An Application of Project-Based Learning in an Urban Project Topic in the Visual Arts Course in 8ᵗʰ Classes of Primary Education

Raif KALYONCU*, Adnan TEPECİK**

Abstract

The purpose of this study is to measure the effect of project-based learning that is used in visual arts course on students' academic success and permanence. The research was applied to students of Hasan Ali Yücel Primary School in the city of Trabzon during the fall semester of 2007-2008 academic year. Among the sample that had been selected randomly, class 8/D (n=30) was assigned as the experimental group, and class 8/E (n=31) as the control group. Pre-test post-test control group design was used in the research. Data of the research were collected by the achievement test and permanence test. "t-test" was used in the analysis of the data in order to show the differences between the means. There is a significant difference between the experimental group, in which project-based learning method had been used, and the control group, in which conventional teaching had been used, in favor of the experimental group, in terms of students' achievement and permanence scores. While a significant difference between pre-test and post-test achievement scores of the experimental group was observed, no significant difference was found between pre-test and post-test scores of the control group. A significant difference between the scores of the students in experimental group and those in control group, who participated in the study was found in the repeated measures test, which was conducted to reveal time and group effect. When the change in in-group measures is searched without making a differentiation between experimental and control groups, it was seen that there is a significant change. When group and measure interaction scores were considered, it was determined that there is a significant interaction between participating in experimental or control group and the results found from the tests used. Based on the results, it was determined that students become more successful with the project-based learning method. The use of the of the method in visual arts courses was suggested. Additionally, few suggestions concerning future research were given.

Key Words

Arts Education, Visual Arts Education, Project-Based Learning, Urban Project.

* *Correspondence:* PhD Candidate, Karadeniz Technical University, Fatih Faculty of Education, Department of Fine Arts Education, Painting Teaching Program, Söğütlü, Trabzon/Turkey.
E-mail: raifkalyoncu@hotmail.com
** Prof., Başkent University, Dean of the Faculty of Fine Arts, Design and Architecture, Ankara/Turkey.

Visual arts education is considered as a field and instrument of education in developed countries. Art education is an indispensable world for growth of an independent, peace-loving, humanitarian, and creative youth, which is integrated with its society, can renew itself in accordance with changing conditions, and reflects the marks of future. Art education should be a process, which helps children gain the values of culture, art and history, and within which they can freely display their creative ideas at the same time (Buyurgan & Buyurgan, 2007). "Art education is related with all disciplines, concerning its field of study; this field has been developed in parallel with science education in developed countries" (Tepecik, 2003, p. 164). As a support for this statement, Özsoy (2003, p. 41) also emphasizes the importance of art education by stating that "art is as important as science and social sciences and other fields in our daily lives."

In the information age, within which radical changes take place in every area; in order the youth to be able to act with responsibility, gain skills and also the citizenship characteristics that are necessary for the integration with the society in a successful way (Özdemir, 2007), innovations should be continuously followed in the area of education. New methods must be searched besides the traditional methods. Recent periods, and 2006 onwards in Turkey, witnessed the process of restructuring in line with the changes and developments mentioned above. Learning is not accomplished at the desired level in an environment, where the active participation of individual does not exist. In this sense, student-centered approaches that can answer the needs of the time have been presented in place of the traditional teacher-centered education approach. Targets in these alternative approaches are the transfer of academic gains to life, use of them in life, and the development of thinking skills for learning to learn. Moving from these developments, it appears in front of us as a necessity to search for alternative theoretical and application methods in visual arts education, also in our country, as seen in the education programs of developed countries.

Moving from these problems, this research is regarded significant as it displays how effective the applications prepared in accordance with the PBL method are as alternative to the traditional applications used in visual arts course in primary education, one of the stages in education system, concerning the quality of visual arts education, realization of its general and specific purposes, and development of the skills specified

in the program. Because of this, it has been seen necessary that such a research is to be made as an alternative application case and that suggestions are to be developed.

Definition and Characteristics of Project-Based Learning

The roots of the concept of project-based learning (PBL) date back to the first half of the 20th century. "The term 'project method' was used first by an American teacher called 'Stimson' in the programs of agricultural vocational schools, in 1908. This method has been used in America and in various countries since this date" (Kemertaş, 1999). The first view regarding the project method as a technique in education is Kilpatrick in the beginnings of 1900s (Esmaiel, 2006). Inspired by Dewey's "progressive" education principles, Kilpatrick developed the project method (Taşpınar, 2007). Also John Dewey adopted the project method in his philosophy. Dewey demanded an education, which takes the child as center and is based on the activities resting upon the interests of the student and real life (Woody, 1934 cited in Esmaiel, 2006). Like Dewey, Wrigley summarized his progressive ideas in his following explanation as such: "…children learn best… in student-centered, progressive education… thanks to their experiences and thanks to the activities that let personal differences" (Wrigley, 1999 cited in Esmaiel, 2006).

 The "Project Method" is based on concrete or abstract expression of the ideas that emerge as a result of the combination of old knowledge and the knowledge achieved through observations and comparisons, by picture, handwork, verbal and written forms (Oğuzkan, 1989 and Hesapçıoğlu, 1994 cited in Gültekin, Karadağ & Yılmaz, 2007).

PBL is a comprehensive, constructivist-based approach, which students use in searching real problems. (Sidman-Taveau and Milner-Bolotin, 2001 cited in Esmaiel, 2006) PBL is an innovative model in teaching and learning. It focuses on main concepts and discipline principles, it includes students in problem-solving research and other meaningful homework, it lets students work autonomously in order for them to build their own knowledge and it results in realistic products. (Buck Institute for Education, 1999 cited in Esmaiel, 2006)

PBL is designed for the use of students in searching real problems and is a comprehensive approach for teaching and learning in class (Blumenfeld et al., 1991).

PBL is a student-centered, comprehensive teaching approach, which students use collectively in complicated self-learning homework in classes. Students usually work on a project in an extended time period; and the emphasis is on doing the activity-purposed, meaningful homework, instead of learning something (Muniandy, 2000).

PBL program includes a deep research about a specific topic complementing literary arts, mathematics, social work, science and fine arts; and it spreads in a time period constituted of days or weeks (Trepanier-Street, 1993). Project work can be realized by the participation of specific classes or the whole school, as well as it can include courses like visual arts, music, technology design, introduction to science within the scope of a specific course (Sezer, 2001 cited in Ayaydın, 2005). PBL points to the process dimension of learning. It is generally designed in class and brings about out-class activities and research. PBL is a learning approach, which rests upon prolonged studies, for students to examine daily life issues or problems in depth on their own or in small groups, in order to produce some concrete things (Gültekin et al., 2007). What is expected from students in this method is building their own knowledge in the light of the knowledge they achieved through their research and making effort in this direction (Başbay, 2005).

PBL is a learning approach, which takes student as the center, is related with the real life, rests upon research, requires research of a lot of resources, is pursued in a long time period, and results in products (Diffily & Sassman, 2002). The main feature of project works is teachers' and students' planning a research collectively, to look for answers for the problems about an issue; and their realizing this research (Katz, 1994). They can constitute groups and develop group projects as well as individual ones, while realizing this research. Projects made in groups are more useful. They enable students to work in coordination with both their own groups and other groups during the learning process.

PBL approach focuses on general concepts, thoughts, and principles of a discipline. It includes students' duties as searching, achieving information and creating a product by integrating this information in a meaningful way for the solution of the problem. It lets students to work in their unique ways and to build their own knowledge (Demirel, 2002).

The main feature of this model is that it is built on a problem/scenario related with also other disciplines and that students learn collectively

in small groups as it grounds on student-centered learning (Demirel, 2002). PBL does not focus on learning something. It focuses on doing something. It aims activities (Moursund, 1999).

"According to Kilpatrick, reader should not expect a radical change from the project technique. Since this word is not new. Project technique is a technique that relies on the principle of activity, which enables live activities, application of the theories about learning, and achievement of social and ethical values" (Bilen, 2006, p. 206). PBL is a model that organizes learning around projects. Projects are complex duties; which rely upon compulsive questions and problems; require students to engage in activities concerning design, problem-solving, decision-making or research; provide students with the opportunity to work autonomously in extended time periods; and result in realistic products (Jones, Rasmussen, & Moffitt, 1997 and Thomas, Mergendoller, & Michaelson, 1999 cited in John, 2000).

As it was also mentioned above, PBL targets individuals' growth as the ones, who learn, research and are able to produce solutions for the problems they meet throughout their lives. PBL consists of a group of students undertaking a close problem, developing answers to it and presenting the solutions to wider audiences. Projects can be completed in a period of time, ranging from a couple days to a couple months (Wrigley, 1999). "Project technique" can be defined as "a teaching technique aiming the solution of problems with an approach like life under natural conditions, individually or through small groups" (Bilen, 2006). Within this context, in PBL, the approach of deep research and knowledge achievement is adopted, instead of transfer of a specific subject to the student.

In the PBL method , teacher is an important requirement in the beginning of the projects, as (s)he guides students in the project work they will choose, and determines the projects in class through collective discussions. However, at the stage of realization of the projects, students are at the forefront, whereas teachers take a back seat in order to facilitate the works for students.

Çepni (2008) lists the characteristics to be considered in planning and application of the PBL method as follows:

Activities should be comprehensive and purified from empty works.

The time period reserved for their preparation should be adequate.

Project should be related with the topics taught in courses; the behaviors that are to be achieved must be clearly stated.

The result that will be achieved should be able to compensate for the investment made.

Students should be given the opportunity to solve their problems through the activities.

They should be appropriate for students' experiencing the senses of creativity, responsibility and success.

The project should be appropriate for students' working in their normal living conditions.

The project should direct students to think, search and examine.

Consequently, changing conditions has required student-centered learning processes, instead of teaching. The main target of modern education understanding must be to teach students the ways to reach knowledge, not to transfer the knowledge to them from a specific resource. And this is possible only through high-level mental skill activities. "The PBL method", which is one of the Constructivism-based education approaches that have been used by MEB (Ministry of National Education) since 2005-2006 academic year, is a multi-dimensional learning approach, through which students solve their problems they had chosen from the real life with an inter-disciplinary view, as they do in real life.

Visual Arts Education and Project-Based Learning

Art education is pursued by taking inter-personal differences into consideration. Art education is realized by regarding the determining individual differences of the people, who are educated, such as knowledge, experience, behavior, gender, ability, age and also the regional differences among them. Creativity in art depends upon the personality structure of the student. The demanded student type today consists of individuals, who have a personality structure that is creative, researcher, questioning, can apply what they know, open to new qualities, able to use environmental factors in favor of art (Erbay, 2004). The PBL method, which grounds on constructivism and is one of the alternative methods in establishing this environment, is a learning understanding that is based upon developing designs, imagining, planning, and constructing. And a learning view based upon designing and constructing brings, above all, the process in the foreground, not the product (Erdem, 2002).

Art education has a creation process, which is different from other disciplines. The growth of the individuals and societies need in developing world is possible in a learning environment, where students construct and direct their own learning, try to solve the problems they meet in co-operation, and make decisions about their own success, and where life is carried into class. Kilpatrick categorizes project works that will be done in the establishment of this learning environment or process under four groups: (1) Objective projects, (2) Problem projects, (3) Talent or skill projects, and (4) Aesthetical projects. According to him, in the objective projects, the goal is to produce a work by applying some ideas and plans (Binbaşıoğlu, 2003). In the problem projects, the goal is to solve a problem emerged in our minds or in our environment. In the talent or skill projects, the goal is to develop what had been learned about a specific topic and to gain skills. Lastly, in the aesthetical projects, the goal is to prepare projects that are related with rather works of art or to enjoy an object or a product in an aesthetical way.

Project works that will be done in visual arts education courses are long-term works with wide contents, which are developed individually or by groups. In the project works that will be developed through the project method; students do the works, through which they can express themselves by using their areas of interests, interesting inventions, ideas, dreams and creativity. These project works can cover all of the four groups mentioned above or only one or some of them according to the content and purpose of the project.

The art education method used in our schools today is a process of activities, which is pursued by teacher-student togetherness and includes intellectual, emotional, visual and physical participation (Özel, 2004). Moreover, what is important in PBL, which is a process-oriented approach, is the presentation of the project topic not as a subject heading, but in a structure that would motivate the learner to think, imagine, question, research and develop aesthetical emotions.

In the project method that will be used in visual arts course, an environment is prepared for the development of creativity of the student by co-proceeding his/her theoretical and used education, and considering individual differences; also sensual, cognitive and psychomotor development of the child is tried to be provided (Aslantaş, 2008).

Today, howsoever good its curriculum may be prepared; the visual arts course will have difficulty to draw the interest it deserves, until it will be turned into an enjoyable application course by teachers. The duty of the teacher of visual arts course is to attract the attention of the student, by combining art education especially with environmental factors and problems. Using the innovations, which emerge as a result of the quick development of daily life, in school environment must be the duty of a modern education and educator.

The main skills of the program expected to be achieved in the visual arts course teaching program and guide, which are being used today, are as such: using Turkish accurately, well and effectively, expressing him/herself, thinking critically and creatively, communicating through art, problem solving, research, decision making, using knowledge technologies, entrepreneurship, taking responsibility, finishing the work started, visual reading, giving weight to personal and social values, development of aesthetic consciousness, aesthetic perception and aesthetic life culture, becoming sensitive to national, moral and universal values by gaining consciousness for environment and nature.

What a good educator should do is to determine the interests and needs of students well, by considering the main skills mentioned above, and to approach to the events with an accurate point of view ranging from local to global. (S)he must relate the activities with intermediary disciplines, choose them from real life, support students' active participation in life, their making accurate decisions and solving problems, and target a progressive generation, by the activities (s)he will apply.

The curriculum program, which was prepared according to the constructivist theory, sets the teacher free in using different teaching applications at the stage of application. These applications include cooperation-based learning, case-based learning, problem-based learning, question-based learning, learning with drama and PBL.

It is verified also by this research that the main skills and targets mentioned above will be achieved through the addition of PBL applications into the teaching program and guide of visual arts course, which had been renewed according to the constructivist theory and used.

Concerning the visual arts education course, the PBL method is a learning activity, through which students construct and direct their own learning, develop their creativity, try to solve the problems they meet

with cooperation in the group, and through which life is carried to the class by the activities chosen from the real life and education is maintained out of the class similarly.

When the visual arts teaching program and guide are evaluated in terms of PBL; it is possible to state that

The program is based upon the constructivist theory,

The knowledge, skills, attitudes and values, which are expected to be brought to the students by the activities, are expressed as gains,

The content is established in a flexible manner, depending upon the creativity of the educator,

It is envisaged that students research and establish knowledge on their own, within the teaching-learning process,

It considers both the process and the consequence in evaluations.

Research Held about the Topic

In Table 1, some of the studies about PBL are summarized.

Table 1.
Some Research Held According to Project-Based Learning

Author	Subject / Concept	Sampling	Data analysis tools	Result(s)
Korkmaz (2002)	The effect of PBL on creative thinking, problem solving ability and academic risk-taking levels of students in natural sciences education.	The research is held through two groups, which are equivalent in terms of teacher and learner characteristic, consisting of 67 students, which are chosen among the 7th year classes of the primary education level.	Creative thinking test, modal A form, logical thinking group-test and academic risk taking scale are used.	A significance difference favoring the experimental group in terms of creative thinking, problem solving ability and academic risk taking levels.

| Demirhan (2002) | Theoretical explaining of PBL approach in "Science of Life" course through literature scanning and examining of the program development in terms of the determined elements are aimed. | It is tested on the experimental and control groups taken from 3rd year primary school classes. | Interview and observation forms are used. | After the application, in the experimental group, there has been an increase in the number of the students, which wanted to prepare a product such as magazine and booklet while there has been a decrease in the number of the double-minded students. The expression of the students, stating that they should not be dependent solely on teacher's lecturing, has also been found significant. Moreover, there has been an increase in the number of the students, which has chosen the project based learning choice concerning the question that in which ways the Science of Life course could be studied. As a result, it is thought that this will contribute to other research to be done and as well as to the possible development and renewal studies. |

Erdem and Akkoyunlu (2002)	Within the scope of Social Sciences course, activities such as; preparing a report for home country through investigating the life styles of the people, their uses of technology, forms of government and education systems in different countries; implementation of project-required research and information gathering activities; organizing data acquired in line with the presentation style; and working as a team are carried out.	The research is carried out in two private primary schools within the scope of Social Sciences course, with 5th year students, form teachers and computer teachers.	Process evaluation and Product Evaluation forms are used and observations are made.	This had significant contributions to the practices of the students such as working as a team in collaboration and completing and presenting a project, studying independently of the teacher.

Vaiz (2003)	This study has been carried out to demonstrate how the use of "student development files (portfolios)" in the Science of Life course ,based on PBL approach, found its repercussions in the learning process.	With the participation of 3rd year primary education students of Science of Life course, their parents and form teacher; the study group is prepared as random experimental group without control groups.	The data are acquired through survey 1 and survey 2, study-times form 1&2, and student development files.	With regard to the relationship between the evaluation points, a significant relationship between teacher and parent evaluation points is observed.
Yurtluk (2003)	Investigation of applicability of PBL approach to the Mathematics courses is aimed.	The research is carried out in Math courses with 8th year, 2nd level primary education students.	Personal evaluation form, group activities evaluation form, math courses attitude scale and interview form are used.	They indicated that,the courses were enjoyable, relationships with other courses are established, sense of responsibility and success is developed at the end of studies. Whereas, the teachers stated that, the study could be useful both for the teacher and the students but the studies would be more efficient when it is carried out with the involvement of academicians.
Başbay (2006)	Within the scope of Social Sciences course, determining the effect of PBL supported with gradual education program to the process and to the views of learner and teacher is aimed.	The research is carried out with 23 students in the primary education 5th grade Social Sciences course.	Observation form, teacher interview form, student interview form, and Raven Standard Progressive Matrices test are used.	At the end of the research, it has been found out that, the students enjoyed the study, there has been a positive increase in their participatory roles, and the learning environment became more meaningful both for the students and the teachers.

↳➤

| Ersoy (2007) | It has been carried out in the Social Sciences course and Computer course and determination of how the applications of technology-supported PBL are realized is aimed. | It is carried out with 30 students and their teachers in the 5th year of primary education. | Student personal information form, participatory observation, video recordings, semi-structured interview, research diary, students' diary and student product file are used. | The most problems are encountered in the evaluation of the research, which is carried out in three stages. In the result of the study, a book named "Let's get to know Eskişehir (Eskişehir'i Tanıyalım)" is prepared. The students indicated that they enjoyed more than they did in other lessons and they got more help. The teacher expressed that the application is useful for him and for students. The study made is realized in comply partly with the constructivist learning environment. It has been identified that problems originating from students, student and the school are encountered. |

| Aslantaş (2008) | Presenting which contributions the studying of the PBL method, which is considered as an alternative to the traditional education method in Visual Arts course, by making use of the portrait subject, will provide is aimed. | Carried out with 49 experimental and control group students from 7th year, 2nd level primary education students. | Semi-structured interview form, consisted of open-ended questions, is used. | It became obvious with this research that, the projects, done either individually or as a group, can provide an environment for the artistic development of the child and for creation of original works. In practice, it was seen that the concept of project is not fully grasped in visual arts education and there have been ambiguities in application. It has been observed that the students are more satisfied with the applications handled in a liberal environment. It was seen that, the students were given the opportunity to get pleasure from the research and from expressing themselves with original works. |

When the domestic research held about the topic is examined, project-based works and research can be seen in different disciplines from the 2000s onwards. When observed in general, the studies were held at various stages of primary education, in courses like science education (Korkmaz, 2002), science of life (Demirhan, 2002; Vaiz, 2003), mathematics education (Yurtluk, 2003), and social sciences education (Başbay, 2006; Erdem & Akkoyunlu, 2002; Ersoy 2007).

Research differs when they are examined in terms of method and data collection techniques used. Usually, pretest-posttest control group design has been used in the research. Work group has been assigned without selection as the experimental group without a control group and research designed descriptively were also observed. When examined in terms of data collection, qualitative and quantitative data collection techniques have been used concomitantly. It was seen that only qualita-

tive or quantitative data collection techniques were used in some of the studies.

Only one master's thesis, which can be regarded as a serious study on visual arts course in our country, was found in the literature review made (Aslantaş, 2008). When this research was examined, it was seen that it had been held by using only qualitative data collection techniques and that the findings achieved support this research.

Consequently, if we consider the fact that each system changes in our age, change of the education systems is inevitable. It is seen important that these research are held especially in the field of visual arts and in different constructivist-based methods such as the PBL method, concerning their role in throwing a light on the changes that will be made in the field of visual arts education.

Problem

What is the effect of PBL method on students' achievement and permanence in a visual arts course in 8th classes of primary education? Answers to the following sub-problems have been sought under this problem statement. 1. Is there a significant difference between the pre-test and post-test scores of the students in the experimental group? 2. Is there a significant difference between the pre-test and post-test scores of the students in the control group? 3. Is there a significant difference between the post-test scores of the students in the experimental group and those in the control group; and is the development in students' achievement levels permanent?

Method

Quantitative data collection method was used in this research. Within this scope, experimentalal design was used in order to achieve the quantitative data and the numerical difference between the two groups was tried to be showed. In this respect, this study falls within the pre-test-post-test control group test model.

Two groups were selected from 8th grade students for this research. One of these groups was assigned as the experimental group and the other as the control group with the method of random assignment. Participants were subjected to measurements about dependent and independent var-

iables, before and after the experimental process. While "urban project" activity, which is within the field of learning visual arts culture, was used with the PBL method in the experimental croup; the same activity was maintained with the conventional teaching method in the control group. Differences between the two groups, students' achievements, and permanence of what had been learned were analyzed in terms of quantitative applications.

Findings

In this chapter of the research, findings and comments concerning the sub-problems of the research take place.

The first sub-problem of the research is whether there is a significant difference between the pre-test and post-test (achievement) scores of the students in the experimental group, where PBL had been used, in visual arts course in 8th grades of the primary education. It can be said as a result of the application that the activities, which had been prepared in accordance with the PBL approach, it provided a significant increase in students' achievements. This result shows that the change determined in students' achievements is dependent upon the process followed in the experimental group.

The second sub-problem of the research is whether there is a significant difference between the pre-test and post-test (achievement) scores of the students in the control group, where the conventional learning approach had been used, in visual arts course in 8th grades of the primary education. The application shows that there is an increase in students' success, even though it is not large, as a result of the visual arts course that had followed the conventional learning approach; however that this increase did not change the achievement level of the students.

The third sub-problem of the research is whether therei is a significant difference between the post-test scores of the students in the experimental group, which had been prepared in accordance with the PBL method, and those of the students who participated in the conventional teaching applications in visual arts course in 8th grades of the primary education; and is the development in students' achievement levels permanent. At the end of the application, it is seen that the "Urban Project" activity, which was used in accordance with the PBL method, provided a greater increase in students' achievements compared to conventional

teaching applications; and that it is also effective in the permanence of achievement. This situation shows that the changes observed in students' achievements can be related to the process followed in the experimental group. In other words, it can be said that this difference in the achievement scores of the experimental group is dependent upon the fact that they had used the PBL method used; that they had searched and structured the information themselves during learning and combined these with their previous knowledge; that they had made group-work; that they had exchanged their ideas with and contributed to the development of each other; that they had learned by searching instead of memorizing; and that they had used what they had learned in the real life.

In the control group, it is seen that there is an increase in students' success, even though it is not large, as a result of the "Urban Project" activity visual that had followed the conventional learning approach; however that this increase did not change the achievement level of the students. This result can be a consequence of the lack of students´ active participation in the classes or that of the method used.

Discussion

This study showed that there is a significant difference between the pretest-posttest achievement scores of the control group students, who participated in the activities that had been prepared according to the PBL method, in visual arts course at 8th grade of primary education. It was observed that there is a significant difference between the groups in favor of the experimental group, in terms of creative thinking, problem-solving skill, and academic risk-taking levels. Similar findings were also observed by by Korkmaz (2002). In Başbay's study (2006), it was shown by observations made and the views of students, teachers and program development experts that the PBL approach that is supported by stepped teaching program contributes to the learning process positively, that students enjoy working very much and there is an increase in their participating roles, and that the learning environment becomes more meaningful for students and teachers. Also, in the research held by Aladağ (2005), it was confirmed that there is a significant difference between the pretest-posttest scores of the students in the experimental group. The conclusion is made also in other similar research (e.g.

Özdener & Özçoban, 2004) that PBL method has a positive effect on student success and that the choice of the teaching method, which is appropriate for students' individual interests and abilities, is important. Findings of these research show parallels with the results of our study. When the results of the research are evaluated within the framework of these literature findings, it can be said that the activities prepared according to the PBL method provides a significant increase in achievement of the students in visual arts course.

It was concluded that there is no significant difference between pretest-posttest (achievement) scores of the students in the control group, where the traditional learning approach was used, in visual arts course at the 8th grade of primary education. So, it is understood that the difference between pretest and posttest is related with the traditional teaching applications.

It was confirmed that there is a significant difference between the posttest achievement scores of experimental group students, who participated in the activities prepared in accordance with PBL approach, and those of control group students, who participated in the activities prepared in accordance with traditional approach, in favor of the experimental group, in visual arts course in the 8th grade of primary education. On the other hand, it was concluded through the permanence test that there is no significant difference between posttest and permanence test scores of experimental group students. This situation shows that the method used is more successful than the traditional method and in the process as a result of the activities prepared according to the PBL method, the gains acquired by the students has durable effects on the comprehension level. This result shows similarities with the findings of Ersoy (2007) and Aslantaş (2008). There are also research determining that, the courses in which the PBL approach is used are enjoyable, relations with different courses are established, and this practice develops senses of responsibility and success (Yurtluk, 2003). On the other side, it was mapped out that teachers are concentrated on very diverse activities and yet they have put less emphasis on the studies that integrates technology with constructivist (Muniandy, 2000). In the literature concerning PBL, the emphasis is mostly put on the theoretical studies. In this context, the weight is laid on defining PBL, on determination of the pedagogical and psychological motives concerning this learning process and on which products will emerge as a result of

learning or what will be its effects on learning. Especially, Tynjala and Olkinuora (2006) made a qualitative scanning of the studies relating to PBL and as a result identified that PBL can be expressed as course definitions focused on running of the courses. Within this scope, it is stated that, PBL concept can be defined with different activities and purposes. These results encourage the program developers and executers to reflect PBL possibilities and purposes, which are realizable and directed at putting clear targets (cited in Başbay, 2006, p. 43).

On the other hand, it was seen that there is no statistically significant difference between the scores of posttest and permanence success test, which were used in time, in the control group, for which traditional method was maintained. Research findings that show parallels or contradict with this research finding could not be achieved.

Findings of this research show that students perceive the courses, which are pursued based on the PBL techniques, as entertaining and enjoyable; and that they participate in these activities actively. When these results are considered, it is evaluated that the PBL method, which is used in visual arts course and in different disciplines, can be used as an alternative method. This research is important in terms of the changes that will be made, especially in the field of visual arts.

Suggestions

As PBL increases the success of students in visual arts lectures, it is required that more space be allotted to the PBL method in the activities taking place in the curriculum of the primary education visual arts lectures and that the content of these lectures is also restructured in this way.

Educators of visual arts should train students who are creative, have aesthetical consciousness, have strong imaginative power, research, think and produce solutions against the problems encountered. To actualize such an aim, it would be beneficial for those educators to plan and apply alternative methods such as restructive the PBL method, which is suitable for the modern era, in line with the objectives of the visual arts course.

More space should be allotted to the activities addressing The PBL method in the visual arts course applications in primary education.

Because this application contributes to grasping of especially cognitive space, to developing higher level of behaviors and to the permanence of this knowledge gained; it is thought that this application, which had been actualized in visual arts course in 8th grades in the second degree of primary education, would be effective also in other age groups and class levels. Therefore, it is suggested that this method be tried in various degrees of education.

References/Kaynakça

Aladağ, S. (2005). *İlköğretim matematik öğretiminde proje tabanlı öğrenme yaklaşımının öğrencilerin akademik başarısına ve tutumuna etkisi*. Yayınlanmamış yüksek lisans tezi, Gazi Üniversitesi, Eğitim Bilimleri Enstitüsü, Ankara.

Aslantaş, S. (2008). *İlköğretim II. kademe proje tabanlı öğrenme yönteminin görsel sanatlar dersine katkısı*, Yayınlanmamış yüksek lisans tezi, Gazi Üniversitesi, Eğitim Bilimleri Enstitüsü, Ankara.

Ayaydın, A. (2005). *İlköğretim resim-iş dersinde çoklu zeka kuramı'na dayalı öğretim yönteminin öğrenci başarısına etkisi*. Yayınlanmamış doktora tezi, Gazi Üniversitesi, Eğitim Bilimleri Enstitüsü, Ankara.

Başbay, A. (2005). Basamaklı öğretim programıyla desteklenmiş proje tabanlı öğrenme yaklaşımının öğrenme sürecine etkileri. *Ege Üniversitesi Eğitim Fakültesi Ege Eğitim Dergisi, 6* (1), 95-116.

Başbay, A. (2006). *Basamaklı öğretim programıyla desteklenmiş proje tabanlı öğrenmenin sürece, öğrenen ve öğretmen görüşlerine etkisi*. Yayınlanmamış doktora tezi, Hacettepe Üniversitesi, Sosyal Bilimler Enstitüsü, Ankara.

Bilen, M. (2006). *Plandan uygulamaya öğretim*. Ankara: Anı Yayınevi.

Binbaşıoğlu, C. (2003). *Eğitim ve öğretim üzerine yazılar*. Ankara: Nobel.

Blumenfeld, P. C., Soloway, S., Marx, R. W., Krajcik, J. S., Guzdial, M., & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational Psychologist*, *26* (3-4), 369-398.

Buyurgan, S. ve Buyurgan, U. (2007). *Sanat eğitimi ve öğretimi*. Ankara: Pegem A Yayıncılık.

Çepni, S. (2008). Öğretim yöntemleri. Çepni, S. ve Akyıldız, S. (Ed.), *Öğretim ilke ve yöntemleri* içinde (s. 111-139). Trabzon: Süzer Kırtasiye.

Demirel, Ö. (2002). *Eğitimde program geliştirme*. Ankara: PegemA.

Demirhan, C. (2002) *Program geliştirmede proje tabanlı öğrenme yaklaşımı*. Yayınlanmamış yüksek lisans tezi, Hacettepe Üniversitesi, Sosyal Bilimler Enstitüsü, Ankara.

Diffily, D., & Sassman, C. (2002). *Project-based learning with young children*. Heinemann: Reed Elsevier Inc.

Erbay, M. (2004, Nisan). *Sanat eğitiminin organik yapısındaki süreklilik*. Gazi Üniversitesi 2. Sanat Eğitimi Sempozyumunda sunulan bildiri. Ankara.

Erdem, M. (2002). Proje tabanlı öğrenme. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, *22*, 172-179.

Erdem, M. ve Akkoyunlu, B. (2002). İlköğretim sosyal bilgiler dersi kapsamında beşinci sınıf öğrencileriyle yürütülen ekiple proje tabanlı öğrenme üzerine bir çalışma. *İlköğretim Online E-Dergi.* 1, 2-11. http://www.ilköğretim.-online.org.tr adresinden 23 Haziran 2008 tarihinde edinilmiştir.

Ersoy, A. (2007). *İlköğretim beşinci sınıfta teknoloji destekli proje tabanlı öğrenme uygulamaları*. Eskişehir: Anadolu Üniversitesi Eğitim Fakültesi Yayınları, No.101.

Esmaiel, Y. E. (2006). *Theory in practice: Constructivism and the technology of instruction in an authentic project-based computer class*. Texas: University of North Texas.

Gültekin, M., Karadağ, R. ve Yılmaz, F. (2007). Yapılandırmacılık ve öğretim uygulamalarına yansımaları. *Anadolu Üniversitesi Sosyal Bilimler Dergisi, 7* (2), 503-528.

John, W. T. (2000). *A review of research on project-based learning*. http://www.bobpearlman.org/BestPractices/PBL_Research.pdf adresinden 14 Ekim 2008 tarihinde edinilmiştir.

Katz, L. G. (1994). *The project approach*. ERIC Digest. Champaign, Il: Clearinghouse on elementary and early childhood educatian. (ERIC Document Reproduction Service No. EDO-PS-94-6)

Kemertaş, İ. (1999). *Uygulamalı genel öğretim yöntemleri*. İstanbul: Birsen Yayınevi

Korkmaz, H. (2002). *Fen eğitiminde proje tabanlı öğrenmenin yaratıcı düşünme, problem çözme ve akademik risk alma düzeylerine etkisi*. Yayınlanmamış doktora tezi, Hacettepe Üniversitesi, Sosyal Bilimler Enstitüsü, Ankara.

Moursund, D. (1999). *Project-based leorning using informatıon technology*. Eugeme, ISTE International Society for Technology in Education.

Muniandy, B. (2000). *An investigation of the use of constructivism and technology in project-based learning*. Unpublished doctoral dissertation, University of Oregon, Ann Arbor.

Özdemir, Ç. (2007). Toplusal değişme karşısında aile ve okul. *Türk Eğitim Bilimleri Dergisi, 5* (2), 185-198.

Özdener, N. ve Özçoban, T. (2004). Bilgisayar eğitiminde çoklu zeka kuramına göre proje tabanlı öğrenme modelinin öğrenci başarısı üzerine etkisi. *Kuram ve Uygulamada Eğitim Bilimleri, 4*, 147-170.

Özel, A. (2004, Nisan). *Sanat öğretimi deneyimlerinde yeni yaklaşımlar*. Gazi Üniversitesi 2. Sanat Eğitimi Sempozyumunda sunulan bildiri. Ankara.

Özsoy, V. (2003). *Görsel sanatlar eğitimi*. Ankara: Gündüz Eğitim ve Yayıncılık.

Taşpınar, M. (2007). *Kuramdan uygulamaya öğretim ilke ve yöntemleri*. Ankara: Üniversite Kitabevi.

Tepecik, A. (2003, Ekim). *Sanat eğitimi ve görsel çevre*. Hacettepe Üniversitesi Güzel Sanatlar Fakültesi 7. Ulusal Sanat Sempozyumu'nda sunulan bildiri. Ankara.

Trepanier-Street, M. (1993). What's so new abaout the Project approach? *Childhood Education, 70* (1),25-29.

Vaiz, O. (2003). *Proje tabanlı öğrenmede, portfolyoların (öğrenci gelişim dosyalarının) kullanımı ve öğrenme sürecine yansımaları*. Yayınlanmamış yüksek lisans tezi, Hacettepe Üniversitesi. Sosyal Bilimler Enstitüsü, Ankara.

Wrigley, H. S. (1999). *Knowledge in action: The promise of Project-based learning* [Electronic Version]. *Focus on Basics Connecting Research Practice*, 2, December, 1998. Retrieved September 9, 2008 from http://www.ncsall.net/?id=384.

Yurtluk, M. (2003). *Proje tabanlı öğrenme yaklaşımının matematik dersi öğrenme süreci ve öğrenci tutumlarına etkisi*. Yayınlanmamış yüksek lisans tezi, Hacettepe Üniversitesi, Sosyal Bilimler Enstitüsü, Ankara.