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The Effect of Problem-Based Learning on Students' Entrepreneurship Level in Social Studies Course*

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Abstract

This research aimed at examining the effect of problem-based learning (PBL) on students' entrepreneurship level in the Social Studies course. The research used an embedded design, which is a type of mixed-methods study. The participants were the 6th-grade students studying in a state secondary school in Ağrı during the spring semester of the 2020-2021 academic year and their Social Studies teacher. Data collection tools were Entrepreneurship Scale for Secondary School Students, semi-structured interviews, unstructured observation, anecdote, research diary, and checklists. For the statistical data, t-test and mixed model ANOVA (split plot) were utilized for independent samples, and an inductive analysis technique was used when analyzing qualitative data. It was found that problem-based learning had a statistically significant impact on students' entrepreneurship level. Besides, participants saw problem-based learning as an approach that contributed to their entrepreneurship level. Based on the findings, the use of problem-based learning in the Social Studies course was suggested, which aims to provide entrepreneurship to the students.

Keywords: Social Studies, Problem-Based Learning, Entrepreneurship

Introduction

The Social Studies course examines the interactions of human beings, who are social beings, with themselves and the society, and aggregates social sciences in accordance with the readiness level of primary and secondary school students (Barr et al., 1998, p.16). Social Studies also aims to educate qualified individuals equipped with a wide range of skills such as problem solving, research, cooperation, and entrepreneurship (Seefeldt et al., 2015, p.2). Problem-based learning (PBL) is one of the learning methods used to raise citizens with these qualifications. PBL is an approach in which students' skills such as questioning, research, decision-making, and initiative are activated. PBL also attempts to apply various problem situations in order to reach new information and utilise that information through experiences (Kek and Huijser, 2017, p.15). Entrepreneurship is one of the common skills that Social Studies courses and PBL aim to gain for students. Entrepreneurship is a skill that today's people should have, given the developments in the economic, social, and political fields in multidimensional living conditions. The Social Studies course aims to educate qualified and entrepreneurial citizens who are harmonious, successful in social and economic fields, knowledgeable about their own history and world history, can contribute to individual and social development, and take an active role in solving problems. PBL, as one of the approaches employed in Social Studies education, includes the practices of producing logical ways to cope with problems, doing research, and collaborative works and initiatives. In this context, one of the common principles of Social Studies courses and PBL is to introduce entrepreneurship to students.

The literature provides many scientific studies regarding PBL and entrepreneurship. Various studies claim that Social Studies courses, in which the PBL approach was applied, are effective in improving the academic success and the communication skills of the students, the level of recall, and gaining a critical perspective (Deveci, 2002; Alagöz, 2009; Sockalingam et al., 2011; Taylor Nelms et al., 2013; Tetik, 2013; Karaca, 2014; Wynn Sr and Okie, 2017). Entrepreneurial studies have focused on topics such as the relationship between entrepreneurship and

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critical thinking skills (Ateş, 2018; Karakuş, 2019), the level of entrepreneurship in the context of various variables (Pereira, 2014), the relationship of autonomy with motivation, entrepreneurship, and creativity (Polat et al., 2015; Arcagök, 2016), the effect of entrepreneurship on cognitive and affective skills (Rosendahl Huber et al., 2014), and the effect of entrepreneurship education on collaboration and creative thinking skills (Leffler and Svedberg, 2005).

Relevant research indicates that entrepreneurship is one of the skills required to be acquired by students all over the world, and PBL is a suitable learning approach for the development of entrepreneurship skills since it directly confronts the individual with life problems. However, no research has identified the effect of the PBL approach on the level of entrepreneurship in the Social Studies course. The current study aims to fill this gap by examining the impact of PBL on the development of entrepreneurship skills in Social Studies courses. Besides, it aims to raise awareness about the use of PBL by Social Studies teachers in gaining entrepreneurship skills for students.

Goal

The main purpose of the research is to examine the effect of PBL on the entrepreneurship level of students in the Social Studies course. To achieve this goal, the following hypothesis was developed and tested, and an answer was sought for the following question.

- There is a significant difference in the experimental group's entrepreneurship levels compared to the control group's, favoring the experimental group.
- Regarding the effect of PBL on students' entrepreneurship levels,
 - What are the perspectives and experiences of students?
 - What are the perspectives and experiences of the Social Studies teacher?

Method

This section includes research design, participants, collection and analysis of the data, and credibility.

Design

An embedded mixed design was used. In the embedded mixed design, qualitative data collection can be performed at any point. Qualitative data can be collected before, during, or after the experimental process, or at all three stages in line with the goal of the research (Creswell, 2015, p.42–43). The flowchart of the embedded mixed pattern based on this study is shown in Figure 1:

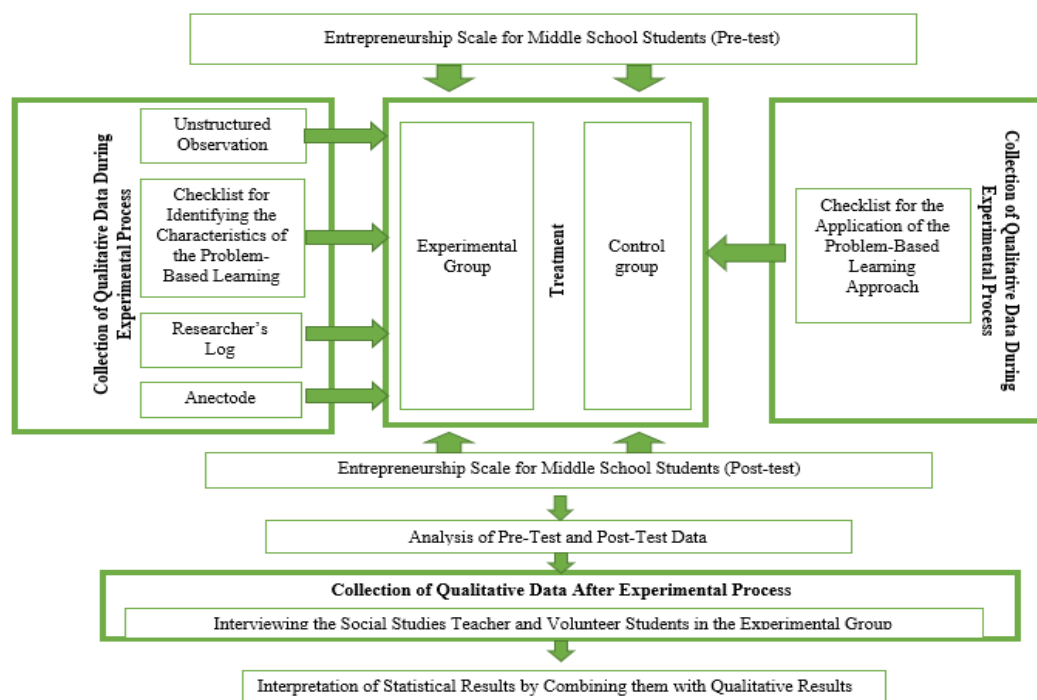


Figure 1. Stages Followed in the Research

As shown in Figure 1, the pre-test was applied first, followed by the collection of the first statistical data. Then, the experimental process began. During the experiment, primary qualitative data were collected through unstructured observations, researcher log, anecdotes, and checklists. Afterwards, the posttest was applied, and the final statistical data was collected. Then, final qualitative data was collected by interviewing the participants. Data from both statistical and qualitative sources were combined and interpreted.

Participants

Participants were 6th-grade students. This is because the outcomes of the 6th-grade social studies course are appropriate for entrepreneurship. A multi-stage mixed sampling method was used. The stages followed within the scope of the multi-stage mixed sampling method are shown in Figure 2.

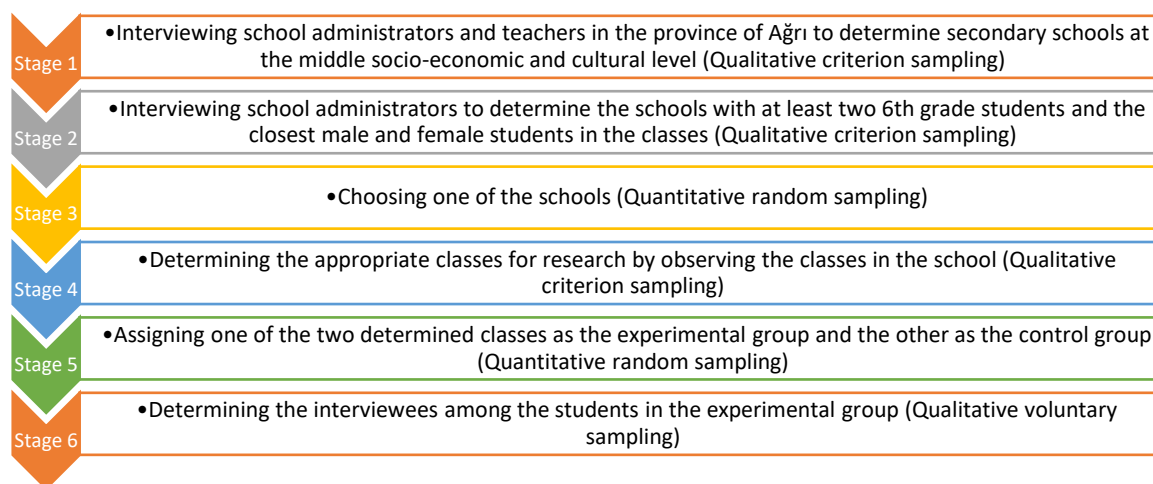


Figure 2. Stages of Determining the Participant Group

As can be seen in Figure 2, while determining the participant group of the research, a total of six stages, four qualitative and two quantitative, were applied. There is an experimental and a control group in the research.

Table 1 shows the personal information of the students in the experimental and control groups as a percentage and frequency.

Table 1. Information about the Experimental and Control Groups

Information		Experimental group		Control group	
		f	%	f	%
Gender	Female	11	52.4	9	45.0
	Male	10	47.6	11	55.0
	Total	21	100	20	100

As seen in Table 1, the experimental group included 21 students (11 girls and 10 boys), and the control group had 20 students (9 girls and 11 boys).

The interview data of the research was collected from 10 students. Due to ethical concerns, the names of the students are not given. In this context, each student took part in the research with a nickname they chose. The code names of the interviewed students are as follows: Ayşe, Nesrin, Mehmet, Hakan, Mustafa, Sema, Sude, Elif, Gökçalp and Şahin.

A Social Studies teacher also took part in the research. The teacher taught the Social Studies course to both experimental and control groups. The teacher graduated from the Social Studies Teaching program of a state university in 2014.

Data Collection

Both statistical and qualitative data was gathered. Entrepreneurship scale, unstructured observation, semi-structured interviews, researcher's log, anecdote, and checklists were utilized as data collection tools.

The entrepreneurship scale for secondary school students developed by Eroğlu et al. (2020) was used for pre-test and post-test data. The scale, which is a four-point Likert-type scale, consists of 31 items and three sub-dimensions. The researchers who developed the scale found the Cronbach Alpha coefficient to be .90 after the process that they carried out to determine the reliability level of the scale. The Cronbach Alpha coefficient was determined as .83 in order to establish the scale's reliability in terms of the current study, and it was decided that the scale was a reliable data collection tool for this study.

Based on the expert's opinion, the student and teacher interview forms were finalized. To ensure validity, a pilot interview was conducted, and the understanding of the questions was tested.

The experimental process was recorded with unstructured observation. Anecdotal records were kept by the students in the experimental group. A checklist was used to determine the features of the PBL process. A diary was kept by the researcher throughout the research process. Prior to the experimental process of the research, a pilot application was carried out to determine the missing aspects of the application and to reveal the defective aspects of the lesson plans. The pilot application, which covered a two-week period, was carried out with the students who were subjected to the study's experimental process for six lesson hours. The pilot implementation of the research was carried out between 15.02.2021 and 24.02.2021. The lessons taught in the experimental group were carried out by the teacher using the activities and materials developed by the researcher within the scope of the PBL method. The experimental process of the study lasted for a total of 10 weeks.

The research was carried out in two 6th-grade classes at a state secondary school in the spring term of the 2020 – 2021 academic year. The implementation phase was carried out partly face-to-face and partly remotely, depending on the conditions caused by the COVID-19 epidemic. In this context, some of the lessons were taught in the classroom environment, and some were taught online. Before the experimental process, a pilot study was conducted for six-lesson hours (2 weeks). The lessons taught in the experimental group were carried out by the teacher for 10 weeks, using the activities and materials prepared by the researcher within the framework of the PBL approach.

Data Analysis

Normality distributions were investigated to determine whether there was a significant difference between the pre-test scores. According to the skewness-kurtosis and Shapiro-Wilk tests, the data had a normal distribution. The homogeneous distribution of the data was determined by the Levene homogeneity test. The p value was found to be .284 (that is, greater than .05). Thus, the pre-test scores of the groups were evenly distributed. As a result of the obtained values, the t-test was used for independent samples in the analysis of the pre-test data.

After the end of the experimental process, the effect of the experimental process was examined by applying the post-test to the experimental and control groups. At this stage, normality and homogeneity tests were performed. The post-test scores of the experimental and control groups were normal and evenly distributed. Since repeated measurements were applied to unrelated experimental and control groups in the study, mixed model ANOVA (Split plot) was used as an analysis technique.

Qualitative data was collected during and after the experimental procedure. Inductive analysis was used to analyse the collected data.

Credibility

To ensure credibility, the researcher was in the research environment for a total of 12 weeks. Regarding transferability, the qualitative data was described thoroughly. For consistency, 25% of the codes and themes were presented to expert opinion and reformulated based on the feedback received. The researcher documented all the data directly and avoided commenting during the data gathering process.

Permissions were obtained from Anadolu University Social and Human Sciences Scientific Research and Publication Ethics Committee and Ağrı National Education Directorate. Students, parents, and the Social Studies teacher signed the consent form. Participants were given pseudonyms, and the name of the school was kept private.

Findings

This section presents findings of the research.

Findings of the Pre-Test-Post-Test Scores Obtained from the Entrepreneurship Scale for Secondary School Students

Before the experimental process, a pre-test was applied to the experimental and control groups. The findings of the pre-test were given in Table 2:

Table 2. The T-Test Results for the Independent Samples Applied between the Pre-Test Scores of the Experimental and Control Groups

Group	<i>N</i>	\bar{X}	<i>ss</i>	<i>sd</i>	<i>t</i>	<i>p</i>
Experimental	21	98.95	9.43	39	.75	.45
Control	20	101.45	11.62			

As seen in Table 2, there was no significant difference between the pre-test results of the experimental and control groups ($t_{(39)}=.75$; $p=.45 > .05$). The results of the experimental and control groups were identical, and in this context, the entrepreneurship levels of the groups were similar. As a result, it can be interpreted that the entrepreneurship levels of the groups did not differ before the PBL application.

Findings of the Mixed Model Anova Test Applied to the Pre-Test-Post-Test Scores Obtained from the Entrepreneurship Scale for Secondary School Students

Following the experimental process, the mixed model ANOVA test was applied to test the hypothesis "There is a significant difference between the experimental and control groups' entrepreneurship levels, favoring the experimental group." The results were shown in Table 3:

Table 3. Mixed Model ANOVA Test Results for the Pretest-Posttest Scores of the Experimental and Control Groups

Source of variance	Sum of squares	<i>sd</i>	Mean squares	<i>F</i>	<i>p</i>	η^2	Observed power
Between groups	3866.51	40					
Group	14.81	1	14.81	.15	.70	.00	.67
(Experiment/control)							
Error	3851.70	39	98.76				
Within Groups	1123.99	41					
Measurement	223.11	1	223.11	14.02	.00	.26	.95
(Pretest-Posttest)							
Group*	280.47	1	280.47	17.63	.00	.31	.98
Measurement							
Error	620.40	39	15.90				
Total	4990.50	81					

As shown in Table 3, the group effect on the pretest-posttest total scores of the experimental and control groups was insignificant ($F_{(1; 39)}=.70$; $p=.70 > .05$). In this context, it was found that the difference between the pre-test and post-test mean scores of the experimental and control groups was statistically insignificant, regardless of measurement. As a result, there was a significant difference between the experimental and control groups' pretest and posttest scores ($F_{(1; 39)}=14.02$; $p < .05$). It can be concluded that the measurement scores of the students change depending on the PBL approach applied, without any group distinctions. There was a statistically significant difference between the mean scores of the experimental and control groups before and after the experimental procedure ($F_{(1; 39)}=17.63$; $p < .05$). In other words, the common impact of the group and the measurement variables on pretest-posttest scores were significant. Regarding the results of the mixed model ANOVA test, the PBL method was effective in raising students' entrepreneurship level.

Table 3 presents the partial eta square (η^2) results, which express the effect size. As shown in Table 3, being in different treatment groups (experimental-control) explained 31% of the difference between pretest and posttest scores. In other words, the experimental procedure had a significant effect size.

Table 3 also includes the power of the experimental procedure. The power of the experimental procedure was .98, so the H_0 hypothesis was rejected at a rate of 98%. In this context, it has been concluded that the experimental process of this research, which examined the impact of PBL on the entrepreneurship levels of students, was quite powerful. In other words, PBL applied in the Social Studies course increased students' entrepreneurship levels.

To explain the statistical results in a multidimensional manner, the qualitative data obtained during and after the experimental processes were analyzed. The results are detailed in the following sections.

Student Views and Experiences Regarding the Effect of PBL on Entrepreneurship in Social Studies Course

Students' perspectives and experiences regarding the impact of PBL on entrepreneurship in Social Studies courses were gathered under sub-themes such as raising awareness in students; directing students to take risks; encouraging students to take advantage of opportunities; directing students to evaluate; providing students with various skills; providing students with various values; providing students with effective characteristics; and improving the quality of daily life of students. The obtained findings are shown in Figure 3.

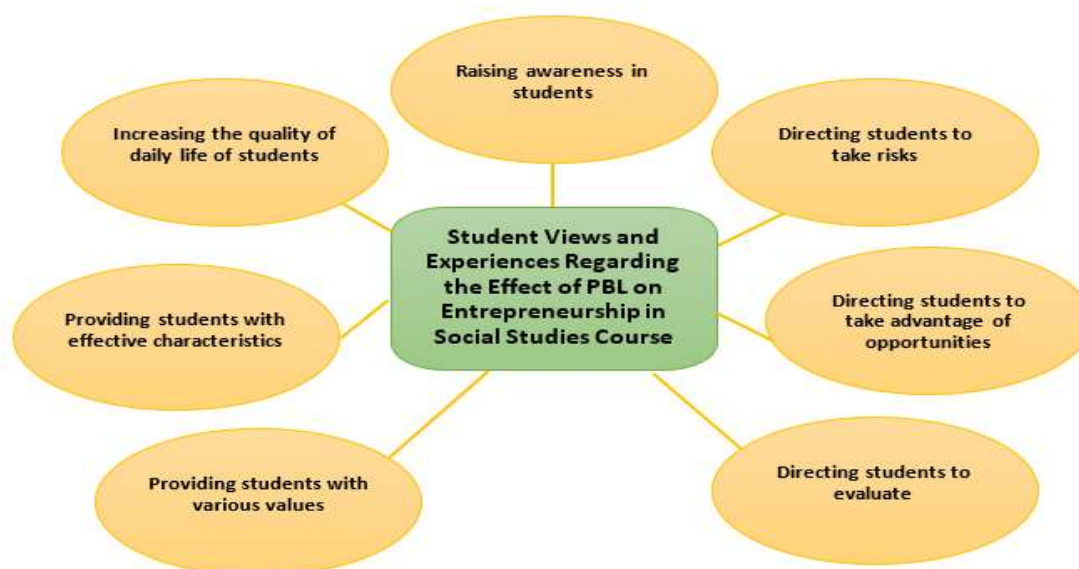


Figure 3. Student Views and Experiences Regarding the Effect of PBL on Entrepreneurship in Social Studies Course

PBL was found to contribute to students' in raising awareness, which is one of the dimensions of entrepreneurship. The Social Studies courses performed with the PBL approach contributed to the development of students' self-confidence. For example, realizing that the entrepreneurial individual should have confidence in himself/herself, Ayşe said, "From the problems shown to us, I understood that one should trust himself. If we are going to start an enterprise, we must trust ourselves. Otherwise, we will not be able to start an enterprise."

According to some students, PBL helped them to realize their qualities and power, in other words, to get to know themselves. For example, Nesrin stated that PBL revealed her leadership potential by saying, "I realized that I could be a leader in groups thanks to PBL. If they had told me to do something like this before, I wouldn't have done it. But I also became the group leader in PBL. I saw that I could do this." It was also observed that students' awareness of their qualifications increased as they worked in groups.

PBL was considered a useful approach for students to learn through experience. As Şahin said, "We usually did most of the things ourselves. I still remember what I learned. Since we learn by ourselves and by understanding, I think we will not forget very quickly."

It was found that PBL could guide students about *taking risks*, which is another dimension of entrepreneurship. Students benefited from PBL by implementing plans, trying different solutions, benefiting from their intuition, benefiting from innovations, and using their imagination. Some students stated that PBL guided them in putting their goals into action. For example, Mustafa expressed that PBL helped him realize his plans: *“I have realized that if we have a plan, we must implement it. We should not be frightened to realize our plans.”*

Some students believed PBL gave them the awareness to try different solutions to problems. One of these students, Hakan, said, *“I used to create a solution for myself to tackle a job. I was following that solution. However, a job could provide a variety of options. For example, I could come up with at least two or three solutions each time.”*

Some students developed a mindset of not avoiding risky situations by using their intuition thanks to PBL. For instance, Ayşe emphasized that we should trust our intuitions in risky situations: *“Life itself is a risk. We don't know what will happen if we go out. We have no idea what happens when we attempt something. We should listen to our hearts in unfamiliar circumstances.”* The anecdotal record provided similar statements: *“We should not hesitate to take risks. We must look at what is in our hearts. Our hearts assist us when we take risks”* (Student Anecdote Record, 16.03.2021).

Some students thought that the Social Studies courses conducted with the PBL approach gave them a perspective that they should *benefit from innovations*. Elif stated that innovations carry some risks, but innovations should be used in order to be beneficial: *“We don't always tend toward something new. We say maybe this will not turn out as we thought. Maybe we'll get hurt. Maybe it's harmful, but we won't know until we try it. Maybe it will be helpful.”*

Many students believed that PBL helped them use their imagination. One of these students, Şahin, said, *“As far as I understand, it is necessary to put yourself in another's place when solving problems. If you can imagine this, you will solve the problem.”*

During the observations, the majority of the students were observed to use their imagination in determining the problem situations and creating solution proposals. The expressions such as *“I would have done that if I were you”* show that the students imagined themselves in a problem situation many times while reading the solution proposals.

PBL, on the other hand, contributed to directing students to *take advantage of opportunities*, which is another aspect of entrepreneurship. The findings indicated that PBL guided students within the scope of noticing and benefiting from the beneficial aspects of events and being ready for opportunities.

Some students stated that they learned how to see the beneficial side of a situation they encountered and turn them into opportunities thanks to the Social Studies lessons conducted with the PBL approach. For example, Nesrin, said, *“There is such a thing as looking on the bright side. I don't think it's about seeing the good in everything. I think there is an opportunity in everything. While solving problems, I realized that we could turn any situation into a benefit.”*

Some students believed PBL gave them the awareness that they should be ready for new opportunities. Mehmet said, *“Opportunities do not wait for pleasure. Where we see it, we should use it immediately. I think the biggest mistake of the people in the stories was that they didn't know how to take advantage of the opportunity. That's why they had problems.”* Thus, he knew that the problem situations presented in the lessons were due to his not being ready for the opportunities encountered.

The findings showed that PBL *directed students to make evaluations*, which is one of the characteristics of entrepreneurship. Students in Social Studies courses conducted with the PBL approach were led to assess themselves, peers, teachers, and make a general assessment.

PBL was useful to some participants because of its multidimensional evaluation feature. Gökalp mentioned the contribution of PBL to self-assessment by saying, *“I think it is very important for a person to evaluate himself/herself to identify his/her strengths or weaknesses. What I see in PBL is that people can do it.”*

During the observations, it was noticed that a student evaluated the teacher. The student compared the teacher's past and present teaching: *“Sir, this PBL worked for you as well. In the beginning, you were struggling like us.”* (Unstructured Observation Record, 13.04.2021).

This research discovered that Social Studies courses conducted with the PBL method *provided students with a variety of abilities*. PBL provided students with various skills such as communication, planning, research, collaboration, problem solving, thinking, time management, decision making, coping with difficulties, analysis, and synthesis.

Ayşe, who believed that PBL contributed to their communication skills, said, *“The group work allowed me to get to know my friends with whom I was not good. It drew us closer together. It has improved the communication among us.”*

Some students stated that PBL also contributed to the improvement of communication between students and teachers. For example, Mustafa said, *“Our teacher is a very good person. We all love him very much, but we did not have very good communication. We got along very well since we always asked him questions in the current lessons. We loved him even more and improved our communication.”*

A few students said that PBL taught them another skill that an entrepreneurial individual should have: *being planned*. One of these students, Ayşe, said, *“We had to pay attention to certain levels while solving problems in the lessons. We had to plan each level. At first, we did not plan, but then we learned to plan.”*

PBL also provided students with research skills. Sema uttered the following statements during the interview: *“Once we understood the problem, we were getting information from many sources. For example, we were researching on the Internet. We were asking the teacher questions. We were also asked questions by the group. We were also looking at the books we brought.”*

PBL encouraged students to gain cooperation and problem-solving skills. Expressions strikingly similar to those of Sude were found in a student's anecdotal recording: *“PBL is very useful. Some benefits are as follows: PBL showed how to work together by collaborating, and taught problem solving through logical research.”* (Student Anecdote Record, 20.04.2021).

In the research, it was found that PBL improved students' thinking skills. Here is a statement by Şahin:

“We have been working with PBL for so long. I developed my critical skills. In the class, the teacher constantly told us to think critically. When solving problems, I thought about the positive and negative aspects of everything. I now consider myself as a problem solver.”

On the other hand, in an anecdotal record, a student underlined the improvement in his creative thinking skills thanks to PBL: *“PBL developed my creative thinking. Now I can come up with creative ways when a difficulty arises.”* (Student Anecdote Record, 06.04.2021).

A few students claimed that they gained time management skills in Social Studies courses conducted with PBL. For example, Ayşe said, *“The topics were sometimes long, and the lecture hours were short. We had to use our time well. We had some difficulties at first, but then we learned how to fix it.”*

Another skill was decision making. Mehmet emphasized the importance of decision-making skills with these words: *“During the lessons, our teacher always said: ‘Act reasonably while making decisions’. He was right. Even at home, when we make a bad decision, the result can be disastrous. Our decisions are very important. We learned well.”*

Some students said that their determination to succeed increased and they learned not to give up in the face of difficulties thanks to PBL. Gökalp said, *“The topics we examined encouraged us not to give up. The characters in the stories we read never gave up. This has been a lesson to me. I have also learned not to give up. It is necessary to be determined in life.”*

Some students cited analysis and synthesis as other abilities gained thanks to PBL. Hakan mentioned that he analyzed the information he had and then synthesized the new information with the preliminary information with the following words: *“In the first lessons, we were trying to solve problems with the knowledge we had learned in the past. Then we realized that we also needed new information. After that, we started to learn new information. But we didn't throw away our old knowledge. We combined it.”*

Also, PBL provided students with the *values* of responsibility, solidarity, respect, fairness, and honesty that an entrepreneurial individual should have. Some students advocated that Social Studies courses conducted with the

PBL approach gave them the value of responsibility. Gökalp said, *“It is not difficult to take responsibility anymore. It even sounds fun because I am not afraid of problems. I say I can fix it. That's why I take responsibilities.”*

Some students stated that they gained the value of solidarity thanks to the outcomes of PBL. Expressing that PBL provided her with the value of solidarity, Sude said, *“When doing group work, it is necessary to act together. That is, to collaborate. Everyone supports each other. We were always doing this. We were finding good solutions by cooperating.”* This statement implies that, thanks to PBL's group work, the students engaged in solidarity with their peers and were able to come up with effective solutions.

The observations showed that most of the students gained the values of respect and fairness. The teacher wanted different students to read the solutions for each lesson to prevent dissatisfaction in the students and to ensure that each student actively participates in the lesson. However, the teacher sometimes did not follow this way and asked the same students to read the solution path in two consecutive lessons. On the other hand, the students respected the rights of their friends, acted fairly, and stated that it was not their turn.

The data showed that PBL helped students gain the value of honesty. The teacher often asked the students, *“Did you do the homework yourself? Or did you get help?”* In the first lessons, it was observed that the students gave answers such as *“I did it myself”* or *“I didn't get any help”*.

PBL provided students with *various affective characteristics* such as pleasure, happiness, excitement, willingness, self-appreciation, curiosity, motivation, calmness, and self-disclosure. These findings are related to some of the qualities that an entrepreneurial individual should have.

Some participants expressed their enjoyment of Social Studies lessons taught with the PBL approach. Şahin stated that he enjoyed the lessons conducted with the PBL approach: *“Before this approach, our teacher usually used narration, and we, as students, were only listening to him. During this period, we both studied and enjoyed ourselves. Thanks to problem solving, I had a lot of fun in the lessons.”*

The lessons conducted with PBL were considered pleasing. An anecdotal record reflected this view: *“PBL courses make me happy. Classes are not what they used to be. In the past, the lessons were boring. I would not be happy at all.”* (Student Anecdotal Record, 17.03.2021).

A few students experienced exciting moments during the application of PBL. In the anecdotal record form kept by a student, the following statements were found: *“Lessons are extremely engaging with PBL. I always try to make my group the most successful. I am very excited.”* (Student Anecdote Record, 06.04.2021).

Some students were observed to appreciate themselves thanks to PBL. For example, Elif stated, *“I work in groups to create a solution. We are dealing with friends. We are trying. We are trying to find a solution. This is how I consider myself to be valuable.”*

It was found that the PBL process aroused a sense of curiosity in some students. They used the following expression regarding the affective situations they experienced during the PBL process: *“something different”*. For example, Elif stated, *“Our lessons were very different. We were not used to teaching lessons like this. We used to first figure out what the problem was and then solve it. It was a different feeling. We were always curious. We were all waiting to see what would happen next.”*

Some students believed that PBL motivated them to participate in the lessons. Ayşe stated that she attended the lessons more thanks to PBL: *“PBL made us enjoy lessons. That's why there was so much participation in the classes. I didn't attend the classes much before, but now I do. I enjoy the lessons”*.

According to some students, PBL motivates them to learn and study new information. Mustafa remarked, *“Our knowledge was often insufficient to find solutions to problems. That's why we couldn't solve problems well. However, thanks to PBL, we learned new information, so we could solve the problems. That's why we wanted to expand our knowledge.”*

Some of the students underlined the contributions of PBL to their calmness in daily events and situations. In other words, it helped them behave calmly. One of these students, Ayşe, explained the contribution of PBL by saying, *“The most important thing is to be calm when solving problems. If there is excitement, one's knees knock together. He or she can't do anything. The problem-solving method has taught me to be calm.”*

Some students stated that PBL gave students the quality of self-disclosure. One of the students expressed this contribution in an anecdotal record as follows: *“The best thing about PBL is that it makes us comfortable. We form groups. Thus, we are at ease (Anecdotal Registration Form, 22.03.2021).”*

It was found that PBL helped students to make life easier, participate actively in life, show assertiveness, and increase their daily life quality. Besides, PBL facilitated the daily lives of students and increased their levels of achievement. The interview demonstrated that Hakan could transfer the outcomes of PBL to daily life: *“What we have learned at school helps us a lot, both at home and on the street. The problem is the same in school and in normal life. We can use what we have learned at school, on the street and at home.”*

Mustafa stated that he could get more involved in life thanks to PBL. Mustafa stated that Social Studies lessons conducted with the PBL approach led him to be more active in daily life and at the same time reduce his shyness: *“I’m getting more involved in life as I’m starting to get good at problem solving. I also attend events without reluctance. Because if I have a problem, I say to myself, I will solve it.”*

It was observed that some students believed that they showed assertiveness in daily life thanks to PBL. Ayşe stated that she became an assertive individual thanks to the group work of PBL: *“I was a very shy person in classes. But we did group work in these lessons. I just got rid of my shyness. I think I have become more assertive.”*

The findings revealed that PBL is a useful learning approach in improving the level of entrepreneurship by increasing the quality of students’ daily lives. As a matter of fact, it was found that PBL facilitated the lives of students and contributed to their active participation in life and showed assertiveness.

Teacher’s Views and Experiences on the Effect of PBL on Entrepreneurship in Social Studies Course

Findings displayed seven sub-themes: raising awareness in students; encouraging students to take risks; guiding students to evaluate opportunities; providing students with various skills; ensuring active participation in the lessons; performing effective teaching; and difficulties arising from PBL in the process of gaining entrepreneurship to students. The obtained findings are shown in Figure 4.

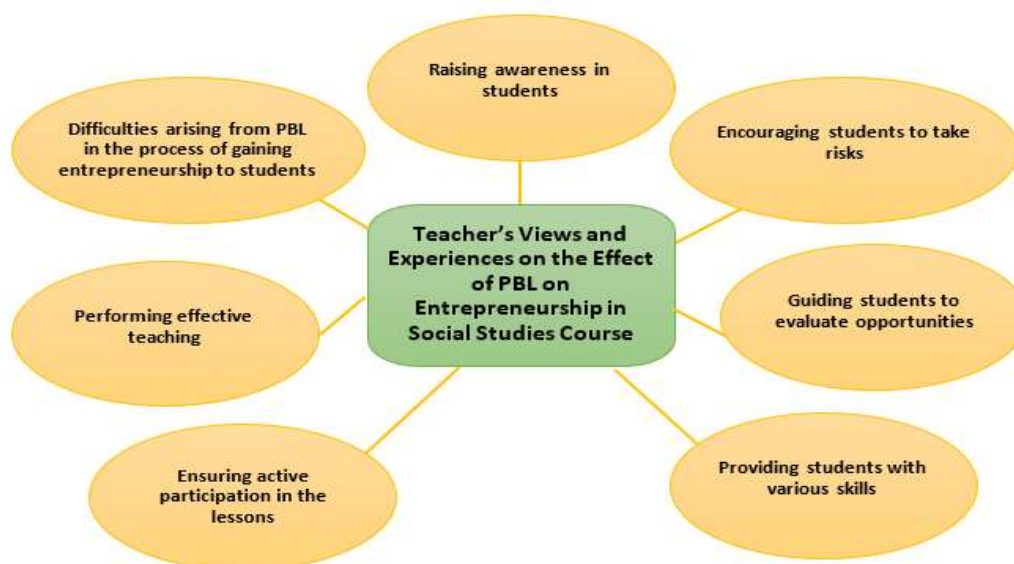


Figure 4. Teacher’s Views and Experiences on the Effect of PBL on Entrepreneurship in Social Studies Course

A Social Studies teacher considered PBL as a learning approach that contributes to the level of awareness, which is one of the dimensions of entrepreneurship in students. According to the teacher, PBL is a method that helps students develop self-confidence, self-knowledge, and leadership skills. Here is a representative statement:

“Some of my students had naturally shy personalities. I had a hard time getting people to talk in class. Shyness hinders entrepreneurship. Since we started using the PBL method, I see that the shyness of the students has decreased.”

The teacher stated that PBL contributed to the students' getting to know themselves. The teacher said that thanks to PBL, the students became aware of their qualities: *"We have learned that even shy students have great potential. You have witnessed it, too. We followed a useful way for students to become aware of themselves."*

According to the teacher, PBL is a learning method that enables students with leadership characteristics to realize and utilize this feature. The teacher said, *"Some students are born leaders, but they cannot find the environment to use it. In PBL, the student can direct the group. Thus, she or he can make use of the feature."*

The teacher saw PBL as a learning method that encourages students to take risks, not be afraid of making mistakes, and contributes to action. In this context, the teacher said, *"I think PBL ensures that students are not afraid to express their thoughts. Students overcome their fear of embarrassment. They dare to be embarrassed."*

PBL is seen as a learning approach that guides students to evaluate opportunities, which is another dimension of entrepreneurship. The teacher believed PBL guided the students within the scope of searching for the positive side of situations and recognizing opportunities.

According to the teacher, PBL is a learning approach that directs students to look for the beneficial aspects of the events they encounter in accordance with entrepreneurship. The teacher's view was as follows: *"PBL encourages students to look for the beneficial side of situations. So, even what appears to be harmful can have beneficial parts. It makes the student realize this."*

The teacher, who considered PBL as a learning approach that allows students to see the opportunities they face, said: *"The awareness of the students who are constantly solving problems also increases. They gain awareness. Therefore, they can notice the opportunities they face. In this aspect, I think PBL provides great benefits."*

According to the Social Studies teacher, PBL is a learning approach that enables students to develop various skills that an entrepreneurial individual should have. The teacher believed that PBL gave students the skills of research, cooperation, communication, problem solving, and self-expression. These skills are among the qualities that an entrepreneurial individual should have. The teacher, who thinks that the students have gained research skills thanks to PBL, explained his views as follows: *"I know my students very well. They generally memorize it. There was a great improvement in students' research skills after PBL. These skills normally improve as research is done in each lesson."*

PBL is viewed as a method that gives students the ability to cooperate. The teacher commented, *"The students also learned how to cooperate. Dividing students into groups is a good tactic. Students help each other in groups. They cooperate. In this way, they learn to work together."*

The teacher explained that the students gained communication skills with the following words:

"I think that in such studies, children's communication with each other also improves. I know many students who did not communicate much with each other before. Now I witness students communicating more closely. This is a valuable advance on the subject of your research."

PBL was believed to provide students with problem-solving skills: *"The method we use is already called PBL. One of the main purposes of the method is to provide students with problem-solving skills. If you ask me... I think students have developed this skill. I notice this even when I'm just reviewing students' homework."*

According to the teacher, PBL gives students the ability to express themselves. The teacher stated that the group work of PBL is useful in helping students gain self-expression skills. The teacher said, *"The group work of PBL is very useful. We ensure that students explain their opinions. Even shy students gradually started to say what was on their minds."*

The Social Studies teacher believed that PBL enabled students to participate actively in the lesson. According to the teacher, PBL contributes to students' participating in group work, expressing their views, and generating ideas. The teacher explained his view as follows: *"Group studies boosted students' participation in the lesson."*

Also, the teacher saw PBL as an approach that increased the level of participation in the lessons by directing the students to explain their opinions. The following are the teacher's perspectives on the subject:

“While the children were working among themselves, I was always walking between the groups. All of them were expressing their thoughts on the solution that was acceptable to them. When doing group work, the student automatically declares his or her opinion. This is one of the benefits of PBL.”

The teacher argued that the Social Studies lessons conducted with the PBL method led the students to generate new perspectives and participate in the lesson in this context by saying, *“Children develop new perspectives while seeking solutions to problems. They develop critical thinking. They are tempted to convey the ideas they have developed to their friends and me. In this way, they participate in the lessons more.”*

PBL was considered as an approach that enables effective teaching development. The Social Studies teacher saw PBL as a learning approach that contributes to effective teaching within the scope of enabling the use of different activities, increasing academic success, ensuring permanence in learning, increasing participation, putting the student in the center, allowing fun, and attracting the attention of the student.

The teacher thinks that PBL is a learning approach that allows the use of different activities. The following is an example of a representative statement: *“We were able to use many activities at the same time. PBL enables this.”*

The teacher sees PBL as a method that increases the academic success of students. The teacher said, *“Thanks to your research, the academic success of the students has also increased. When learning is permanent, academic success increases, of course.”*

The teacher thinks that PBL is a learning approach that enables students to learn permanently. The teacher said, *“The students researched and learned everything themselves. Naturally, their learning was permanent. They were still able to answer the questions I asked weeks later.”*

According to the teacher, PBL directs students to attend the lesson. The teacher, who thinks that PBL enables students to participate in the lesson willingly thanks to its qualifications, said, *“The process we applied together encouraged students to participate in the lesson. You and I have both seen this clearly.”*

For the teacher, PBL provides an effective teaching process as a student-centered learning approach. For example, the teacher said, *“In constructivist education, education is student-centered. Since we use a type of constructivist education, we see the student at the center of education. This lets us have a qualified education.”*

PBL, according to the Social Studies teacher, allows students to learn while having fun. The teacher said, *“My students liked PBL a lot. It was evident in every way. They had a lot of fun in the lesson. It is a fun method for students.”*

The teacher also sees PBL as a learning approach that attracts students' attention. The teacher, who stated that the students were able to get their attention thanks to PBL, said, *“Everything we did created a situation of interest in students. They were also paying attentive since they attracted the attention of the students.”*

Findings showed that some difficulties were encountered in the Social Studies lessons conducted with the PBL approach. The teacher cited the inadequacy of course time as one of the difficulties experienced in the implementation process of PBL. Regarding this issue, the teacher uttered, *“I spent a lot of effort to complete the activities you prepared. I was afraid of running out of time.”*

Another difficulty of PBL is that it requires intense communication with students. The teacher's perspective was that *“The student is at the center of PBL. Intensive communication with students is required. It is necessary to communicate with each student. It's a tiring job. It is also a bit wearisome for the teacher.”*

The teacher believed that the multidimensional measurement-evaluation requirement of PBL, was also problematic. The teacher expressed the difficulties experienced in the measurement-evaluation process by saying, *“Such an evaluation system requires expertise. Otherwise, it's a huge hassle. I had a hard time.”*

PBL was considered a learning approach that requires patience: *“The learning method we used was very rich in all aspects but required patience. Taking care of each student individually, guiding the students, motivating them... Not every teacher has these responsibilities.”*

The teacher considers that the courses conducted with PBL require intensive preparation due to the difficulties of PBL. The teacher said, “*We did a lot of preparation before the lessons. Doing this for a year makes the teacher tired.*”

It was determined that PBL caused various difficulties in the process of making learners gain entrepreneurship skills. So, depending on the teacher's experience in the application process, it has been determined that entrepreneurship can be fostered among learners by having a broad time frame, managing time effectively, being in intense communication with the learners, being able to make multidimensional measurement-evaluation, being patient, and making intensive preparations before the lessons.

Conclusion and Discussion

It was found that the Social Studies courses conducted with the PBL approach improved students' entrepreneurship levels. Oganisjana and Laizans (2015) argued that the courses conducted with PBL significantly affected university students' entrepreneurship levels. In their research, Morselli (2019) examined the effects of PBL on students' initiative and entrepreneurship skills. At the end of the research in which PBL applications were used, PBL was found to be an effective method for gaining entrepreneurship skills. Santateresa (2015), who examined the effect of PBL on students' successful initiatives, introduced PBL as an effective learning approach that enabled students to become entrepreneurs.

According to the findings, PBL contributes to awareness, which is one of the dimensions of entrepreneurship, within the scope of self-confidence, self-knowledge, leadership and learning to learn. Hendriana et al. (2018) concluded that PBL contributed to students' developing self-confidence. Similarly, Song (2014) found that PBL was an effective learning method that provides students with gains in developing self-confidence and acting boldly. According to the findings of O'Sullivan et al. (2018), PBL contributes to the leadership development of students. Self-confidence, self-knowledge, and learning to learn are the essentials of the awareness that entrepreneurial individuals should have to be able to take successful initiatives. An entrepreneur needs to be self-confident, aware of what she/he can do, and know how to learn.

The findings showed that PBL contributed to students' risk-taking, which is another dimension of entrepreneurship. In their study, Awang and Ramly (2008) found that the participants made progress in realizing their plans and did not avoid risky situations. According to Ersoy and Başer (2014), PBL could contribute to risk-taking by providing students with qualities such as using their imagination, finding new ideas, and trying solutions. Jdaitawi (2020) argued that PBL could enable students to benefit from their intuition. Khoiriyah and Husamah (2018) concluded that PBL could provide students with the awareness of researching and benefiting from innovations. LaForce et al. (2017) found that students who received training with PBL started to believe in themselves more and were less fearful of making mistakes. Kassem (2018) underlined that PBL could mobilize students against risks.

According to the findings, PBL contributes to students' making use of opportunities, which is another dimension of entrepreneurship. Similarly, Oganisjana and Laizans (2015) concluded that PBL could enable students to evaluate the opportunities they encounter. Cui (2016) observed that students first experienced problems in the education process carried out with the PBL approach, but then they saw the positive aspects of the process and benefited from it. Entrepreneurship is based on noticing the opportunities encountered and taking advantage of them. It cannot be said that individuals who cannot seize opportunities make successful initiatives.

PBL was found to encourage students to make assessments. Ribeiro (2014) stated that teachers made progress in assessment at the end of the training process carried out with PBL. Alias et al. (2015) concluded that PBL improved students in terms of self-evaluation, peer assessment, and teacher assessment. Kritikos et al. (2011) showed that PBL contributed to students both in terms of peer assessment and general assessment.

Participants of this study stated that PBL provided students with various skills. According to Severiens and Schmidt (2009), PBL could provide students with communication and problem-solving skills. Lufri et al. (2021) introduced PBL as a learning approach that contributes to the development of communication skills in students. According to Simamora et al. (2017), thanks to PBL, students learned to act in a planned manner. Maskur (2020) found that PBL helped students with research skills by enabling them to benefit from different sources of information. Similarly, Bai et al. (2017) and Naimnule et al. (2020) considered PBL as a method that provides students with research skills. Kardipah and Wibawa (2020) emphasized that students learned to use time effectively, in other words, they gained time management skills, depending on the multi-stage structure of PBL.

In their study in which they investigated the effect of PBL on decision-making skills, Thabet et al. (2017) found that PBL could contribute to decision-making skills. Serevina (2018) argued that PBL gave students the ability to analyze and synthesize. Since entrepreneurship is a multidimensional structure, individuals who make successful initiatives need to have a diverse set of skills. In this context, it is important to provide individuals with skills in the process of raising entrepreneurial individuals.

This study indicated that PBL gave students various values. Alagöz (2009) concluded that PBL taught students with the value of sensitivity and enabled them to take responsibility for environmental problems. Similarly, Akin (2008) found that PBL had a positive effect on students' attitudes towards environmental problems and instilled a sense of responsibility in them. Karaca (2020) informed that education based on real-life problems created positive changes in the helpfulness attitude of students. Nasution et al. (2018) also argued that PBL provided various values. Values must be observed in individual and social initiatives. Entrepreneurship is about providing both individual and social benefits. In this context, the entrepreneur should have various values. On the other hand, the Social Studies course aims to add value to students.

Based on the findings, PBL provided students with affective characteristics. According to Tatlısu (2020), students favored PBL, and most of the students enjoyed PBL applications. Jamiat (2018) found that the participants enjoyed the educational process thanks to PBL. Tavakol et al. (2009) found that the majority of educators were excited about PBL processes. According to Asyari et al. (2016), PBL increased students' motivation, and, thus, students appreciated themselves. Utomo et al. (2020) similarly concluded that PBL made students feel valued. Similar results were reported by Millanzi and Kibusi (2021), who introduced PBL as an effective learning approach for students to feel important. Matlala (2021) concluded that PBL arouses a sense of curiosity in students. On the other hand, Moutinho et al. (2015), found in their study that PBL motivated students about the lesson. Taking effective initiatives is proportional to having various affective characteristics. The affective characteristics of the individual are among the important factors in achieving success or not.

In this study, students believed the Social Studies courses conducted with the PBL approach increased the quality of their daily lives. According to Akinoğlu and Tandoğan (2007), students were more successful when they applied what they learned in PBL processes to their daily lives, making their lives easier. Dochy et al. (2005) investigated student views on PBL and found that students saw PBL as an approach that contributed to their active participation in daily life. Klegeris and Hurren (2011) stated that students overcame their shyness thanks to PBL and participated in lessons more. This may be because one of the goals of the entrepreneurial individual is to improve the quality of life.

According to the views of the Social Studies teacher, PBL enabled students to actively participate in lessons. According to Pastirik (2006), PBL positively affected the students' level of participation in lessons by providing environments where students could express their views. Active participation is one of the important factors in achieving the objectives of the lesson. In this respect, it is essential to use teaching approaches that enable students to actively participate in the lessons.

The findings showed that PBL was a useful method in achieving effective teaching. Similarly, Wirkala and Kuhn (2011) reported that PBL provided effective teaching by allowing the simultaneous use of different activities. Like this research, Deveci (2002) concluded that PBL increases academic achievement in the Social Studies course. Examining the effect of PBL on students' academic success, Tunç (2015) observed that PBL increased students' academic success and class participation rates. For Srinivasan et al. (2007), PBL ensured effective teaching thanks to its student-centered education approach. In Reynolds (2003), students considered PBL as an approach that could provide a fun learning environment and effective teaching. Galukande et al. (2015) concluded that the PBL process drew the attention of the students and enabled them to concentrate on the lesson. Given that PBL is a useful method in achieving effective teaching, it can be interpreted that PBL is beneficial in Social Studies courses, which aim to bring entrepreneurship to students.

The Social Studies teacher brought out various difficulties regarding PBL. According to Aybek (2019), being able to benefit from PBL effectively depends on the quality of the teacher, but the fact that the teacher is not competent in PBL causes difficulties. For Taylor Nelms et al. (2013), PBL is a useful approach, but it is far from being beneficial when the implementation of PBL lacks sufficient time and preliminary preparation. Regarding De Chambeau and Ramlo (2016), PBL requires patience and intense communication. According to Lydia Wen et al. (2006), PBL can cause various difficulties as it uses a multidimensional measurement-evaluation method.

Examining the effect of PBL on the entrepreneurship level of students in the Social Studies course, the present study argued that PBL contributed to students' regarding awareness, risk-taking and benefiting from opportunities. Therefore, PBL was considered an effective learning method for raising entrepreneurial individuals. The

entrepreneurial individual should have a high level of awareness, be able to take risks and take advantage of opportunities when necessary. The findings displayed the contributions of PBL in providing students with various skills, values, and affective characteristics that an entrepreneurial individual should have. It can be said that PBL directs students to make assessments and improve their daily life quality. Based on the research findings, PBL is a useful learning approach for developing students' entrepreneurship levels. However, PBL includes some difficulties in the process of gaining entrepreneurship for students.

Recommendations

According to the results of the research, the following recommendations were presented:

- PBL can be used in Social Studies courses to enable students to develop self-confidence, self-knowledge, and the ability to learn, take risks, recognize opportunities, evaluate opportunities, make general and specific evaluations, and improve their awareness levels.
- In the Social Studies course, PBL can be used to provide students with various values, skills, and affective characteristics that an entrepreneurial individual should have.
- PBL can be used in the Social Studies course to provide students with the imagination that an entrepreneur should have and to enable students to follow innovations in accordance with entrepreneurship.
- In Social Studies courses, PBL can be used in designing teaching processes in which students can learn by having fun, by doing-experiencing, and through permanent learning.
- The PBL method can be applied in social studies courses to bring entrepreneurship to students.
- Further studies can investigate the effect of PBL on students' various skills, values, and affective characteristics that an entrepreneurial individual should have.
- PBL can be used in action research on how to gain entrepreneurship skills for students in the Social Studies course.
- In the Social Studies course, future studies can investigate the effect of PBL on gaining students the ability to assess themselves, their peers, and teachers and make general assessments, which should be in an entrepreneurial individual.

Author (s) Contribution Rate

Both researchers contributed at every stage of the research.

Conflicts of Interest

There is no conflicts of interest

Ethical Approval

Ethical permission (25/11/2020 – Protocol No: 66593) was obtained from Anadolu University, Educational Sciences Institute for this research.

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