

Full Length Research Paper

A study on the efficacy of project-based learning approach on Social Studies Education: Conceptual achievement and academic motivation

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In this research, an experimental study was carried out in social studies 4th grade students' to develop students' conceptual achievement and motivation to succeed academically. The study aims to investigate the effectiveness of project-based learning (PBL) in social studies. A quasi-experimental research design (pre-and posttest) was used in the research. While the experimental group of students received an interactive social studies instruction including completely PBL in a team format activities, the control group students received an instruction including direct instruction method (whole class teaching and individual work in the worksheet of the topics) in the fourth 4th grade social studies curriculum for six weeks. The findings indicated a statistically significant difference in favor of the experimental group on the concept achievement and motivation. Students who participated in the PBL environments not only enriched and expanded their knowledge but also achieved a higher level of motivation than the control group. The PBL in a team format activities were provided to promote the experimental group students' motivation to succeed academically and to develop their conceptual achievement. The results demonstrated that the PBL improved students' understanding regarding social studies concepts and helped them achieve the behaviours which were aimed academically. The experimental group's intended behaviours in academic motivation at the beginning of the experimental treatment turned into performed behaviours at the end.

Key words: Project-based learning, social studies teaching, academic motivation, student achievement.

INTRODUCTION

Today the traditional skills of reading, writing and listening are necessary in learning and teaching activities, but they are not sufficient for young citizens in order to participate in community actively or even survive in the real-world. Therefore, the following goals for elementary school education have been identified to help children

accomplish what the other subjects and courses cannot help them achieve or motivate positively. All these facts revealed that social studies education is very important and necessary in schools because the primary purpose of social studies is to educate young people to become active citizens, who will become a part of a multicultural

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nation and conscious of the social world. With social studies education, students improve their values of citizenship, inquiry, problem-solving, critical thinking and decision making skills on critical social issues (Barth, 1993; NCSS, 1994; Wade, 2007; Maxim, 2010). In this sense, since authentic instruction contains many different disciplines, methods and techniques, it is suggested to be used in teaching social studies because different instructional practices are known to have different outcomes on students' motivation and engagement in active learning (Grolnick and Ryan, 1987; Patrick et al., 1993; Cordova and Lepper, 1996; Assor et al., 2005).

Today's schools involve not only promoting content knowledge of disciplines, but also developing high-level cognitive skills and transferring values. To help students acquire these goals, teachers should be encouraged to use more authentic instruction approaches in teaching (Lam et al., 2009). Method diversity can help students solve problems related to social world and educate them as democratic citizens. One of these learner-centered methods is the project-based learning (PBL), which has been recommended highly in education reforms. PBL provides an effective way for teachers and students to develop creativity and supportive learning environments. Project-based learning in social studies allows students to acquire social studies ideas, concept related to social issues, democratic skills and values by conducting small projects with their peers. The projects carried out by students support them to improve their real-world skills such as research, scientific thinking, creative and critical thinking, hands-on skills, communication and presentation abilities by working in groups in accordance with their own managerial skills. Students in small or big groups collaborate with each other to reach collective outcomes over a period. They search solutions to a problem by posing and refining questions and discussing ideas, collecting and analyzing data, drawing conclusions and presenting the findings to each other's (Hmelo-Silver, 2004; Zimmerman, 2010). In other words, project-based learning is defined as an important method which is used to make students acquire necessary knowledge, vital skills and citizenship values for the 21st century including portfolios, performance assessments and written reports (Andres, 2006). PBL is a method which is based on scientific principles and encourages students to discovery learnings, enhances metacognitive strategies about the quality of life, results in realistic products following the authentic questions and topics. PBL can be defined as an investigative activity that develops cognitive structures and reconstructs knowledge in accordance with the perspective of Piaget's cognitive development. It includes activities such as metacognitive thinking, creates an original product, allows to be used communication skills in a group, class or society and presents the final products (Kimonen, and Nevalainen, 2000; Mergendoller, 2006; Carr, 2012). Educators identified seven core skills for students referred as 7Cs. These seven skills are:

1. Critical thinking and problem-solving.
2. Creativity and innovation.
3. Cooperation, teamwork and leadership.
4. Intercultural understanding.
5. Fluency in communication and information.
6. Computer and communication technology.
7. Career and self-development.

PBL supports the development of individuals in the areas mentioned above. This is because projects and team-works are the artifacts and ways by which the real-world needs to study both today and future. The main purpose of projects is to help students study cooperatively in democracy, acquire a deeper understanding related to their lives and improve interest and abilities (Trilling, 2008; Moylan, 2008; Kubiato and Vaculova, 2011). Students can create products in accordance with their own cognitive power, artistic talents and presentation skills in process of project. It provides to explore a topic in depth. Its basic features are students' orientation, connection with social world, process of inquiry and research, information from data sources, acquisition of content knowledge, teamwork study skills, group work values and final products (MacDonell, 2007). According to Kilpatrick (1918), project learning characterizes "versatility" in social content. This versatility is one of the most important components of life and based on structuring knowledge as intrinsic by considering children's prior knowledge and past experiences. It is the best way to prepare individuals for life because it represents life itself (Citied Yun, 2000). Hence, teachers should try to help students acquire the facts of life by teaching social studies goals in the elementary school education. NCSS (1994) and Checkley (2008) point out that social studies must be challenging, active, meaningful, value-based, integrative and contain authentic applications which encourage students to think deeply and practice their knowledge. If you want social studies education to be beneficial, it should be planned in accordance with these main essentials. Wolfe (2001) observed that such real-world projects make the curriculum more meaningful and powerful to students because project-based learning gives a chance to solve the social world problems and dilemmas faced by students in their society and make suggestions for them.

Theoretical overview project-based learning and student motivation

The constructivist approaches lead to increase academic motivation to develop cognitive skills in a wide variety in class participation on social studies. Because constructivist approaches hold promise for increasing both students achievement and motivation. One of the most popular approaches under the canopy of constructivist learning methods is project base learning (Fox, 2013).

PBL environments not only ensure students to feel themselves as the owner of a property in a project, but also create higher motivation academically (Blanken, 1999; Diffily, 2002; Kaplan, 2002; Carr, 2012). Self-management, participation in social environments and academic achievement are the basis of motivation for learning. Hence, a self-concept focused model behaviour gains strength with the best level of intrinsic motivation. Indeed, motivation is an integrated structure which includes internal processes of individuals' personal goals, beliefs, needs and interests as well as external processes. Jolly and Cherian (2012) emphasized the orientation of success of individuals themselves as the most important framework of motivation.

The milestone of PBL is creation of student-centered learning environment to develop motivation to succeed academically. One of the most important purposes of this learning approach is to increase students' intrinsic motivation and to gain learning outcomes of social studies by organizing conditions of external motivation because projects encourage students to discuss social events and compare important ideas. As regards with the rich content of social studies, students improve their creativity and acquire independent learning skills by making connections among social studies ideas and concepts through project-based learning. For instance, students can study on a project which is about the "*Results of World War II in terms of its environmental impacts*" or about senior citizen stories with full of fascinating memorabilia in social studies classroom (Maxim, 2010; Klein et al., 2009). In this process, teachers should be facilitator, support materials, increase motivation and bring in relevant educational experiences through crucial projects (MacDonell, 2007). Students were encouraged to interact socially with their peers and to share project products by putting forward their own ideas. Thanks to these interactive activities, students' negatively intrinsic motivation or external pressures such as shame, guilt, anxiety, family reactions, fear of failure or low motivation can be eliminated. Thus, students can organize external and internal conditions of a controlled and planned study by carrying out such projects (Thomas, 2000; Jolly and Cherian, 2012). In short, it is clear that project approach can be connected with the concept of self-determination and self-regulation. To Waugh (2002), motivation includes internal and external processes which reinforce behaviours. In other words, motivation can be defined as any variables such as personnel planning, assertiveness, controlling positions, personal success and power, connecting needs, social success, academic achievement, expertise, work adjustment, competitiveness, solidarity and personal curiosity (Chye and Waugh, 2010). This approach is widely believed to be a powerful teaching strategy that can enhance student motivation and promote self-directed learning because the learning issues usually arise from problems that attract students' interests. Consequently, students can observe their improvements

in process and assess their own learning outcomes by conducting on projects. Thus, students are motivated to learning process because children not only develop their perceptions of real-world around them through projects, but also strengthen their dispositions, attitudes and motivation towards learning that they will use for the rest of their lives (Blumenfeld et al., 1991; Katz and Chard, 2000; Hmelo-Silver, 2004).

Research on instructional practices

Pedagogical strategies which heighten students' engagement in learning process ensure social studies' academic success. Indeed, authentic instruction is the most effective method for evaluating students' achievement. It also supports students' higher level thinking interpret all background information or in depth conceptual understanding. This is because the authentic methods enable participants of these activities to use skills they have gained and perform the intended behaviours that are crucial to the outside of school. Authentic instruction consists of various teaching strategies that should be utilized to engage students in a social studies curriculum that enhances democracy actively. The project-based learning, as one of the authentic methods, is culturally concerned with pedagogy in order to accomplish social goals and increase students' interest and motivation (Newmann et al., 2007). To Levin-Goldberg (2009), students are typically more motivated to learn when they are allowed to participate in a project in which they have a greater interest. According to Newmann et al. (2001), there is evidence that when teachers organize instruction around assignment that demands higher level thinking in depth, understanding elaborated communication makes a connection to students' lives beyond school so students produce more complex works intellectually. These authentic intellectual studies have been found to increase students' engagement and achievement.

Research has also shown that attitudes, engagement and motivation of students towards social studies have been negatively affected by their prior experiences in social studies classrooms. These results mainly arise from lack of materials, continuous exposure to textbooks, teacher excitement, instructional methods (Van Sickle, 1990; Gustafson, 1993; Pahl, 1995; Hinde, and Ekiss, 2005; Ünal, and Çelikkaya, 2009; İlter, 2013). Heafner (2004) stated that many teachers struggle with lack of students' interest in content which turns into low motivation to learning. According to him, this situation is especially prevalent in social studies course. Above researches indicate that students rarely feel engaged in learning process and gained social studies concepts when teachers still embrace traditional pedagogies. in social studies course. This may be detrimental not only to students, but also to the society as a whole since it is the social studies which students learn about society, economics and effective citizenships.

Studies in the literature indicated that social studies is often perceived as interesting and boring course among students due to the teaching strategies and extensive content knowledge related to the disciplines of social sciences. In fact, students tend to like social studies course compared to the other curriculums in the school because students should learn the contents of social sciences to promote active and knowledgeable participation in democracy (Bullock, 2013; North Carolina Department of Public Instruction, 2013a; McCall et al., 2008). In social studies education, direct instruction is generally used including lecture, reading textbook and filling out worksheets, writing, taking test, assessing student's ability and reviewing memorized information. However, in order to prepare students for the life in a multicultural society, various authentic instruction strategies and alternative assessment techniques should be used in social studies. Traditional methods often utilized by social studies teachers do not sound interesting for all students, so there are many opportunities to acquire knowledge, skills and values and also to enhance concepts related to social world. The nature of social studies requires collaborative studies to increase student's content knowledge and democratic concepts because the purpose of social studies subject is the maintenance and growth of a society. In other words, social studies is intended to increase students' understanding of democracy and citizenship and to help them perceive the real-world. Newmann et al. (2007) emphasized that student's motivation and engagement in learning process increase when learning is connected with authentic social world problems. This increase in engagement is especially needed in social studies to ensure that students are able to make informed decisions in democracy. The students are supposed to analyze social phenomena effectively by conducting projects in social studies classrooms. So teachers should use the best instruction methods possible and strive to gain achievement and motivation in a subject area that is critical to social life (Bullock, 2013; Evans, 2006).

Consequently, the use of project-based learning in social studies can help integrate the concepts of disciplines and develop students' interest, attitudes and academic achievement. Hence, project based learning is intended to increase the engagement of student and lead to better education outcomes in all subjects (Heafner, 2004; National Assessment of Educational Progress, 2010; Carmichael and Martens, 2012; New Tech Network 2013b).

METHODOLOGY

Research design

The purpose of this study is to determine the effect of project-based learning on the 4th grade primary school students' concept achievement and motivation to succeed academically in social studies. Pre- and post test comparison groups and quasi-experimental research

Table 1. Distribution of participants for the experimental treatment groups.

Experimental Treatment Groups	Girls		Boys		Total
	N	%	N	%	N
Experimental	15	53.57	13	46.43	28
Control	11	42.30	15	57.70	26
Total	26		28		54

design were used in the research. While the lessons were planned in the project-based learning in a team format in the experimental group, direct instruction methods (whole class teaching and individual work in the worksheet of the topics) were used in the control group.

Participants

The participants of the research are composed of the fourth grade students (n=58), divided into the experimental and control group in Bayburt city, Turkey during 2012 to 2013 school years. An experimental group (n=28) and a control group (n=26) were created randomly and matched to equalise. Table 1 presents the participants of the research. The distribution of the participants is shown in Table 1: there were total 54 students in the experimental treatment groups. While the experimental group contained total 28 students consisting of 15 girls (53.57 %) and 13 boys (46.43 %); in the control group, there were total 26 students consisting of 11 girls (42.30 %) and 15 boys (57.70 %). First, the experimental treatment groups were assigned randomly, after the participants in the groups were matched according to their gender and pre-test scores obtained from the research instruments in order to assign individuals equally. According to the results, there were not any statistically significant inferences between students' academic motivation and achievement in the experimental and control group in terms of their pre-test scores before the treatment (Academic motivation pre-test [$t_{(53)}=0.812, p>.05$]; Concept Achievement pre-test [$t_{(53)}= 1.676, p >.05$]).

Data collection

The methods chosen for the present research included concept achievement test and motivation scale to succeed academically. The information related to data collection tools are presented below in detail.

Research instruments

Concept achievement test: In the research, an achievement test was developed by researcher to assess conceptual achievement of students related to the unit "The place we live" within the theme "people, places and environments" in social studies curriculum (MEB, 2013). The draft achievement test consisted of total 30 (four-options, multi-choice questions). The content validity was taken into consideration during the distribution of questions in the concept achievement test. The draft test was presented to the expert opinions. After revising opinions, the test was finally prepared for validity and reliability. The study of validity and reliability was carried out total 300 students at middle schools in Bayburt city, Turkey during 2012 to 2013 school years. In consequence of the item analysis, the parameters of item difficulty and item discrimination were estimated. To analyze the results, the values of item difficulty

in concept achievement test ranged from 0.31 to 0.89; values of item discrimination were found between 0.27 and 0.55. The average difficulty rate of the test was determined as 0.54. The Cronbach Alpha reliability was analyzed to determine the consistency of the concept achievement test. According to the results, value of KR_{20} was found as 0.82. At the end of the reliability and validity analysis, the concept achievement test consisted of total 25 items and were used for the experimental treatment.

Academic motivation scale: Another data collected as a measurement instrument in the research was the academic motivation scale to determine students' motivation to succeed academically. This scale was developed by Waugh (2002) and adapted to Turkish by researcher. Firstly, the researcher got in touch with Dr. Waugh who took the ethical permission to translate into Turkish. The motivation scale contains students' requirements, behaviours, attitudes, beliefs, expectations and proposes. In the original scale, "What I actually do" and "What I aim to do" response sets are available. These response sets represent dimensions of 'attitudes' and 'behaviours' of academic motivation and test relationships between them. 'What I actually do' is expected to be expressed by students in terms of the number of subjects to which it is applied, too. It is expected to be determined by students' personal beliefs, needs and cognitions and expressed as what they actually do in their subjects. 'What I aim to do' reflects a range of behaviours aimed by students' needs, belief, expectations, cognitions and desires, values, cognitive learning outcomes, all of which are internally and covertly available within students' minds. The response sets of the original scale were classified according to the set of subject response categories (*none=0, in some=1, in most=2, in all=3*). The scale of motivation is linked with attitude items (*What I aim to do*) and behaviours which are performed items (*What I actually do*). It determines the connection between attitudes and behaviours. In the motivation scale, high scores mean better for performing behaviours or aiming to do behaviours academically.

When the main structure of the original scale is examined, three-factorial structure appears: a conceptual model of motivation, which is based on "Striving for Excellence" (1), "Desire to Learn" (2) and "Personal Incentives" (3). These factors consist of a series of sub-factors; Striving for excellence is defined by the sub-aspects *academic standards, goals, tasks, effort, ability* and *values*. Desire to learn is defined by the sub-aspects *interest, learning from others* and *responsibility for learning*. Personal incentives are defined by *extrinsic rewards, intrinsic rewards* and *social rewards* Waugh (2002). The language equivalence of motivation scale was carried out. The items in original motivation scale were adapted and translated into Turkish by the researcher. While adapting the scale into Turkish, the original form of scale was filled out to 20 master students. Both English and Turkish forms were presented to the expert judgments to determine its consistency. The expert discussed all the items of this scale and translated them into Turkish. Subscales and total scores of the English and Turkish versions of both scales were compared and correlated. According to the analyses, a high positive correlation between 0.76 and 0.89 ($p < .001$) was found. As the result of expert judgments, some items were changed due to some cultural differences. These results statistically indicated that both the English and Turkish versions of the scales were similarly very well perceived. Afterwards, reliability and validity of the scale was applied to total middle school students. According to this result, the Turkish and English forms were parallel with each other. It was obtained that a three-factorial structure described a variance of 42.12 % in exploratory factor analysis as in the original scale. The Kaiser-Meyer-Olkin (KMO) value of the scale was calculated as 0.714; Bartlett's test was significant ($\chi^2=367.654$; $p < .001$). For reliability of the scale, the internal consistency was calculated among sub-scales. Total internal consistency of the scale was calculated as α (Cronbach Alpha) = 0.74. Reliability coefficient of "Striving for excellence" sub-scale $\alpha=0.78$; "Desire to learn" sub-

scale $\alpha=0.76$; "Personal incentives" subscale $\alpha=0.71$.

Process of the Experimental Treatment

In the experimental group

While planning the projects in team format for the experimental group, firstly the researcher gave information about the preparation guide of the project in accordance with thematic unit of topics. The most important topics which provided high-level participation and promote cooperative learning and hands-on skills were chosen in order to acquire alternative perspectives and experiences in social studies. Students who used teamworks completed their projects by interacting each other. Klein et al. (2009) stated that while planning the project explicit learning goals and project subjects should be taken into account. In the present study, implementation teacher played an important role as a facilitator and a supplier of the materials for the project team works in the experimental group. The topics of the project were designed according to the unit "The place we live" within the theme "People, Places and Environments" in the fourth grade social studies curriculum (MEB, 2013).

The group formation

Since the experimental group was composed, of total 28 students, seven project study teams were created. Each work group consisted of four students. These groups were composed of researcher by taking into consideration teacher's opinion for the project works. The characteristics of the project-team groups are presented in the Table 2.

The project-team groups were named as geographical regions of Turkey (example, Marmara Region Group, Aegean Region Group). Each group of students chose a group representative for their group's reporting, giving an oral presentation about what they learned related to the topics or products. When students completed their projects in a lesson time or a week, they presented their projects in the classroom. At the end of six weeks, all groups delivered their projects. While evaluating the projects, forms of "Evaluation of the Group", "Project Evaluation" and "Group Self-Evaluation" were used and feedback was given about the development of the students both individually and as a group. It was considered that there were students on different levels in each study team. The purpose of the work groups was to create a competitive learning environment and increase social and group interaction among both the members of a group and among groups. Chi-Square analysis technique was used to determine whether the normal distribution of the project groups' parameters (gender and average pre-test scores of concept achievement test) can be made or not. According to the results, scores of the project study groups in the experimental group were normal distribution and significant differences were not found among groups in terms of gender and the average pre-test scores of concept achievement test [(Gender: $\chi^2=0.743$, $p > .05$; Pretest: $\chi^2=2.256$, $p > .05$)]. This means that the project groups were similar to each other in terms of gender and conceptually achievement. Finally, a learner-centered environment which was focused on cooperative learning through projects was created in the experimental group. In other words, the groups were heterogeneous inside themselves, but in the class they were generally homogeneous. Lessons were organized to encourage the students to develop their hands-on skills, problem solving, presentation and communication skills by carrying out projects. Students were completely motivated to projects by using inquiry skill actively, defining the problem, collecting data and manipulating materials. The researcher only observed the learning process by taking a non-participant role in the classroom. He intervened neither the students nor the teacher during the experimental treatment. The

Table 2. Distribution of the project work groups in the experimental group.

Groups	Names of Groups	Social Studies Grades	Gender		Total Members
			Girls	Boys	
1	Marmara Region	5,5,4,4	2	2	4
2	Mediterranean Region	5,4,4,3	3	1	4
3	Eastern Anatolia Region	5,5,4,3	2	2	4
4	Black Sea Region	5,5,4,4	2	2	4
5	Central Anatolia Region	5,5,4,3	3	1	4
6	Southeastern Anatolia Region	5,5,4,3	1	3	4
7	Aegean Region	5,4,4,4	2	2	4
Total			15	13	28

Table 3. A summary of the topics of project related to the unit “The Place We Live”.

Weeks	Thematic Topics	Products
1.	Directions	Sketch drawing
2.	Let's see and lets draw	Manufacturing Relief Map of Turkey about landforms
3.	The weather	Weekly Weather Observation Report
4.	What are in our environment?	Mind-Map and Concept Map
5.	The nature in our culture	-Earthquake Bag -Manufacturing Earthquake Regions Map of Turkey
6.	Let's get ready for the natural disasters	Newspaper, Poster

researcher only delivered necessary materials to the implementation teacher for the project activities. The topics of the project and products related to the unit “*The places we live*” are presented in the Table 3.

In the control group

There was no intervention in the control group in the research. The topics of the unit “The place we live” in the 4th grade social studies textbook worksheets of topics, whole class teaching, individual work methods were used in the control group. Social studies teacher conducted the lessons both in the experimental and control group during the experimental treatment

Data analysis

The data gathered through measuring instruments for the present study was analysed by SPSS 15.0 packaged software. To compare the groups' average pre-test scores, an independent t-test was used. Additionally, Repeated Measures Analysis of Variance (Anova) was used to compare both the groups' pre-and posttest scores for determining whether there was a significant difference or not.

RESULTS

The variables in the research consisted of two measures: concept achievement and motivation to succeed

academically in social studies. According to variance analysis results, students' pre-and posttest scores of the concept achievement were significantly different between groups [$F_{(1-54)} = 1.235$; $p \leq .05$]. The results showed that there were significant interaction effects between the project-based learning activities and direct instruction methods based on textbook worksheets in social studies in favor of the experimental group. Bonferroni test analyze result indicated that students in the experimental group were more successful than the control group on conceptual achievement (Mean=11.169; SD: 3.239, $p \leq .05$). Project-based learning activities concerning with conceptual achievement performed significantly better than the methods used in the control group.

In the research, the other independent variable was motivation. The experimental treatment enabled the experimental group students to change the behaviour of their motivation to succeed academically better than the control group students. At the beginning of the experimental treatment, students' attitudes towards striving for excellence, desire to learn and personal incentives of sub-scales in the academic motivation scale turned into behaviours at the end of experimental treatment. Students' pre- and posttest scores regarding both “*What I aim to do*” and “*What I actually do*” were significantly different between groups [$F_{(1-54)} = 2.035$; $p \leq .05$; $F_{(1-54)} = 0.876$; $p \leq .05$]. In other words, the experimental group's intended

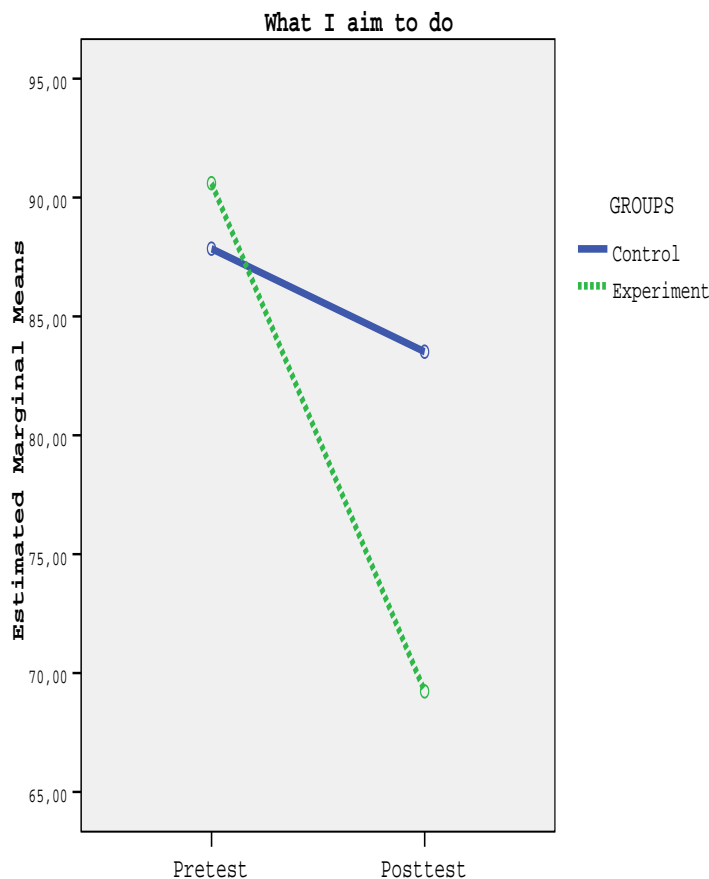


Figure 1. Pre and post-test scores of “What I aim to do” related to behaviors in the academic motivation scale

behaviours (*What I aim to do*) in the motivation scale performed more academically (*What I actually do*) than the control group (Figure 1 and 2) because the experimental group had more opportunities for collaboration, self-regulation and hands on skills activities during the experiment. Hence, better social and cognitive interactions among the students in the project-based model improved their motivation in social studies courses.

At the end of the experimental treatment, both groups’ conceptual achievement and academic motivation scores increased. However, the results demonstrated that students in the experimental group were more successful academically and had a higher-level academic motivation than the control group. In Figure 1, it has been understood that at the end of the experimental treatment, the experimental group of students’ scores related to “*What I aim to do*” in academic motivation decreased more than the control group.

But in Figure 2, it can be seen that the experimental group of students’ scores related to “*What I actually do*” increased more than the control group. The correlation analysis results indicated that there was a negatively significant relationship between the scores of “*What I actually do*” and “*What I aim to do*” in the academic

motivation scale ($r = -.067, p < 0.01$). This means that the experimental group students’ motivation scores related to performed behaviours (*What I actually do*) increased through project-based learning in team format activities. The project-team activities turned the intended behaviours into performed behaviours academically after implementing the project environments. The project environment had significant effects on the experimental group’ students aimed behaviours academically.

All these results came out through doing and experiencing learning in social studies. Significant changes appeared after implementation of the projects regarding conceptual achievement and academic motivation. Consequently, it was found that positive motivation to succeed academically increased through the projects which were in a team format activities.

DISCUSSION

The present study investigates the effectiveness of project-based learning on the fourth grade primary school students after the experimental treatment in social studies

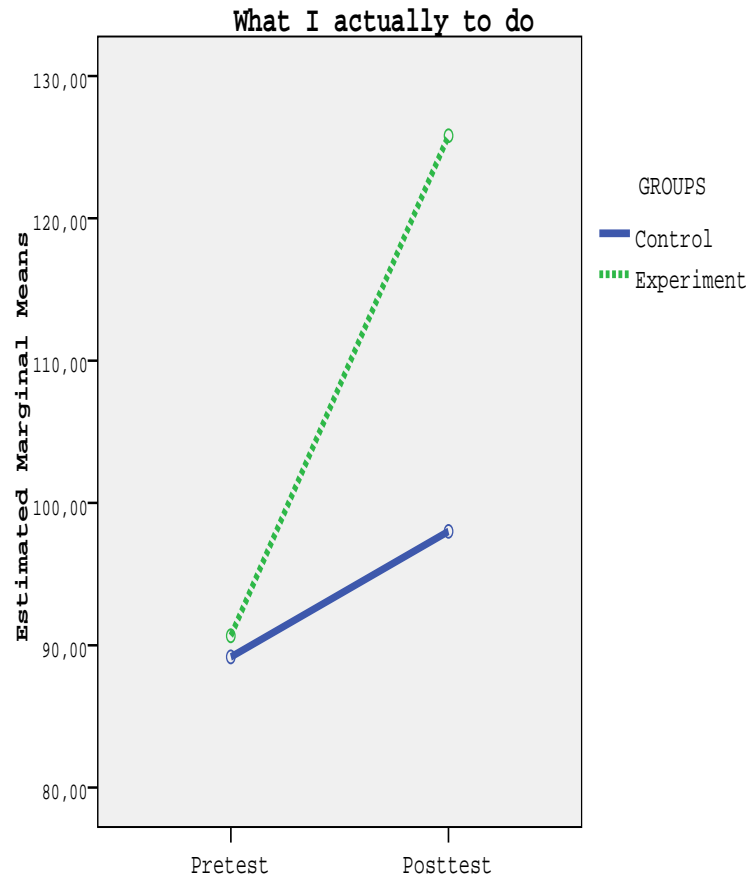


Figure 2. Pre and post-test scores of “What I actually do” related to behaviours in the academic motivation scale

in terms of conceptual achievement and motivation to succeed academically. The results obtained from the present study show that students enriched their knowledge by conducting projects in social studies. The research findings demonstrated that the students expanded their concepts on the units mainly through hands-on skills by doing projects in a team format in social studies. In addition, students developed their motivation positively. Cooperative works initiated interactions, exchange of ideas about social studies with both their own members and those of other groups. With the present study, it can be stated that projects enhance cooperative learning, creating a comfortable and supportive learning environment, help students increase conceptual achievement, also develop their motivation to succeed academically. Researches in the literature tend to support the findings of the present study strongly (Boaler, 1998; Barron et al. 1998; Shepherd, 1998; Korkmaz and Kaptan, 2002; Liu, and Hsiao, 2002; Balkı-Girgin, 2001; Holst, 2003; Özdener, and Özçoban, 2004; Gültekin, 2005; Kaldi et al., 2010).

Results of the project-based learning studies in literature indicated that it is an effective learner-centered mo-

del which develops content knowledge, communication, self-management and self-regulation skills, positive attitudes, problem solving, teamwork skills, makes students acquire hands-on experiences, scientific inquiry skills, and promotes social interaction and motivation to succeed academically (Veenman and Kenter, 2002; Doppelt, 2003; Lam et al., 2009; Kaldi et al., 2010; Musa et al., 2010; Öztürk, 2012; Halvorsen et al., 2012; Fox, 2013). Meyer et al. (1997) suggest that PBL helps students acquire high-level cognitive skills and strategies and a sense of responsibility. Similarly, some other researches demonstrated that project-based learning provided great opportunities for collaboration, supported active engagement and academic achievement in classroom (Demirhan, 2002; Pedersen, 2003; Iwamoto, 2013). Cervantes (2013) stated that engagement is the center of PBL acquainted with the use of creativity, collaboration, teamwork, motivation relevance and establishment of relationship while working on authentic projects. He examined the impact of PBL on Reading and Mathematics achievement of 7th and 8th grade students and tested hypothesis that PBL was effective in academic achievement in Reading and Mathematics and also on

students' participation both in class and out. Wirkala and Kuhn (2011) concluded that the students in both PBL groups had comprehension and application skills that were superior to groups who engaged in the lecture. Zhou and Lee (2009) in their study, the results indicated positive experiences with PBL style learning as well, including increased confidence and abilities and gained meaningful learning. Students appreciated and saw value in the collaborate aspects of learning. Struyven et al. (2010) described that active learning strategies interest and motivate students academically as exploratory learners. This approach promoted deeper learning in students (Prosser et al., 2003). When students complete their projects without presenting, mostly they want to show them to their peers or parents proudly by pleasure, so this enables them to be focused on the course (Sunal and Haas, 2005). Reducing students' lack of interest and motivation towards social studies or school works is one of the most important benefits of using project-based learning. The educational approach that primarily utilizes lectures or textbooks which are focused on traditional approach does not necessarily supply academic needs and motivation of students. Indeed, students who take active roles in education have been found to be better on monitoring and regulating their own learning processes when compared with students who are engaged as non-participant in learning process (Bell, 2010; Martell and Hashimoto-Martell, 2011; Iwamoto, 2013). The results from the present research emphasized the students are able to develop their content knowledge for conceptual achievement in social studies. Its influence on achievement and motivation finally created meaningful learnings environmental so students gained wide range of cognitive skills by learning social studies concepts. Consequently, review of the literature revealed similar results to the findings of the present study. All these studies suggest that students learn best by actively constructing their concepts, knowledge through projects with peers in social studies.

CONCLUSIONS

Overall findings of the present study supported using of PBL in teaching social studies. In the study, project-based learning was found to create more positive effects on students' conceptual achievement and motivation to succeed academically than the control group's methods (whole class teaching and individual work in the worksheet of the topics). The results indicated that students' conceptual understanding has improved as a result of project environments which are among innovative approaches in 21st century. In the experimental group, project work groups spent their time on various activities to develop their social studies understanding. They focused on the research and hands-on skills activities deeply to receive and memorize many social studies content knowledge through social interaction by participating in

the projects actively. This situation enabled the students to increase their high-level academic motivation and allowed them to perform their intended behaviours. For instance, students used their scientific process skills by observing weather, reading and interpreting maps in more detail, generating the data, conducting on research-based activities, manipulating the materials and improving self-regulation and self-evaluation skills on projects. Similarly, students in the experimental group created relief maps about landforms by using their hands-on skills together with their peers. Conclusions of this study indicated for the effectiveness of PBL in team format in teaching social studies. All these activities based on constructivist learning environments in social studies education helped students gain meaningful experiences. The results of the present study suggest that students learn better by actively constructing their knowledge through projects with peers in social studies.

Children learn to become responsible and active citizens who make right decisions; furthermore, they will become independent learners and thinkers by participating in real-world projects actively because they develop their own world by improving knowledge, skills and have a sense of society nationally and globally. At this point, the use of project approach in teaching of social studies can help developing research and hands-on skills such as collecting data, organizing, interpreting and time management, problem-solving and manipulating materials. Bruner had strong ideas in teaching of social studies. To him, the inquiry-based learning activities should be dominant in Social Studies Education because he believed that the best way for students to learn how to solve the problems was carrying out research projects (Cited Zarrilo, 2000). For instance, students can search for first-hand data sources, the daily anecdotes, old newspapers, and archives to conduct projects in their classrooms. In addition, students can play role as a geographer, historian, anthropologist, researcher, writer and political scientist in social studies project works. Students who participate in projects can play an active role in learning process by using abstracting, patterning, ordering, prioritizing, judging and connecting skills of their frontal lobes' executive functions. Therefore, students will learn better academically and construct their content knowledge effectively through projects. Thus, teachers should make sure that each project is closely tied to learning objectives and that students understand how the project is linked to what they're learning.

Accordingly, in teaching of social studies, teachers can increase students' personal constructs /concepts/ interpretations and develop their interests and motivation to succeed academically by using project-based learning approach in team format. All in all, educators may develop project-based learning environments in social studies in order to develop skills, values, attitudes, reliance upon social studies perspectives and community orientation.

Conflict of Interests

The author have not declared any conflict of interests.

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