS	df	MS	F	p
Group	5.497	1	5.497	0.193	0.661
High School	22.268	1	22.268	0.782	0.378
Achievement	333.48	1	333.48	39.46	0.000
Achievement x High School	1.22	1	122	0.14	0.704
Achievement x group x High School	0.02	1	0.02	0.00	0.958
Error (Achievement)	1504.47	178	8.45		

*$p < 0.05$

Analysis of the data to test the first research hypothesis proved that reading comprehension test achievement of the experiment group students are higher than the control group students' reading comprehension test achievement. However, the difference between the two groups might be caused by the high school the students have graduated from. So, in order to ensure that the difference is the result of active learning practices, the reading comprehension achievement of the subjects in both experiment and control groups is analyzed by taking the high school as a factor affecting success. According to the Two-Way Repeated-Measures

ANOVA results, the general and vocational high school graduates' reading comprehension test scores can be interpreted as follows;

1. The analysis based on the group variability, no statistically significant difference is detected (p=0.661).
2. The analysis based on the high school variability, no statistically significant difference is detected (p=0.378).
3. The analysis carried out ignoring the group and the high school variability and taking only the achievement variability pointed out that there is a statistically significant difference (p=0.000).
4. The analysis carried out considering both the pre-test/post-test and the high school interaction showed that there is no statistically significant difference (p=0.704).
5. The analysis carried out considering the pre-test/post-test, the control/experiment groups and the high school interaction also showed that there is no statistically significant difference (p=0.958).

These results showed that active learning practices have similar effects on both general and vocational high school graduates. General and vocational high school graduates' Reading Comprehension Test achievement means is presented in Figure 3 and Figure 4. Comparing the difference between Reading Comprehension pre-test and post-test scores of the general and vocational high school graduates' in the experiment groups, considering the time elapsed, no interaction of the plots is observed. The lines as being parallel, shows the effect of active learning practices on Reading Comprehension Test achievement did not have a significant difference in terms of the high schools the students have graduated from.

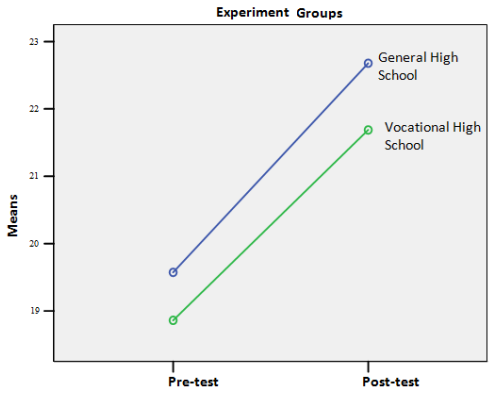

Figure 3: Reading Comprehension Test Achievement Means of the General and Vocational High School Graduates in Experiment Groups.

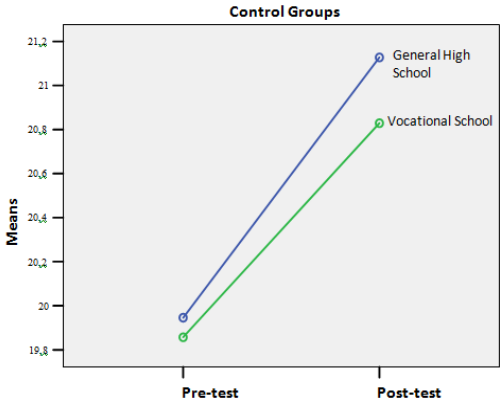

Figure 4: Reading Comprehension Test Achievement Means of the General and Vocational High School Graduates in Control Groups.

Comparing the difference between Reading Comprehension pre-test and post-test scores of the general and vocational high school graduates' in the control groups, considering the time elapsed, no interaction of the plots is observed. The lines as being parallel, shows the effect of active learning practices on Reading Comprehension Test achievement did not have a significant difference in terms of the high schools the students have graduated from.

The fourth research hypothesis of this study and the findings related to this hypothesis are as follows. The fourth research hypothesis of this study is stated as; "Considering the high school the students have graduated from, there isn't a significant difference between Foreign Language Self-Concept Scale (FLSCS) points of the experiment and control group students." Descriptive statistics of the control and experiment groups are shown in Table 10.

Table 10: FLSCS Points of Control and Experiment Groups by High School Graduated Descriptive Statistics (Whole Group)

	Group	High School	n	$\overline{X}$	sd
Pre-test	Experiment	General	28	119.64	22.07
		Vocational	64	109.77	26.41
		Total	92	112.77	25.46
	Control	General	55	117.29	21.63
		Vocational	35	113.49	19.72
		Total	90	115.81	20.88
	Total	General	83	118.08	21.68
		Vocational	99	111.08	24.22
		Total	182	114.27	23.30
	Group	**High School**	**n**	$\overline{X}$	**sd**
Post-test	Experiment	General	28	115.46	27.58
		Vocational	64	120.58	23.30
		Total	92	119.02	24.64
	Control	General	55	116.75	23.77
		Vocational	35	119.94	20.89
		Total	90	117.99	22.63
	Total	General	83	116.31	24.96
		Vocational	99	120.35	22.37
		Total	182	118.51	23.60

In order to find out the interaction effect between the control and experiment groups, Two-Way Repeated-Measures ANOVA was done. The results of this analysis are presented in Table 11.

Table 11: FLSCS Points of Control and Experiment Groups by High School Graduated
Two-Way Repeated-Measures ANOVA (Whole Group)

Source	SS	df	MS	F	p
Group	20.676	1	20.676	0.034	0.854
High School	147.053	1	147.053	0.241	0.624
FLSCS	802.27	1	802.27	1.64	0.202
FLSCS x High School	2465.64	1	2465.64	5.05	0.026
FLSCS x group x High School	325.28	1	325.28	0.67	0.415
Error (Achievement)	86916.09	178	488.29		

*p < 0.05

According to the Two-Way Repeated-Measures ANOVA results, the general and vocational high school graduates'FLSCS points can be interpreted as follows;

1. The analysis based on the group variability, no statistically significant difference is detected (p=0,854).
2. The analysis based on the high school variability, no statistically significant difference is detected (p=0,624).
3. The analysis carried out ignoring the group and the high school variability and taking only the the FLSCS points variability, no statistically significant difference is detected (0,202).
4. The analysis carried out considering both the pre-test/post-test and the high school graduated interaction also showed that there is no statistically significant difference (p=0,202).
5. The analysis carried out considering the pre-test/post-test, the control/experiment groups and the high school graduated interaction showed that there is no statistically significant difference (p=0,415).

These results showed that active learning practices have similar effects on both general and vocational high school graduates in the control and experiment groups. General and vocational high school graduates' FLSCS points' means are presented in Figure 5 and Figure 6. Comparing the difference between FLSCS points pre-test and post-test scores of the general and vocational high school graduates' in the experiment groups, considering the time elapsed, no interaction was observed. In other words, the effect of active learning practices on FLSCS points did not have a significant difference in terms of the high schools the students have graduated from.

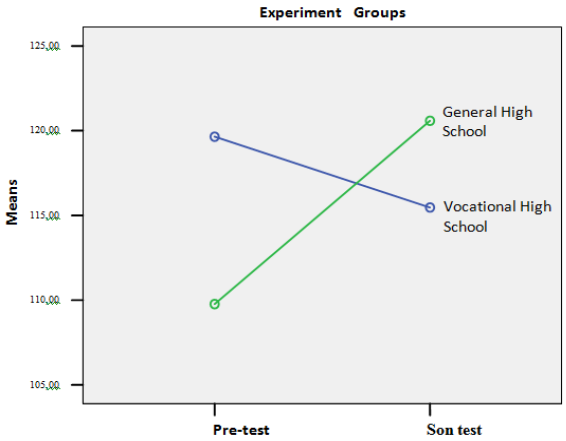

Figure 5: FLSCS points Means of the General and Vocational High School Graduates in Experiment Groups

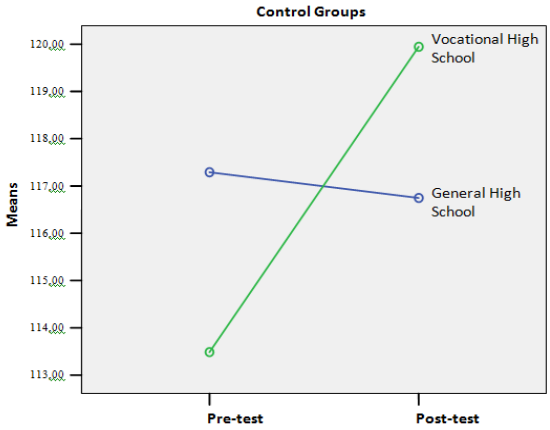

Figure 6: FLSCS Points Means of the General and Vocational High School Graduates in Control Groups

As it is shown in the graphs, comparing the difference between FLSCS pre-test and post-test scores of the general and vocational high school graduates' in the control and experiment groups, considering the time elapsed, active learning practices carried out in the experiment groups didn't have a significant difference on FLSCS points of the general high school graduates. Furthermore, taking the whole group into consideration there is a difference in FLSCS points based on the high school the students have graduated from ($F=5.05$; $p=0.026$). However, regarding the FLSCS points, the group and the high school graduated interaction ($F=0.17$; $p=0.415$), it is hard to claim this difference stems from active learning practices.

DISCUSSION

This study provides important data on the use of active learning on teaching English in a military academy context. Using NCO College freshman cadets' Reading Comprehension Test scores and Foreign Language Self-Concept Scale points, the effects of active learning and lecture methods on students' Reading Comprehension achievement and academic self-concept scores compared. The results of this study indicate that the active learning approach resulted in higher Reading Comprehension achievement than the traditional lecture teaching approach. On the other hand, the research data showed that the effects of active learning on the students' foreign language self-concept isn't statistically significant. Another researcher studied the effects of active learning techniques on reading comprehension achievement and academic self-concept is Ghaith. His research provided evidence on the positive effects of active learning techniques on reading comprehension achievement but the research data showed that in terms of academic self-concept scores there isn't a statistically significant difference between the control and experiment group students (Ghaith, 2003). Since the difference between the two groups isn't found to be statistically significant, it is concluded that active learning did not have a substantial effect on experiment group students' academic self-concepts. These results do not match with Zisk's study. Zisk's study entitled as "The effects of cooperative learning on 10th graders' academic self-concept and achievements" pointed out the fact that experiment group students engaged in the cooperative learning

techniques acquired higher academic achievement than the traditional lecture group i.e. control group students (Zisk, 1998). Zisk also found that the difference between the control and experiment groups' self-concept scores is statistically significant. In other words, active learning practices created a positive effect on the experiment group students.

Rosenberto, (1965) stated that *self-concept develops gradually* and substantial changes in self-concept is experienced in childhood and adolescent periods. He also pointed out the fact that self-concept is not stable and it changes throughout life. Richardson (2003) also carried out a research to find out the relationship between the self-concept and reading comprehension achievement. His research lasted for six weeks and the results indicated that cooperative learning techniques improved the students' reading skills but the students' negative attitudes towards reading didn't turn into positive. So, he concluded that individuals build attitudes-like self-concepts- in years, and it is hard to change attitudes in a short time period such as six weeks. School experiences do shape students' self-concepts. Scientists found out that the difficulty experienced in reading skill in the early years of schooling in return affects academic development in a negative way. The students having difficulty in reading in the first grades of school experience fear and anxiety in classrooms. Fear and anxiety are the two barriers to learning and emotional development. They not only hinder academic achievement but also they also make the students develop negative attitudes and low academic self-concepts. As the students grow, low levels of achievement lead to the development of low academic self-concepts and as the years pass it becomes quite hard to break this cycle (Marsh, 1993).

RECOMMENDATIONS

This study proved that active learning used in language classrooms can promote learning. Learning environments enriched by active learning practices enabled the students to participate, act, react, and reflect both individually and in groups of three or four. As a conclusion, the findings of this research reveal that the likelihood of positive results in reading classes is quite high if active learning is implemented effectively. This study provides strong evidence to implementation of active learning method to increase language learners' success in reading classes. Based on the findings of this study, the following recommendations can be made for the language teachers, program managers and researchers.

1. In reading classes meaningless repetition drills should be abandoned and instructors should employ active learning techniques in order to provide the students with challenging academic tasks and increase academic achievement.
2. Instructors need in-service training in order to be proficient active teachers.
3. This study's focus is on the effects of active learning on the students' reading skills. Further research is needed to clarify the effects of active learning on students' listening, speaking and writing skills.
4. Since it takes time to improve self-concept of an individual, implementation of a new longitudinal research -lasting at least for two semesters- would help to clarify the effects of active learning on students' foreign language self-concepts.
5. Being accomplished in a higher education institution makes this study valuable, and similar research is also needed in different courses.

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REFERENCES

Açıkgöz, K. Ü. (1992). *İşbirlikli öğrenme: kuram, araştırma, uygulama.* Malatya: Uğurel Matbaası.

Açıkgöz, K. Ü. (1996). *Etkili öğrenme ve öğretme.* İzmir: Kanyılmaz Matbaası.

Açıkgöz, K. Ü. (2003). *Aktif Öğrenme.* İzmir: Kanyılmaz Matbaası.

Balian, E. S. (1994). *The graduate research guidebook: A practical approach to doctoral/masters research (3rd ed.).* Lanham, MD: University Press of America.

Bybee, R. W. ve Sund, R. B. (1990). *Piaget for educators.* İllinois : Waveland Pres, Inc.

Felder, R.M., Felder, G. N. ve Dietz, E. J. (1998). A longitudional study of engineering student performance and retention. v. comparisons with traditionally-taught students. *Journal of Engineering Education*, 87,469-480.

Gardner, R., Heward, W. L. & Grossi, T. A. (1994). 'Effects of Response Cards on Student Participation and Academic Achievement: A Systematic Replication with Inner-city Students During Whole-class Science Instruction', *Journal of Applied Behavior Analysis* 27(1): 63–71

Ghaith, G. (2003). Effects of the learning together model of cooperative learning on English as a foreign language reading achievement, academic self esteem, and feelings of school alienation. *Bilingual Research Journal*, 27:3 Fall 2003.

Haack,K. (2008). UN Studies and the Curriculum as Active Learning Tool. *International Studies Perspectives,* 9, 395–410.

Johnson, D., Johnson, R., and Holubec E. (1994). *Cooperative learning in the classroom*. Alexandria, VA: ASCD

Marsh, H. W. (1993). *Academic self-concept: theory, measurement, and research*. In Suls,J. *Psychological perspectives on the self*. Volume 4. S. 59-98. Lawrence Erlbaum: Hillsdale, NJ.

Richardson,C. (2003). The Relationship between self-esteem and reading. Unpublished master dissertation, Kean University, New Jersey.

Rosenberg,M. (1965). *Society and adolescent self-image.* Princeton, NJ: Princeton University Pres.

Romiszowski, A.J. (1981). *Designing Instructional Systems: Decision making in course planning and curriculum designing*. London: Kagan Page.

Sener, J. (1997). Constructivism: Asynchronous Learning Networks. *ALN Magazine* , 1:1.

Shimazoe, J. and H. Aldrich (2010). Group work can be gratifying: Understanding and overcoming resistance to cooperative learning. Coll. Teach., 58: 52-57.

Slavin, R.E. (2000). *Educational Psycholoy theory and Practice.* Boston: Allyn and Bacon.

Steffe, L.P. ve Gale, J.(1995). *Constructivism in Education*. Hillsdale,New Jersey: Lawrence Erlbaum Associates Publishers.

Tan, I. G., Sharan, S., and Lee, C. K. (2006). *Group investigation and student learning. An experiment in Singapore schools.* Marshall Cavendish International, Singapore.

Zisk, J. F. (1998). *The effects of cooperative learning on academic self-concept and achievement of secondary chemistry students.* Unpublished doctoral dissertation, The University of Pennsylvania, California.