

Full Length Research Paper

Evaluation of the Project Studies in social studies course of secondary schools in Turkey

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The aim of this study is to evaluate project studies in the 6th and 7th grades social studies courses of secondary schools according to opinions of students. This study is a descriptive research in the survey model. The sample is 880 students selected from 6th and 7th grades of 22 secondary schools randomly in central province of Kastamonu. As a data collection instrument, a questionnaire is used in order to elicit opinions of 6th and 7th grade students on project studies in their schools. Quantitative data collection technique was used. The statistical package for the social sciences (SPSS) program was used for statistical analysis. The frequency, percentage, arithmetical mean and standard deviation of the answers were calculated. Independent t-Test, Kruskal-Wallis-H and Mann Whitney-U test was used to analyze the data.

Key words: social studies, social studies teacher, project, teachers' perceptions.

INTRODUCTION

Project based learning was discussed for the first time in W. Kilpatrick's article titled "Project Management" published in 1918. Project based learning focuses primarily on concrete or abstract expression of ideas with art, crafts, speech and writing obtained by observations, comparisons and ideas resulting from a combination of old information. The real founder of the method is John Dewey, an American educator. Kilpatrick and Collings, students of John Dewey practised this method and developed this method. The method which was begun to be tried in 1912, in Geneva, JJ Rousseau Institute, Director of the Bureau of Education in 1925, and which M. Pierre Bovet showed great interest to and wanted it to be implemented finally spread to America with the ideas of John Dewey's works and started to be implemented in this regard (Çubukçu, 2011). The famous educator John Dewey (1960) has made important

studies in this regard. J. Bruner (1977) is also an educator who contributed to the project-based education, For this reason, it can be said that the method practiced today, in fact, is a synthesis or a contemporary interpretation of the project practices in the past.

Today's education system has to catch the change the age requires and educate individuals the age needs. The education system which aims to educate individuals with this approach must engage in a different formation instead of the traditional insights that learners learn the content from teachers in the classroom. This formation must have a structure that learners and teachers learn together, team work and problem solving can be executed successfully, learners and teachers assume the role of the researcher. The project based learning approach is one of the educational approaches which are thought to be an appropriate structure suitable to this

understanding (Başbay, 2007).

The project is a design, a process that the design is directed to develop predicts relational learning and mental model which is restructured continuously. The word "based" emphasizes the fact that the project is not a target but a process and saves the project to be a completed final project. Learning emphasizes a truly student-centeredness by sliding the attention away from teacher to the learner (Erdem and Akkoyunlu, 2002: 3). This method is a kind of individual learning method. In the project method, research papers are given on the subject to be learned. These can also be a group tasks. Each student participates in a research on the subject or on its particular aspects. The student reveals the problem in this research study first, and then detects changes and proposes way of solution, that is, sets hypothesis. Then, try to test the hypothesis if it was right or not. At the end, each student writes his report on the project and presents it clearly and concretely as possible with his experiments in the class (Aykaç, 2005: 125).

Project based learning is a model which organizes learning around projects. According to the definitions in project based learning handbooks for teachers, projects are complex tasks, based on challenging questions or problems, that involve students in design, problem solving, decision making, or investigative activities; give students the opportunity to work relatively autonomously over extended periods of time; and culminate in realistic products or presentations (Jones, et al. 1997; Thomas et al. 1999). Other defining features found in the literature include authentic content, authentic assessment, teacher facilitation (Moursund, 1999), cooperative learning, reflection, and incorporation of adult skills (Diehl et al. 1999).

Terry (1997) stated that project based learning is a mental and physical activity that students performed at or near the actual living conditions. Project based learning is a learning approach that aims to solve problems by means of individual or small groups in a method similar to living under natural conditions (Korkmaz and Kaptan, 2002). Project based learning is a model of regulating learning around projects (Thomas, 2000). In addition, Blumenfeld et al. (1991, p.1) define project based learning as a "comprehensive perspective focused on teaching by engaging students in investigation".

Project based learning is a method that allows students to throw out opinions about the topics covered in fields of interest, to ask questions, to estimate, to develop theories, to use different tools, to use the skills acquired in the context of a real and meaningful life and allows learner to solve problems and answer questions in a creative way in the classroom and outside (Katz and Chard, 2000). Project based learning is an integrated instructional practice that includes constructivist theory. It requires students to gain knowledge for implementation in a culminating project (Quigley, 2010).

Project based learning is defined as a learning

approach which puts students in the center of the teaching-learning process and which focuses on real-life issues and practices (Özcan, 2007). Project based learning highlights learning the concepts and principles rather than learning the facts on the desired content and highlights gaining complex problem solving skills rather than gaining skills separate from each other (Newell, 2003). According to Fogarty (1997), teaching of the project is built around the creation, application and the production of a thing. Project spans in an appropriate time. This period may be up to a period of a week, depending on the type of the project. For example, book reports, research publications, multi-media presentation and mechanical inventions are powerful regulators in creating a suitable curriculum suitable to interests, abilities, and resources. Project teaching supports learning based on hard work to produce something, creativity, cooperation and experience.

Project based learning allows students design, problem solving, decision-making and investigation activity opportunities including opportunities and difficult questions (Panasan and Nuangchalerm, 2010: 253). Project-based learning is a teaching method that attracts learning event into real life. It encourages students to learn actively. The students plan how to access information, implements, and produce a result. Acquisition of knowledge involves an active process, not passive. Learners are active at every stage of the learning process.

Project based learning is a teaching method used in authentic, complex, and real-life projects in order to motivate and to provide learning experiences (Shu-jing and Li-hua, 2010: 28). Project based instruction is a teaching strategy that aims to achieve teaching through projects based on students' activity and design (Zorbaz and Çeçen, 2009).

Items that are included in project based learning approach are content, processes, activities and results. (Buck Institute for Education, PBL Overview, What is Project Based Learning?; Four Reasons to Try). According to Erdem and Akkoyunlu (2002), process steps in project based learning are the identification of targets, determination and identification of the subject to be discussed or done, formation of teams, determination of the features of final report and presentation style, work schedule determination of control points, determination of the evaluation criteria and level of proficiency, collection and organization of the information, reporting, and presentation of the project.

Project based learning is based on already validated models that have an overriding project which is the motivation or stimulus of importance. Larmer et al. (2003) pointed out components of project based as follows:

Brain-based instruction is based on the understanding of how the brain functions and is a key factor in understanding the best instructional techniques. With the

understanding of how information is assembled, and how many different ways individual human beings' brains process, educators tailor instruction to help all students become successful (Becktold, 2001).

Cooperative learning is an instructional strategy that places students in cooperative groups where they work together in problem solving and coming to a conclusion. This strategy provides students with peer assistance in mastering content and provides the opportunity to learn from one another (Biehler and Snowman, 2003).

Competitive learning strategies are based on competition as a motivator. This is meant to create a higher cognitive level of content importance (Johnson and Johnson, 1991).

Individualist learning is an instructional strategy that puts the responsibility of gaining knowledge on the individual student and is often used when students need to have a high level of focus to receive instruction, and for repetition of acquired skills (Johnson and Johnson, 1991).

Constructivism is a philosophy of learning based on the brain-based ideas that knowledge is constructed, not a prescription for learning. Pelech (2006) stated that people of all ages do not create knowledge, they discover it; connect it to previous knowledge, and have a cognitive restructuring. This philosophy is not limited to a particular type of classroom pedagogy; it just has to be a discovery based environment with key questions and teacher facilitation, not teacher leading (Pelech, 2006).

Teachers guide more and teach less in project based learning (Carr and Jitendra, 2000). The role of teachers is to organize the conceptual knowledge, questions and the status of the dispute around according to the students' interests. Teachers assist students in establishing a new connection between what they have learned new and old and in developing what they have learned new. Presentations made in wide range of thoughts are cut into pieces then. Activities are student-centered and students are encouraged to ask their own questions, complete their own experiences and arrive at their own conclusions (Brooks and Brooks, 1993). Project based learning transformed teacher's role from a speaker who teach people and direct training to a person who provided resources and transformed teacher's role from an expert person to a person that help and lead (Çiftçi, 2006). The task of teachers is to increase experiential meanings that includes spontaneous impressions which is about the events around students suitable to developing interests and expectations of students rather than equipping students with standard knowledge (Gürdal et al., 2001). The teacher acts as a guide for students rather than transferring standard information. The teacher gives information to students about available sources and follows learning process of the students.

The student's role in project based learning method differs from traditional learning classes. Throughout the project, the student not only implements what the teacher told, but also looks for solutions to problems he/she faces on their own. Students work with teachers together from the selection of the project subject to planning activities. The students have the opportunity of checking themselves with the help of the teacher in every step of the learning process, they apply activities themselves, produce exploratory and unifying thoughts define their own processes, work independently most of the time (Çepni, 2005). Students work together for creating goals, providing information and for decision-making activities in Project-based learning. The students apply knowledge they gained through research not only to solve problems but also to deliver the results they reached (Howard, 2002). Project-based learning is a method that allows students to apply their acquired skills in the context of meaningful real life applications that enables the learner to solve problems and answer questions in a creative way in the classroom and outside. Real life is problem-solving oriented and directs all the students to work and try. This is also effective on thinking skills as it developed students' problem-solving skills (Karakuş, 2004). In project based learning, students form groups or work individually to solve the problems. They decide themselves how they approach to problems, which activities they carry out and what resources they need to reach.

Evaluation is done by considering the process and the product together in project based learning approach. Evaluation is not just about whether learners learn the subject or not. At the same time it is about the development of learners' problem-solving skills required in real-life needs. In other words; assessment deal with not only has taken into account what the learners have learned but also how what they have learned. According to Demirhan and Demirel (2003), evaluation studies in project based learning approach are based on universal evaluation studies. According to this approach, the role of the teacher in evaluation studies is to evaluate the student's own work, work of group colleagues and the work of colleagues in other groups according to the determined criteria as well as observing and evaluating students.

Evaluation activities are about whether students understand issues or not, develop their skills they need in real life outside the school and document them. The progress of the students can be documented thanks to evaluation that reflect what and how much they have learned in extra-curricular studies. The best assessment is students' evaluating themselves which enables them to find answers to questions such as "What I understand?", "How I am doing?" (Çakan, 2005: 22). Project based learning approach is a process that develops students' knowledge and skills, supports lifelong learning and encourages them to learn self-controlled (Korkmaz and

Kaptan, 2001: 194). As learning is a process, the evaluation of process is required during the evaluation.

Project based learning has a lot of positive effects on student content knowledge. Students in project based learning classes performed better on assessments of content knowledge when compared to traditional classes, (Boaler, 1997; Penuel and Means, 2000; Stepien, et al., 1993). Students with average to low verbal ability and students with little previous content knowledge learned more in project based learning classes than in traditional classes (Mergendoller, et al., 2006; Mioduser and Betzer, 2003). Students were also able to demonstrate specific content area skills after they took part in project based learning (Mioduser and Betzer, 2003; Peck, et al., 1998). For example, students working on a geometry project linked to architecture and design utilized measurement skills as they developed their blueprints, of which 84% met architectural building standards (Barron, et al., 1998). Students taught in project based learning classes emerged with useful, real-world content knowledge that they could apply to a variety of tasks (Boaler, 1997). Turnbull's (1999) thesis also provides further evidence for the positive effects of a more multi-dimensional, project-based approach within a French immersion context.

The benefits for project based learning are increased student motivation and engagement (Bell, 2010; Belland, et al., 2006; Brush and Saye, 2008; Frank et al., 2003; Green 1998; Thomas 2000; Lenschow 1998; Helle et al., 2006). For instance, in one study within an economics classroom, a project based learning unit engaged the lowest and highest level students as well as those students who were least interested in economics at the start of the unit (Ravitz and Mergendoller, 2005). In addition, Bartscher et al. (1995) studied the effectiveness of the project based learning with third, fifth and tenth grade students. They concluded that project work conducted in the classes increased the level of motivation and interest in subject topic (Bartscher et al., 1995). According to elementary school teachers, who reported using 37% of their overall instruction time on project based learning, students' work ethic improved as well as their confidence and attitudes towards learning as a result of project based learning (Tretten and Zachariou, 1995).

Students who participated in project based learning also benefitted from improved critical thinking and problem solving skills (Mergendoller, et al., 2006; Shepherd, 1998; Tretten and Zachariou, 1995). In particular, one study of project based learning showed a positive effect on low-ability students, who increased their use of critical-thinking skills including synthesizing, evaluating, predicting, and reflecting by 446% while high-ability students improved by 76% (Horan, et al., 1996). In addition, during project based learning, students showed initiative by utilizing resources and revising work, behaviors that were uncharacteristic of them before they engaged in project based learning (Barron, et al., 1998).

Project based learning has been shown to benefit a variety of students in developing collaborative skills. For example, through project based learning, elementary students learned to understand multiple perspectives and conflict resolution skills (ChanLin, 2008); special education students developed social skills such as patience and empathy (Belland, et al., 2006); and low-ability students demonstrated initiative, management, teamwork, and conscientiousness as they worked in groups (Horan, et al., 1996). Students also enjoyed project based learning because it gave them opportunities to interact with their friends and make new friends through cooperative projects (Belland, et al., 2006; Lightner, et al., 2007). However, group- and self-efficacy were found to depend largely on the quality of the group process (Weng-yi Cheng, et al., 2008) while high school students struggled to work positively in small groups (Achilles and Hoover, 1996).

Ghaith (2003) highlighted that providing students with many different forms of learning promotes positive interdependence, increased awareness of one's own strengths in learning, as well as an increase in meta-cognitive and communicative skills. Hamurcu (2000) also stated advantages of project based learning method. These are as follows: the vital skills, ability to use technology, cognitive skills, self-control skills, attitudes, trends, and beliefs. Teachers may be shy to give students responsibility in project-based learning model. They think that students are not ready enough. Lack of instructional materials, exam pressure and family expectations can be other disadvantages (Aladağ, 2005).

Thomas (2000) found different evidence in his research on project based learning. In his study, he described different kinds of studies on the effectiveness of project and problem based learning methods in the context of primary schools in the USA. The effectiveness in his review was evaluated in several forms which were e.g. summative evaluation, formative evaluation, assessing the role of student characteristics affecting project based learning. and many more. Studies showed that project based learning had a positive effect on the level of students' understanding of the subject content. Erdem (2002) stated advantages of project based learning method as follows:

- *it provides learning in a natural environment and an interdisciplinary approach,*
- *it provides development of relevant skills within a specified time period by designing, implementing and evaluating project with the expenditure of effort required,*
- *it provides learning the issues that the project focused on and provides specialization in related subject,*
- *it provides development of knowledge and skills for the use of educational technology effectively,*
- *it provides acquisition of the ability to work both individually and as a group with least foreign aid,*

- *it makes student autonomous, designer, creative, and productive,*
- *it improves self-confidence and a sense of personal dignity,*
- *it enriches student's product file,*
- *it develops skills of research and higher level thinking*
- *it develops skills of studying in cooperation for success,*
- *it enhances self-evaluation skills and the skills of evaluating team colleagues,*
- *it makes student an integral part of the school.*

On the other hand, Helle et al. (2006) conducted a literature review on project-based learning and the result is that only two articles out of 22 provided concrete evidence of the impact of project-based learning. Korkmaz and Kaptan (2001) expressed the disadvantages of project-based learning method as follows:

- *Teachers do not like to leave authority and power in their classrooms although they have a role of learning with students together and role of facilitating the process. Therefore, the time for learning process is difficult for teaching.*
- *It is difficult for teachers to change teaching methods. The teacher's responsibility increases much more in the classroom that student-centered educational model is applied.*
- *Implementation of the content in classrooms that student-centered education model is applied takes a long time 20% compared to classrooms that traditional learning approach is applied*
- *Social development is ignored as Individual development is given more importance*
- *Teacher control decreases compared to traditional methods and therefore activities transform into a spontaneous event.*

When we analyze the key studies within the context of project based learning, a few distinctive areas with which project based learning fits were found. These include experiential learning and out-of-the classroom experiences (Thiel, 1984; Legutke, 1985; Carter and Thomas, 1986; Beck and Simpson, 1993; Hill and Martyn, 2004). Quigley (2010) stated that more studies on project based learning need to be conducted as to highlight the effect of a project tied toward student achievement.

As a result of studies about project based learning it was found that the project-based learning approach affected the academic success of students in the social sciences course in primary education in a positive way (Boaler, 1997; Gültekin, 2005; Korkmaz and Kaptan, 2002; Özden and Özçoban, 2004). Learning with project based learning approach was enjoyable (Balkı, 2003; Gültekin, 2005). Balkı, (2003) expressed that the projects motivate students and let them have fun while learning something. Boaler (1997) stated that learning in a conventional class with course books is boring. Literature

states about positive effects of project based learning (Bartscher et al., 1995; Frank and Barzilai, 2004; Holst, 2003; Korkmaz and Kaptan, 2002; Tretten and Zachariou, (1995).

There is limited number of studies on project based learning in social studies course in Turkey. As a result of one of these studies conducted with teachers of social studies teachers (İbret et al., 2012) in Turkey which analyze project based learning from different perspective, the findings are as follows: Opinions of the teachers about the project studies being implemented in social studies classes do not show a statistically significant difference in terms of gender, years in profession, and participation to in-service training that they have received, but it was observed that the teachers who graduated from faculty of education have more positive views on the project studies than other social studies teachers.

This research is important as it aims to reveal the positive and negative dimensions of project method, to give information about the infrastructure problems in the schools, to reflect the students' point of view to new program and to show parents' role and involvement in the studies.

The aim of this study is to evaluate project studies in the 6th and 7th grades social studies courses of secondary schools in 2011-2012 academic periods according to opinions of students. In this context answers were sought to these following questions.

1. What are the opinions of 6th and 7th grade students on project studies in their schools?
2. Do the opinions of 6th and 7th grade students on project studies show a meaningful difference in terms of students' gender?
3. Do the opinions of 6th and 7th grade students on project studies show a meaningful difference in terms of grades?
4. Do the opinions of 6th and 7th grade students on project studies show a meaningful difference in terms of educational level of students' parents?

METHODOLOGY OF RESEARCH

General Background of Research

This is a descriptive research in the survey model. According to Karasar (2005), scanning models are research approaches which aim to define a past or present situation.

Sample of Research

The population of the study is all 6th and 7th grade students in secondary schools of Ministry of National Education in central province of Kastamonu in 2011-2012 academic periods. The sample is 880 students selected from 6th and 7th grades of 22 secondary schools randomly in central province of Kastamonu.

The demographic features of the sample were analyzed. The split between genders was in favor of female with 52.9% female and 47.1% male. The rate of students who study in 6th grade is

Table 1. Demographic features of the students.

Demographic features of the students		F	%	TOTAL	%
Grade	6	459	52.1	880	100
	7	419	47.9		
Gender	Female	466	52.9	880	100
	Male	414	47.1		
Education level of mother	Secondary school	543	61.7	880	100
	High School	235	26.7		
	University	82	9.3		
	Other	20	2.2		
Education level of father	Secondary school	428	48.6	800	100
	High School	299	33.9		
	University	135	15.3		
	Other	18	2.0		

Table 2. Opinions of 6th grade secondary school students on project studies in their schools in terms of scale items.

2	Subjects of project-based learning are determined with teachers.
5	The purposes of projects constructing should be determined prior to project activities by the teachers.
13	The projects in textbooks and teacher's books must be adapted to the conditions of our school.
17	Project-based learning increase creativity and motivation of the students.
22	Students see project studies as an undue burden.
25	Teachers must allow students to present project studies in classrooms.

52.1% and who study in 7th grade is 47.9%. When the education level of students' mothers was analyzed it was seen that 61.7% of mothers is graduated from secondary school, 26.7% of mothers is graduated from high school and 9.3% of mothers is graduated from university. When the education level of students' fathers was analyzed it was seen that 48.6% of fathers is graduated from secondary school, 33.9% of fathers is graduated from high school and 15.3% of fathers is graduated from university as shown in Table 1.

Instrument and Procedures

As a data collection instrument, a questionnaire was used in order to elicit opinions of 6th and 7th grade students on project studies in their schools. For the reliability of the instrument, literature study was done and pre-interview form was administered to ten social studies teacher in ten secondary school of Ministry of Education and then a questionnaire is prepared. Expert opinion was examined for the validity of the questionnaire. Questionnaire was revised in line with the opinions of faculty members. Reliability coefficient of the questionnaire was 0.90.

Findings were gathered by the help of a questionnaire which was applied to 880 students selected from 6th and 7th grades of 22 secondary schools of Ministry of National Education randomly in central province of Kastamonu. 880 students selected from 6th and 7th grades of 22 secondary schools were reached and necessary

explanations were done before the application process. Necessary time was given to students to fill the questionnaire.

Data Analysis

In this study, quantitative data collection technique was used. SPSS program was used for statistical analysis of the data collected by the surveys filled in correctly and fully according to the explanations in the frame of the general aims of the study. The frequency, percentage, arithmetical mean and standard deviation of the answers were calculated. Independent t-Test, Kruskal-Wallis-H and Mann Whitney-U test was used to analyze the data.

RESULTS OF RESEARCH AND DISCUSSION

Findings elicited from the questionnaires applied to 6th and 7th grades secondary school students were given in this section. Opinions of 6th grade secondary school students on project studies in their schools were given in Table 2.

6th grade secondary school students stated that 37.7% of them definitely agree about item 2 of the scale "Subjects of project-based learning are determined with

Table 3. Opinions of 7th grade secondary school students on project studies in their schools in terms of scale items.

19	Students must participate actively in project-based learning studies.
24	Parents should be informed about their responsibilities during the course of project-based learning.
30	Product and process should be evaluated together in the evaluation of the students' project work.

Table 4. Opinions of 6th and 7th grade secondary school students on project studies in their schools in terms of scale items.

4	Teachers must give project studies that can be prepared in daily life.
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teachers". 50.4% of 6th grade secondary school students definitely agree about item 5 of the scale "The purposes of projects constructing should be determined prior to project activities by the teachers ". 37.3% of the 6th grade secondary school students definitely agree about item 13 of the scale "The projects in textbooks and teacher's books must be adapted to the conditions of our school". 34.1% of the 6th grade secondary school students definitely agree about item 17 "Project-based learning increase creativity and motivation of the students". 6th grade secondary school students definitely don't agree about item 22 of the scale "Students see project studies as an undue burden". 43.6% of the 6th grade secondary school students definitely agree about item 25 "Teachers must allow students to present project studies in classrooms".

Opinions of 7th grade secondary school students on project studies in their schools were given in Table 3. 7th grade secondary school students stated that 43% of them definitely agree about item 5 of the scale "The purposes of projects constructing should be determined prior to project activities by the teachers ". 32.1% of the 7th grade secondary school students definitely agree about item 13 of the scale "The projects in textbooks and teacher's books must be adapted to the conditions of our school". 36.1% of the 7th grade secondary school students definitely agree about item 17 "Project-based learning increase creativity and motivation of the students". 38.5% of the 7th grade secondary school students definitely agree about item 19 "Students must participate actively in project-based learning studies". 29% of the 7th grade secondary school students definitely agree about item 24 "Parents should be informed about their responsibilities during the course of project-based learning". 36.6% of the 7th grade secondary school students definitely agree about item 25 "Teachers must allow students to present project studies in classrooms". 30.7% of the 7th grade secondary school students definitely agree about item 30 "Product and

process should be evaluated together in the evaluation of the students' project work".

Opinions of 6th and 7th grade secondary school students on project studies in their schools were given in Table 4. 6th and 7th grade secondary school students stated that 41.1% of them definitely agree about item 4 of the scale "Teachers must give project studies that can be prepared in daily life". 6th and 7th grade secondary school students stated that 46.9% of them definitely agree about item 5 of the scale "The purposes of projects constructing should be determined prior to project activities by the teachers". 32.9% of the 6th and 7th grade secondary school students agree about item 24 "Parents should be informed about their responsibilities during the course of project-based learning". 40.3% of the 6th and 7th grade secondary school students definitely agree about item 25 "Teachers must allow students to present project studies in classrooms". 32.8% of the 6th and 7th grade secondary school students definitely agree about item 30 "Product and process should be evaluated together in the evaluation of the students' project work".

Arithmetical mean and standard deviation of the answers that students give about their project studies were given in Table 5. When we analyze Table 2, it can be seen that the highest arithmetical mean of the items are I5 (3.97), and I19 (3.80), on the other hand, the lowest arithmetical mean of the items are I22 (2.62) and I27 (2.98). The total arithmetical mean of the scale in general is 102.94. According to these findings it can be seen that students answer generally in the level of "I partly agree", in other words, it can be said that the opinions of the students on project-based learning are moderate (middle level).

t Test results of students' opinions on project studies according to students' gender were given in Table 6. When we analyze Table 5, it can be seen that students' opinions about their project studies show a meaningful difference according to gender [$t_{(878)} = -2.88, p < .05$]. The arithmetical mean of female students (104.84) is higher

Table 5. Arithmetical mean and standard deviation of the answers that students give about their project studies.

Item No	\bar{X}	S	Item No	\bar{X}	S
I1	3,431	1,267	I16	3,276	1,393
I2	3,674	1,295	I17	3,620	1,316
I3	3,790	1,255	I18	3,535	1,298
I4	3,729	1,348	I19	3,795	1,309
I5	3,965	1,280	I20	3,655	1,292
I6	3,450	1,382	I21	3,419	1,415
I7	3,023	1,497	I22	2,620	1,479
I8	3,386	1,335	I23	3,501	1,420
I9	3,028	1,289	I24	3,563	1,328
I10	2,985	1,335	I25	3,693	1,347
I11	3,151	1,380	I26	3,326	1,347
I12	3,478	1,301	I27	2,980	1,452
I13	3,642	1,290	I28	3,409	1,326
I14	3,311	1,385	I29	3,476	1,315
I15	3,455	1,334	I30	3,564	1,310
TOTAL	102,94	18,61			

5 The purposes of projects constructing should be determined prior to project activities by the teachers.

19 Students must participate actively in project-based learning studies.

22 Students see project studies as an undue burden.

27 There is no hiding place for the projects of the students at the school

Table 6. t Test results of students’ opinions according to teachers’ gender.

Gender	n	\bar{X}	S	sd	t	p
Male	466	101.23	19.40	878	-2.88	.004*
Female	414	104.84	17.47			

*p<0.05.

than male students (101.23). The findings aren’t similar with the research done by Gökmen (2003).

t Test results of students’ opinions on project studies according to grades were given in Table 7. When we analyze Table 7, it can be seen that students’ opinions about their project studies do not show a meaningful difference according to grades [$t_{(876)} = 1.19, p > .05$]. In other words opinions of the 6th and 7th grade students are similar.

Kruskall-Wallis H Test results according to education level of students’ parents were given in Table 8. When we analyze Table 8, it can be seen that students’ opinions about their project studies show a meaningful difference according to education level of their fathers [$\chi^2(2) = 14.787, p < 0,05$]. In other words it can be said that education level of students’ fathers is an important factor on students’ opinions about their project studies. Binary comparisons are made in order to find the significant

difference between the groups. Non-parametric Mann-Whitney U test was used in pairwise comparisons as the number of individuals $n < 30$. As a result of analysis opinions of the students whose fathers’ education level is other are negative than the opinions of the students whose fathers’ education level is secondary school, high school and university. It can be said that as education level of the fathers increase, opinions of the student on project studies and activities become more positive. This finding is similar with the research done by Şahin (2007). When we analyze Table 6, it can be seen that students’ opinions about their project studies do not show a meaningful difference according to education level of their mothers [$\chi^2(2) = 5.411, p > 0,05$]. In other words it can be said that education level of students’ mothers isn’t an important factor on students’ opinions about their project studies. This finding isn’t similar with the research done by Şahin (2007).

Table 7. t Test results of students' opinions on project studies according to grades.

Grade	N	\bar{x}	S	sd	t	p
6	459	103.70	19.80	876	1.19	.233
7	419	102.21	17.10			

*p<0.05.

Table 8. Kruskal-Wallis H test results according to education level of students' parents.

Education level	n	\bar{x}	Kruskal-Wallis H	Sd	P	
Father	Secondary Sc.	28	443,90	14,787	3	4-1*
	High School	299	430,95			4-2*
	University	35	477,81			4-3*
	Other	8	238,44			
Mother	Secondary Sc.	43	442,29	5,411	3	144
	High School	35	442,09			
	University	82	455,38			
	Other	20	312,25			

CONCLUSION

As a conclusion, 6th grade secondary school students stated that 50.4 % of them definitely agree about item 5 of the scale "The purposes of projects constructing should be determined prior to project activities by the teachers". This item has become the item that students state opinions mostly. 6th grade secondary school students stated that 5.8 % of them don't agree about item 19 of the scale "Students must participate actively in project-based learning studies". This item has become the item that students state opinions least.

7th grade secondary school students stated that 40.3% of them definitely agree about item 5 of the scale "The purposes of projects constructing should be determined prior to project activities by the teachers ". This item has become the item that students state opinions mostly. 7th grade secondary school students stated that 5.3% of them don't definitely agree about item 3 of the scale "I have prior knowledge and skills needed to prepare project". This item has become the item that students state opinions least.

When we analyze the answers of 6th and 7th grade secondary school students, it can be seen that 6th and 7th grade secondary school students stated that 46.9% students definitely agree about item 5 of the scale "The purposes of projects constructing should be determined prior to project activities by the teachers ". This item has become the item that students state opinions mostly. 6th and 7th grade secondary school students stated that 6.7% of them don't agree about item 19 of the scale

"Students must participate actively in project-based learning studies". This item has become the item that students state opinions least.

When the arithmetical mean and standard deviation of the answers that students give about their project studies were analyzed, it was found that students answer generally in the level of "I partly agree", in other words, it can be said that the opinions of the students on project-based learning are moderate(middle level).

When the t Test results of students' opinions on project studies according to students' gender were analyzed, it was found that students' opinions about their project studies show a meaningful difference according to gender. Arithmetical mean of female students is higher than male students.

When we analyze t Test results of students' opinions on project studies according to grades, it can be seen that students' opinions about their project studies do not show a meaningful difference according to grades.

When we analyze Kruskal-Wallis H Test results according to education level of students' parents, students' opinions about their project studies show a meaningful difference according to education level of their fathers. Education level of students' fathers is an important factor on students' opinions about their project studies. On the other hand; students' opinions about their project studies do not show a meaningful difference according to education level of their mothers. Education level of students' mothers isn't an important factor on students' opinions about their project studies.

According to the results of the study, the following

recommendations can be made: the teachers should provide the necessary information to students about the purpose of construction of the project before doing the project work. Teachers also should provide the necessary information about the cost of the project before students start working on the project. Social studies teaching hours should be increased in order to implement a project-based learning method effectively. Teachers should inform the family of the students about their responsibilities during the project work. Teachers should adapt the projects in school textbooks and teacher guide books to the conditions of the school. Teachers should allow students to present project work in the classroom and use these studies in Social Studies classes. Teachers should evaluate both product and process of students' project work.

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