

THE EFFECTIVENESS OF COLLABORATIVE LEARNING APPLICATIONS IN ART EDUCATION*

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Abstract

This research has been carried out in order to define the effectiveness of collaborative learning applications in art education training through using the model of pre-test and post-test control group. Two groups of learners, who were 4nd primary school students at Korgeneral Lütfü Akdemir primary school in 2007-2008 Autumn semester, were divided as control and experiment groups. According to the results of this search it can said that usage of collaborative learning method in visual art education is more effective than traditional methods.

Keywords: Collaborative Learning, Art Education

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INTRODUCTION

Modern world in a fast and continuous changing. Creative, constructive and educated persons needed to keep up with this changing. The aim is to grow and improve creative persons. Education through art is one of the easiest way to emerge creative potentials. Every person endowed with this potential and it can improved through a proper education (Gencaydın, 1993, p.2).

Education can be described as intended and permanent behavioural changings and as a result of this it can said that individuals can adapt physical, intellectual, psychological and social gainings for their own personalities. Education is one of the important element of society to keep up with changings of modern civilizations. The role of education is unquestionable when the subject is to discover and develop the creativity and ability in individuals and make them to express themselves. Education is a kind of long-term investment on people. Therefore, education must be planned so well and aims must be defined clearly. It must be keep in mind that art can developed and universalized with education. The importance and supportings for art and artists considered by society are commensurate with percentage of art used in education (Özsoy, 2003, p.25). Art education carry weight with essence of creativity in it's nature. Because the aim of art education is to grow individuals have the ability of discover new things and not to repeat the same things have done by past generations.

Searching, observing, questioning, developing abilities of criticising and evaluating, gaining group working habits and ability of planning, teaching usage of visuals- literature and technology, joining activities intended for developing art

language, having criterion about evaluating and criticising of artworks are very important in art education (Artut, 2004, p. 102).

Constructivist Learning Method

Constructivism is a learning theory developed based on the studies of Piaget which are related to formation of knowledge. Constructivism is not a teaching method or strategy. It's more related to learning than teaching. Teacher behaves to simplify the interaction and collaboration in classroom and prepare classroom atmosphere that make learning meaningful and interesting for students (Yaşar, 1998, p.71). Collaborative learning applied in this study, which is one of the application that carries the constructivist learning in to classrom.

Collaborative Learning Method

Collaboration is an important human activity. People who came together and organized to achieve one subject would be succesfull in each field of life. Group working bring in more than total producing of individuals worked separately.

Collaborative learning developed based on the concept of “cooperation” that especially emphasized in social psychology. Dewey put forward that democratic societies based on collaborative activities actualized in classrooms and he pointed out that active role of students must be clarified in educational philosophy (Acikgoz, 1992, p. 1-2).

Basic principles of collaborative learning given in below:

- Learning actualized in small groups consist of 2-6 persons.
- Interaction of students in group is important at learning.
- Competition between groups is more important than competition among students.
- Success or failure are belonging to groups more than individuals.
- Applications of this method concrete students in classroom who have different abilities and characteristics. Also friendship increased among students.
- Cognitive, affective and social behaviours of students are improved using this learning applications.

Namlu (1996, p.28) summerizes the differences between groups based on collaborative and traditional learning methods in below:

Collaborative Learning

There are positive cooperation, addiction and self- responsibility. It's important that groups consist different persons with different talents. Leadership shared out and each person responsible from others. There are some various and continuous assignments. Social abilities gained directly. Teacher is an observer and meddlesome in classroom. Groups streamed for activities.

Traditional Learning

There is no cooperation or responsibilities for individuals. Groups are homogenic and there is only one leader. Each person responsible for himself/herself. Only one assignment is important. Social skills are remissible. Teacher doesn't join group activities. There is no special group working. More success and improved social relationships aimed in learnings.

AIM OF STUDY

Traditional visual arts education is intended for individual workings. Aim of this study is to bring a new approach in visual arts education lessons with the method of working with small groups as well as individual workings of students. Effective learning atmosphere wanted to created in visual arts education lessons with collaborative learning method used in other fields of education.

Public aim of this study is to determine the effectiveness of collaborative learning method used in visual arts education lessons. There are some goals given in below oriented from this public aim:

1. There is a significant difference between experiment group used collaborative learning method and control group used traditional teaching methods about colour knowledge. Difference is in favour of experiment group.
2. There is a significant difference between experiment group used collaborative learning method and control group used traditional teaching methods about drawing skills. Difference is in favour of experiment group

IMPORTANCE

Collaborative learning method is examined as an alternative learning method for the other methods used in traditional visual arts education to seek for effective and complete learning. Students improve their skills successfully using constructivist learning model.

LIMITATIONS

These are the limitations of this study:

1. This study is limited with scientific searching reports and literature reached in written and printed.
2. Findings of this search are limited with data obtained from experiment and control groups of students who are in fourth grades in Koramiral Lütfü Akdemir Primary School, in 2007-2008 teaching year.

METHODOLOGY

Study Model

Quantitative searching method was used to reach the aim of this study. Classical experimental method was used through quantitative methods.

Pre-test and Post-test strategy with control group (Karasar, 1995, p.97) was used in this study. Two groups formed with using unbiased placement method in

this model, one of them is control group and the other is experiment group. There are some measurements taken from both groups before and after experiment.

Groups that formed for specified aims were examined in Pre-test and Post-test with control group model. One of the groups was accepted as experiment group and the other was control group in coincidence. After that measurements were taken before experiment started and after it finished (Kaptan, 1998, p.85).

Students took part in this study who are in fourth grades in Koramiral Lütfü Akdemir Primary School in autumn term of 2007-2008 teaching year.

The reason that fourth grades chosen for this study is they are started to educated in visual arts in this grade and they don't have any positive or negative attitudes about this lesson in their age. The opinion that the circumstances can be organized easier and better in Koramiral Lütfü Akdemir Primary School is effects selection of school.

Collecting Data

Information reached from local and foreigner literature was used to form the theoretical part of study and the opinions of professionals in this field were referenced. Success test performed as Pre-test and Post-test. Besides, visual arts education lesson plans were developed to perform lessons with collaborative learning method, new teaching materials for activities in classroom and observation forms to determine the circumstances in collaborative learning.

A success test consist from 20 questions and 5 selections for each question was developed to measure the knowledge of students have about colour. Pre-designs of the test forms were given the professionals of this study field and tests developed according to the opinions and evaluations of them.

Experimental Process

After the materials prepared for the application, permissions obtain from school directory to perform the applications in visual arts education lessons in 4-A and 4-B classrooms. Application of study was started in Autumn semester of 2007-2008 teaching year. Programme performed in seven weeks, two lessons in a week and 14 lessons at cumulative. Dates of application are 10 November 2008 to 28 December 2008. During the application, experiment group was practised with collaborative learning methods based on constructivist learning and control group was learnt with teacher centered models of traditional learning method. "Colour knowledge success test" and "drawing skills success test" have given to students as pre-test and post-test. After Colour knowledge success and art tests given for students as Pre-tests, there was a practice time for six weeks and students were familiarized for applications.

During this time information about learning with small groups as a sub-method of collaborative learning and constructivist learning methods was given to students and sample practices actualized in classroom.

-An independent observer follow the applications in experiment group that they are acceptable or not which was prepared according to the collaborative methods.

- Students in control group listen the explanations of teacher about the subject of lesson, they draw and teacher showed the mistakes of their drawings. Lesson was completely teacher centered and learnings were in traditional methods in control group.

-Researcher works himself during all parts of the applications in experiment and control groups.

Students in experiment group were active in learning process and they prepared their learning materials just like what they want. When they had problems, they tried to solve them with cooperating at first, then they wanted help from their teacher.

Teacher was a guide and an organizer in experiment group. Some directions were given to students and they were encouraged to take part in active learning by teacher as an organiser. And teacher walked among students just like a member of group, joined activities and tried to make easier learnings as a guide.

Data Analysis

After measurements completed about the experiments data obtained from experiments started to analyse. Experiment group consists of 15, control group consists of 14 test subjects and statistical calculations actualized from 29 subjects in cumulative. Scores of the test subjects were controlled particularly before they have given codes, they transfered to information forms and then to computer.

Scores obtained from Pre-test and Post-test of experiment and control groups. Then arithmetic means and standart deviations calculated from these scores. "t-test" was used to compare the means of groups and 0.05 confidence degree was accepted. All of the statistical analysis realized with the SPSS (Statistical Package for the Social Sciences).

FINDINGS AND EXPLICATION

In this part of study, findings obtained from data analysis and the explication of these findings are mentioned. When findings and evaluations presenting "in-Sufficiency" and aims of study were considered.

1. Hypothesis of “there is a significant difference in favour of experiment group, between the experiment group given collaborative learning methods and control group given traditional learning methods in visual arts education lessons” examined at first in study. Arithmetic means and standart deviations calculated using the scores of Success Test obtained from experiment and control groups then differences between these means examined with t-test. Findings related Pre-Test scores of experiment and control groups from “Colour Knowledge Success Test” were given in Table 1.

Table 1. Findings Related Pre-Test Scores of Groups from “Colour Knowledge Success Test”

Groups	(N)	(X)	(SS)	t	(Sd)	(P)
Exp. Group	15	24,88	3,49	4,602	17	,001
Control	14	21,12	2,97			

N: Number of Subject , X: Arithmetic Mean, SS: Standart Deviation, t: t value, Sd:Degree of freedom, P: P value

It's obvious in Table 1 that there is a difference between the means of Pre-test scores in groups. Difference is 3.76 and it's in favour of experiment group. t-test was used to determine if it's a significant difference or not. It can be seen in Table 1 that Degree of freedom is 17 and $P > 0.05$ so it can be said that there isn't any significant difference between the arithmetic means of experiment and control groups. Difference between the scores from “Colour Knowledge Success Test” that obtained from both groups is not significant.

Then it's examined to see the effectiveness of applications if there is a significant difference between the means of Post-test scores obtained from experiment and control groups. Findings related Post-test scores of experiment and control groups from “Colour Knowledge Success Test” were given in Table 2.

Table 2. Findings Related Post-Test Scores of Groups from “Colour Knowledge Success Test”

	(N)	(X)	(SS)	t	(Sd)	(P)
Exp.	15	21,12	2,97	1,483	17	,004
Control Group	14	19,59	4,06			

According to Table 2 there is a difference between the means of Post-test scores obtained from “Colour Success Knowledge Test” in groups. Difference is at score of 1.53 and t-test was used to determine if it’s a significant difference or not. Degree of freedom is 17 and $P < 0.05$ so it can be said that there is a significant difference between the arithmetic means of experiment and control groups.

This significant difference shows that collaborative learning applications are more effective than traditional methods in visual arts education lessons and student can be more successful with using this approach. So, first aim of study which put forward the idea that there is a significant difference in favour of experiment group between the means of scores obtained from experiment group used collaborative learning applications and control group used traditional methods, was supported.

Table 3. Findings Related Pre-Test Scores of Groups from “Drawing Skills Success Test”

Groups	(N)	(X)	(SS)	t	(Sd)	(P)
Exp. Group	15	21,12	2,97	1,483	17	0,492
Control	14	19,59	4,06			

According to the results seen in Table 3 that there is a difference between the means of Pre-test scores in groups. Difference is 1.53 and it’s in favour of experiment group. t-test was used to determine if it’s a significant difference or not. Degree of freedom is 17 and $P > 0.05$ so there isn’t any significant difference between the arithmetic means of experiment and control groups. Difference between the scores from “Drawing Skills Success Test” that obtained from both groups is not significant. After that, it’s examined to see the effectiveness of experiment if there is a significant difference between the means of Post-test scores

obtained from experiment and control groups. Findings related Post-test scores of groups from “Drawing Skills Success Test” were given in Table 4.

Table 4. Findings Related Post-Test Scores of Groups from “Drawing Skills Success Test”

Groups	(N)	(X)	(SS)	t	(Sd)	(P)
Exp. Group				2.177	17	0.719
Control						

According to Table 4 there is a difference between the means of Post-test scores obtained from “Drawing Skills Success Test” in groups. Difference is at score of 2.29 and t-test was used to determine if it’s a significant difference or not. Degree of freedom is 17 and $P < 0.05$ so it shows that there is a significant difference between the arithmetic means of experiment and control groups.

This significant difference shows that collaborative learning applications are more effective than traditional methods in visual arts education lessons. Second aim of study was supported with these results.

CONCLUSION AND SUGGESTIONS

Results of findings obtained from statistical data analyses and some suggestions oriented from these results are given in below:

Conclusion

1. There is a significant difference in favour of experiment group between the means of scores obtained from experiment group used collaborative learning applications and control group used traditional methods about colour knowledge. In other words, collaborative learning applications improved students knowledge about colour.
2. There is a significant difference in favour of experiment group between the means of scores obtained from experiment group used collaborative learning applications and control group used traditional methods about drawing skills. In other words, collaborative learning applications improved students’ drawing skills.

According to findings obtained from this searching, it can said that in visual arts education collaborative learning applications are so effective and they are more improving than traditional teaching methods at student success.

Collaborative learning method applied in this study which is used in constructivist educational fields. This model makes learning easier with interaction of in-group and between-groups, improves responsibility and social skills and prepare students to real life.

Usage of collaborative learning methods in art education help to increase knowledge about field, provide cultural accumulation and socialization and also improve the creativity.

Findings obtained from data analysis show that collaborative learning methods increase the effectiveness of visual arts education and make possible to students improve their skills about art expression.

According to the results it can be said that usage of collaborative learning method in visual art education lessons is suitable.

Suggestions

Suggestions are given below which oriented from findings of this study:

1. There has to be some new methods for motivate students and lessons have to be open for changes for a healthy development of creative ideas in art education.
2. Researches about collaborative learning in art education must related to other researches about collaborative learning in other educational fields.
3. The effectiveness of this method must be practised with new researchs in different foundations and at different level of ages.
4. Researches intended to determine the effects of collaborative learning method can be practise in other fields of art education not only in drawing lessons.

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