

The Impact of the Project-Based Learning Strategy on Leadership Skills Acquisition among Palestinian Refugees Students in Gaza

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Abstract: This study aimed at investigating the effectiveness of the project-based learning strategy on developing third graders' leadership skills. The research questions were addressed using the experimental approach. The researchers purposively sampled 76 third graders from Al Zaitun Co-ed Elementary C School in Gaza and randomly sampled two classes of third graders. Participants were divided into two equivalent groups, each consisting of 38 students. The project-based learning strategy was used for teaching English to the experimental group, whereas the traditional method was used for the control group. The study tool consisted of an observation card on which the student's leadership skills were rated pre- and post-application. Data were analyzed using the Statistical Package for Social Sciences. Independent samples *t*-test and effect size were used in the analysis. Results revealed higher mean scores in leadership skills for the experimental group in the post-application observation card. The researchers attributed these findings to the project-based learning strategy and recommend its use in teaching English to

develop leadership skills. Further research is needed to investigate the effect of other project-based learning strategies on other grade levels and life skills.

Keywords : project-based learning, leadership skills

Introduction

Learning the English language has become an important need nowadays as it is one of the most essential and dominant languages around the world. In addition, English is the everyday language of many aspects of life such as business, science, economics, technology, and education. “During the last few decades there has been an increasing need to use English language for the expression of knowledge within specific professional fields” (Ardeo, 2003, p. 110).

Cameron (2001, p. 6) points out that there are some differences between teaching a foreign language to children and teaching it to adults. Children are often more enthusiastic and lively, but lose interest more quickly and are less able to keep themselves motivated on a task they find difficult. Children struggle to use language as accurately and fluently as older learners, and they tend to speak with a more native-like accent. In addition, they also have difficulty paying attention for more than 10-20 minutes, after which they become bored and tired. Given these characteristics, the relevance of active learning becomes apparent.

Many strategies have been used to facilitate the process of learning and teaching English. In order to overcome all the challenges that face the educational process concerning English as a second language, the teacher should implement appropriate teaching methods that encourage students to employ the studied language while responding to their interests and improving their different practical leadership skills, such as decision-making and critical thinking (National Academy Foundation, 2011).

Project-based learning (PBL) is one of the promising new learning strategies that respond to children's needs for active learning. Hallermann et al. (2011, p. 5) define project-based learning as a systematic teaching method that engages students in learning important knowledge and 21st-century skills through an extended, student-influenced inquiry process structured around complex, authentic questions and carefully designed products and learning tasks. Project-based learning offers a wide range of benefits to both students and teachers. A growing body of academic research supports the use of project-based learning in school to motivate students, cut absenteeism, boost cooperative learning skills, and improve academic performance (Kokotsaki et al., 2016; Megayanti et al., 2020). In addition, project-based learning has been shown to benefit a variety of students in developing collaborative skills. For example, through PBL, elementary students were able to understand multiple perspectives and acquire conflict resolution skills (ChanLin, 2008). According to elementary teachers, PBL has several positive effects on students' content knowledge. Compared to traditional classes, students in PBL classes performed better on assessments of content knowledge. Furthermore, Hallermann et al. (2011, p. 5) state that in project-based learning, students have to engage with the curriculum through a

meaningful question to explore, a concrete problem to solve, or a creative challenge to overcome. Before they can accomplish these tasks, students need to inquire into the topic by asking questions and developing their own answers. To demonstrate what they learn, students must then create high-quality products and present their work to others. Students often work on projects in small teams, guided by the teacher. Students are challenged to do research on their own in order to find answers to typically harder questions. Finding answers requires the learners to think deeply, investigate, collect the necessary data, predict, analyze the data, combine and interpret the results, evaluate the findings, and finally present solutions to the problem (Baghri et al., 2013, p. 18).

Such activities, whether they take place inside or outside the classroom, require team leaders. Teachers should, therefore, motivate students to practice leadership skills and be aware of the importance of improving these skills. Leadership skills are highly relevant for students at different levels, especially for young learners, as they will be the ones to occupy future leadership positions. Palestinian refugee students, most specifically, would benefit greatly from such leadership skills, given the difficult circumstances and emergency situations they must face. Classroom teachers can help their students practice a number of leadership skills and behaviors by involving them in a variety of exercises such as planning activities, appointing group leaders, providing opportunities for teacher role-playing, and making presentations in front of the class. In addition, teachers must actively strive to improve these leadership skills early in students' educational development. Moody (2000) points out that learners who are characterized by leadership behaviors are more comfortable coping with difficulties and challenges. The researchers believe that students need to be trained on such leadership skills; they also deserve this interest as they are the future leaders. As a result, providing teachers with leadership development resources such as books, videos, software, and workshops could help them foster enabling educational environments for students to become effective leaders.

Many studies around the world have investigated the effectiveness of project-based learning, both for the study of English and for other types of learning (Kokotsaki et al., 2016). These studies support the effectiveness of this strategy on school success and the development of various life skills (Megayanti et al., 2020). For example, Bagheri et al. (2013) have reported the benefits of this strategy on students' self-directed learning skills, whereas Baş (2011) and others have reported the benefits of project-based learning on students' academic achievement and attitudes towards English (Chen & Yang, 2019).

The current study aims to assess the effects of the project-based learning strategy on leadership skills development among third-grade students in UNRWA primary schools in Gaza.

Statement of the problem

The study problem is stated in the following general question: *What is the impact of the project-based learning strategy on leadership skills acquisition among Palestinian refugee students in Gaza?*

Research questions

1. What are the leadership skills that need to be developed through using the PBL strategy?
2. What are the statistically significant differences ($\alpha \leq 0.05$) in the level of leadership skills between students in the experimental and control groups at the final stages of the experiment?
3. What are the statistically significant differences ($\alpha \leq 0.05$) in the level of leadership skills of students in the experimental group between the initial and final stages of the experiment?
4. What are the statistically significant differences ($\alpha \leq 0.05$) in the level of leadership skills between male and female students in the experimental group?

Objective of the study

The study aimed to investigate the impact of using PBL on leadership skills acquisition among Palestinian refugee students in Gaza.

Limitation of the study

This study has the following limitations. First, it focuses only on third grade students in UNRWA schools. Second, it took place during the first semester of the 2015-2016 school year. Furthermore, it is limited to elementary school in the eastern part of Gaza. Finally, the experiment uses only three units of the book English for Palestine.

Operational definition of terms

Before addressing the methodological framework, certain definitions must be established. First of all, the project-based learning strategy (PBL) is a model for classroom activities that shifts away from the usual classroom practices of short, isolated, teacher-centered lessons. We use the definition proposed by Proulx (2004, p. 31):

A systematic process of knowledge acquisition and transfer during which the learner anticipates, plans and carries out, within a given time, alone or with peers and under the supervision of a teacher, an observable activity that results, in a pedagogical context, in an evaluable end product.

In addition, Chiung-Sui Chang et al. (2011) also define PBL as an instructional strategy that trains learners on how to fully utilize acquired knowledge, skills, and attitudes to solve problems and adapt to unforeseen circumstances in real life. The PBL strategy is conceptualized in the present paper as a set of activities inside or outside the classroom that are led by learners as they work in groups to solve defined problems in order to better learn new vocabulary and improve their leadership skills.

Secondly, the leadership skills for Potter (1997, p. 6) is about creating positive feelings on the part of the followers and emphasizing inspiration instead of control. Gill (2012, p. 101) also defines leadership as the ability to accomplish useful and desirable things that benefit the people being led.

Leadership skills are conceptualized in the present paper as the set of skills that children should have to enable them to influence others in order to achieve common goals. These skills include project planning, communication skills, problem solving, decision making, self-confidence, presentation skills, time management, teamwork, personal effectiveness skills, initiation, and opportunities for responsibilities. They are improved by the PBL strategy and measured by the student scores in the leadership observation card.

Méthodology

Research design

The study employed an experimental approach that required two groups of students: an experimental group and a control group. The project-based learning strategy was applied for teaching the experimental group, whereas the traditional method was used with the control group. The experiment lasted for six weeks. Both groups were taught by the researcher.

Study population

The population of the study consisted of all third graders at UNRWA schools in Gaza enrolled in the first semester of the school year.

Study sample

The sample of the study consisted of 76 students distributed into two groups: the experimental group consisting of 38 students and the control group consisting of 38 students also. The sample of the study was purposively chosen from Al Zaitun Elem Co-ed “C” School in the east of Gaza, where one of the researchers works as an English teacher. The sample was randomly chosen from the third-grade classes. Table 2.1 shows the distribution of the sample.

Table 2.1 : Sample distribution

| Group | Experimental | Control | Total |
|--------------------|--------------|---------|-------|
| Number of students | 38 | 38 | 76 |

Study instrumentation – Observation card

An observation card (Appendix 1) was prepared by the researchers to measure the impact of the project-based learning strategy on third graders' leadership skills. This observation card was used before and after the experiment for both the experimental and control groups. It was composed of eleventh domains, involving thirty-seven items. The five-point Likert scale was used to measure teachers' observations. Responses ranged from *strongly disagree*, *disagree*, *not sure*, *agree* to *strongly agree*. Scale items were translated into Arabic to help other observers understand them easily and accurately. The final version of the scale consisted of 37 sentences distributed into eleven domains as illustrated in Table 2.2 below. Here is the list of skills present on the observation card:

1. Planning: The student's ability to prepare for what they will do in a project, such as setting goals, preparing materials, and identifying project steps;
2. Communication skills: The student's ability to use effective written, verbal, and nonverbal skills to convey ideas to others and to exchange opinions and feelings;
3. Problem solving: The student's ability to suggest and create several solutions for problematic situations;
4. Decision making: The student's ability to see things from different perspectives and to make ethical decisions or consider someone else's point of view;
5. Self-confidence: The student's ability to discover personal interests and heroes who they can look up to for inspiration and motivation;
6. Presentation skills: The student's ability to present and show their project (title, goals, importance, procedures, and results) systemically and logically using graphs, pictures, flow charts, and concept maps;

7. Time management: The student's ability to manage and organize their time and their work for project activities and tasks;
8. Teamwork: The student's ability to get things done without being bossy and alienating others. Good leaders learn from others and are willing to be led;
9. Personal effectiveness skills: The student's ability to influence others either by motivating them to do something or by persuading them to think in a different way;
10. Initiation: The student's ability to do things by themselves without the other's demand and their ability to promote acting instead of waiting;
11. Opportunities for responsibilities: The student's ability to act and behave well when being offered the opportunity to have responsibilities and experiences in many different roles in clubs, on school trips, in presentations, in debates, and around the house.

Table 2.2 : Observation card domains

| Domains | Number of items |
|------------------------------------|-----------------|
| Planning skills | 4 |
| Communication skills | 4 |
| Problem solving skills | 3 |
| Decision making | 3 |
| Self-confidence | 4 |
| Presentation skills | 3 |
| Time management skills | 3 |
| Teamwork / group work | 3 |
| Personal effectiveness skills | 4 |
| Initiation | 3 |
| Opportunities for responsibilities | 3 |
| Total | 27 |

Pilot study. The observation card was first used on a random pilot sample of five third graders from Al Zaitun Elem Co-ed “C” School in the east of Gaza in order to ensure the clarity of the observation card items and instructions. This also served to assess the observation card validity and reliability.

Reliability of the observation card. The researchers used the referee reliability and the internal consistency methods.

Referee reliability. The observation card was introduced to a jury composed of experienced supervisors and specialists in English language, methodology, and psychology, as well as professors from Gaza universities and the Ministry of Education. The observation card items were modified according to their recommendations.

Internal consistency. The internal consistency indicates the correlation of the score of each item with the total score of the domains. It also indicates the correlation of the average of each domain with the total average. This reliability was calculated by using Pearson Formula. Table 2.3 shows the internal consistency value of the observation card.

According to Table 2.3, the coefficient correlation of each item within its domain is significant at level 0.01. Table 2.4 shows the correlation coefficient of each domain with the whole observation card. According to the following tables, we conclude that the observation card was highly consistent and reliable as a study tool.

Table 2.3 : Pearson Correlation Coefficient for Every Domain With the Total Degree of The Observation Card

| Domains | Items | Pearson correlation | Domains | Items | Pearson correlation |
|----------------------|-------|---------------------|-------------------------------|-------|---------------------|
| Planning | 1 | 0,969** | Presentation skills | 19 | 0,966** |
| | 2 | 0,980** | | 20 | 0,980** |
| | 3 | 0,976** | | 21 | 0,977** |
| | 4 | 0,966** | | 22 | 0,959** |
| Communication skills | 5 | 0,935** | Time management | 23 | 0,972** |
| | 6 | 0,954** | | 24 | 0,969** |
| | 7 | 0,948** | | 25 | 0,956** |
| | 8 | 0,914** | | 26 | 0,984** |
| Problem solving | 9 | 0,956** | Teamwork | 27 | 0,984** |
| | 10 | 0,979** | | 28 | 0,960** |
| | 11 | 0,965** | | 29 | 0,976** |
| | 12 | 0,970** | | 30 | 0,967** |
| Decision making | 13 | 0,989** | Personal effectiveness skills | 31 | 0,973** |
| | 14 | 0,946** | | 32 | 0,961** |
| | 15 | 0,958** | | 33 | 0,974** |
| | 16 | 0,958** | | 34 | 0,973** |
| Self confidence | 17 | 0,924** | Initiation | 35 | 0,977** |
| | 18 | 0,936** | | 36 | 0,990** |
| | | | | 37 | 0,988** |
| | | | | | |

r table value at df 38 and sig. level 0.05 = 0.304

r table value at df 38 and sig. level 0.01 = 0.393

Table 2.4 : Correlation Coefficient of Each Domain of the Observation Card With the Total

| Domain | Pearson correlation | Sig. level |
|----------------------|---------------------|--------------|
| Planning | 0,933 | sig. at 0,01 |
| Communication skills | 0,965 | sig. at 0,01 |
| Problem solving | 0,935 | sig. at 0,01 |
| Decision making | 0,918 | sig. at 0,01 |
| Self confidence | 0,921 | sig. at 0,01 |
| Presentation skills | 0,950 | sig. at 0,01 |
| Time management | 0,933 | sig. at 0,01 |

| | | |
|---|-------|--------------|
| Teamwork | 0,939 | sig. at 0,01 |
| Personal effectiveness skills | 0,945 | sig. at 0,01 |
| Initiation | 0,948 | sig. at 0,01 |
| Opportunity for responsibility | 0,949 | sig. at 0,01 |
| <hr/> | | |
| <i>r</i> table value at df 38 and sig. level 0.05 = 0.304 | | |
| <i>r</i> table value at df 38 and sig. level 0.01 = 0.393 | | |

Reliability of the observation card. The tool is considered reliable if it gives the same results when reapplied in the same conditions. The reliability of the observation card was measured with the Alpha Cronbach, the split-half technique, and the coefficient of inter-observer agreement.

Coefficient of inter-observer agreement. To measure the reliability of the observation card, the researcher used the inter-observer agreement method (the researcher and another teacher). Each observer worked independently and used the same scale to record the performance of students during the observation period. The researcher and the other teacher completed their observations at the same time, which was at the end of the specified period of total observation. The researcher and the other teacher observed five students. The agreement ratio was calculated statistically by using Cooper equation, the results of which are outlined in Table 2.5 below.

$$\text{Coefficient agreement} = \frac{\text{Points of agreement}}{\text{Points of agreement} + \text{Points of disagreement}}$$

Table 2.5: Percentage of Inter-Observer Agreement to Assess the Reliability of the Observation Card

| Group | Total performance | First observer | Second observer | Percentage |
|-------------------------------|-------------------|----------------|-----------------|------------|
| Student 1 | 185 | 133 | 124 | 93,23 |
| Student 2 | 185 | 127 | 118 | 92,91 |
| Student 3 | 185 | 115 | 106 | 92,17 |
| Student 4 | 185 | 111 | 99 | 89,19 |
| Student 5 | 185 | 121 | 115 | 95,04 |
| Total reliability of the card | | | | 92,51 |

According to Table 2.5, the researcher found that the highest percentage of inter-rater agreement was 95.04, the lowest percentage of agreement was 89.19, and the total reliability was 92.51. These percentages point towards a high level of inter-observer reliability.

Split-half technique. According to Table 2.6 and Table 2.7, the observation card is proved to be reliable, with an Alpha Cronbach coefficient of 0.994 and a split- half coefficient of 0.969.

Table 2.6: Alpha Cronbach Coefficients of the Observation Card Domains

| Cronbach's alpha | Total | Domain |
|------------------|-------|--------------------------------|
| 0,981 | 4 | Planning |
| 0,947 | 4 | Communication skills |
| 0,961 | 3 | Problem solving skills |
| 0,967 | 3 | Decision making |
| 0,959 | 4 | Self confidence |
| 0,973 | 3 | Presentation skills |
| 0,964 | 3 | Time management skills |
| 0,974 | 3 | Teamwork / group work |
| 0,977 | 4 | Personal effectiveness skills |
| 0,967 | 3 | Initiation |
| 0,985 | 3 | Opportunity for responsibility |
| 0,994 | 37 | Total |

Table 2.7: Reliability Coefficient by Split-Half Technique

| Scope | Total | Coefficient correlation | Reliability |
|--------------------------------|-------|-------------------------|-------------|
| Planning | 4 | 0,937 | 0,967 |
| Communication skills | 4 | 0,900 | 0,947 |
| Problem solving skills | 3 | 0,829 | 0,965 |
| Decision making | 3 | 0,881 | 0,943 |
| Self confidence | 4 | 0,905 | 0,950 |
| Presentation skills | 3 | 0,879 | 0,976 |
| Time management skills | 3 | 0,877 | 0,966 |
| Teamwork / group work | 3 | 0,881 | 0,984 |
| Personal effectiveness skills | 4 | 0,959 | 0,979 |
| Initiation | 3 | 0,851 | 0,973 |
| Opportunity for responsibility | 3 | 0,876 | 0,988 |
| Total | 37 | 0,968 | 0,969 |

Controlling for previous leadership skills. To make sure that the sample subjects were equivalent in their previous leadership skills, the researcher completed the pre-application observation card. The results of the subjects were recorded and statistically analyzed using *t*-test. Table 2.8 shows the mean and the standard deviation of each group for each previous leadership skill.

Table 2.8 : Results of the t-Test - Controlling Previous Leadership Skills Variable

| Domain | Group | N | Mean | Std. deviation | <i>t</i> | Sig. value | Sig. level |
|------------------------|--------------|----|--------|----------------|----------|------------|------------|
| Planning | Experimental | 38 | 11,316 | 3,662 | 0,398 | 0,692 | not sig. |
| | Control | 38 | 11,737 | 5,401 | | | |
| Communication skills | Experimental | 38 | 11,553 | 3,151 | 0,123 | 0,902 | not sig. |
| | Control | 38 | 11,658 | 4,206 | | | |
| Problem solving skills | Experimental | 38 | 7,605 | 2,955 | 0,253 | 0,801 | not sig. |
| | Control | 38 | 7,421 | 3,382 | | | |
| Decision making | Experimental | 38 | 7,263 | 2,544 | 0,291 | 0,772 | not sig. |
| | Control | 38 | 7,079 | 2,954 | | | |
| Self confidence | Experimental | 38 | 11,684 | 3,103 | 0,581 | 0,563 | not sig. |

| | | | | | | | |
|--------------------------------|--------------|----|---------|--------|-------|-------|----------|
| | Control | 38 | 11,211 | 3,953 | | | |
| Presentation skills | Experimental | 38 | 8,158 | 2,727 | 0,034 | 0,973 | not sig. |
| | Control | 38 | 8,184 | 3,965 | | | |
| Time management skills | Experimental | 38 | 8,526 | 2,128 | 0,081 | 0,936 | not sig. |
| | Control | 38 | 8,474 | 3,391 | | | |
| Teamwork / group work | Experimental | 38 | 9,395 | 2,636 | 0,076 | 0,940 | not sig. |
| | Control | 38 | 9,342 | 3,387 | | | |
| Personal effectiveness skills | Experimental | 38 | 10,289 | 2,710 | 0,256 | 0,798 | not sig. |
| | Control | 38 | 10,526 | 5,007 | | | |
| Initiation | Experimental | 38 | 8,579 | 2,213 | 0,224 | 0,823 | not sig. |
| | Control | 38 | 8,421 | 3,732 | | | |
| Opportunity for responsibility | Experimental | 38 | 8,737 | 2,901 | 0,495 | 0,622 | not sig. |
| | Control | 38 | 8,395 | 3,115 | | | |
| Total degree | Experimental | 38 | 103,105 | 23,625 | 0,092 | 0,927 | not sig. |
| | Control | 38 | 102,447 | 36,994 | | | |

t table value at df 74 and sig. level 0.05 = 2.00

t table value at df 74 and sig. level 0.01 = 2.66

Analysis of the results indicated that there were no statistically significant differences between the experimental and the control groups at $\alpha \leq 0.05$.

Controlling for gender. To control for the gender of students in the experimental group, the researcher used the independent samples *t*-test, the results of which are outlined in Table 2.9 below.

Table 2.9: Results of the Independent Samples t-Test - Differences Between Male and Female Students in the Experimental Group

| Skill | Gender | N | Mean | Std. Deviation | <i>t</i> | Sig. Value | Sig. level |
|--------------------------------|--------|----|---------|----------------|----------|------------|------------|
| Planning | Male | 16 | 11,375 | 3,384 | 0,084 | 0,934 | not sig. |
| | Female | 22 | 11,273 | 3,930 | | | |
| Communication skills | Male | 16 | 11,438 | 2,421 | 0,190 | 0,851 | not sig. |
| | Female | 22 | 11,636 | 3,646 | | | |
| Problem solving skills | Male | 16 | 7,875 | 3,324 | 0,475 | 0,638 | not sig. |
| | Female | 22 | 7,409 | 2,720 | | | |
| Decision making | Male | 16 | 7,250 | 2,955 | 0,027 | 0,979 | not sig. |
| | Female | 22 | 7,273 | 2,272 | | | |
| Self confidence | Male | 16 | 11,125 | 2,604 | 0,946 | 0,350 | not sig. |
| | Female | 22 | 12,091 | 3,421 | | | |
| Presentation skills | Male | 16 | 8,313 | 2,774 | 0,294 | 0,770 | not sig. |
| | Female | 22 | 8,045 | 2,751 | | | |
| Time management skills | Male | 16 | 8,938 | 1,769 | 1,016 | 0,316 | not sig. |
| | Female | 22 | 8,227 | 2,349 | | | |
| Teamwork / group work | Male | 16 | 9,625 | 2,446 | 0,454 | 0,652 | not sig. |
| | Female | 22 | 9,227 | 2,810 | | | |
| Personal effectiveness skills | Male | 16 | 10,500 | 1,789 | 0,404 | 0,689 | not sig. |
| | Female | 22 | 10,136 | 3,256 | | | |
| Initiation | Male | 16 | 8,625 | 2,094 | 0,108 | 0,915 | not sig. |
| | Female | 22 | 8,545 | 2,345 | | | |
| Opportunity for responsibility | Male | 16 | 8,875 | 2,705 | 0,247 | 0,806 | not sig. |
| | Female | 22 | 8,636 | 3,094 | | | |
| Leadership skills | Male | 16 | 103,938 | 17,819 | 0,183 | 0,856 | not sig. |
| | Female | 22 | 102,500 | 27,490 | | | |

t table value at df 36 and sig. level 0.05 = 2.02

t table value at df 36 and sig. level 0.01 = 2.70

Analysis of the results indicates that there were no statistically significant differences between the male and the female students in the experimental group at $\alpha \leq 0.05$.

Statistical analysis

Our team used several statistical tools adapted to the nature of the study. First, the Cronbach's alpha technique was used to measure the reliability of the observation grid. Second, the Independent Sample t-Test was used to control for interferential variables and

to measure the statistical differences in the means between the two groups with respect to the study variables. In addition, Cohen's t , η^2 , and d were used to test the effect size of the differences that the independent variable, i.e. the intervention, had on the dependent variable, i.e. the experimental group. Finally, data were collected using the Statistical Package for Social Sciences software.

Results

The purpose of the current study was to examine the impact of the project-based learning strategy on third graders' leadership skills. This section reexamines the research questions and hypotheses in light of the results, after analysis using the Statistical Package for Social Sciences. In her attempt to analyze the data, the researcher employed different statistical formulae such as frequencies, means, standard deviations, and t -tests. Furthermore, the researcher used effect size through η^2 and d values to measure the extent to which the independent variable—the project-based learning strategy—had an effect on the dependent variable—the experimental group's leadership skills.

Answers to Research Questions

Answer to the first research question. The first question is formulated as follows: What are the leadership competencies that need to be developed through the PPA strategy? To answer this question, we have listed the most common leadership competencies from related research (Jokinen, 2005). As well, specialists in education and psychology were consulted. The competencies identified were: planning; communication skills; problem solving; decision making; self-confidence; presentation skills; time management; teamwork; self-efficacy; initiative; and responsibility.

Answer to the second research question. The second question was the following: *Are there statistically significant differences ($\alpha \leq 0.05$) in the level of leadership skills between students in the experimental and control groups at the final stages of the experiment?* To answer this question, the researcher tested the null hypothesis that there are no statistically significant differences at $\alpha \leq 0.05$ between the level of leadership skills of students in the experimental group and their counterparts in the control group in the post-application observation card. To examine this hypothesis, the means and standard deviations of both groups' results on the post-application observation card were computed. An independent samples t -test was used to assess the differences. The results are presented in Table 3.1.

Table 3.1 : Results of the Independent Samples t -Test - Differences Between the Experimental and Control Groups in the Post-Application Observation Card

| Skill | Group | N | Mean | Std. Deviation | <i>t</i> | Sig. Value | Sig. level |
|----------------------------|--------------|----|---------|----------------|----------|------------|--------------|
| Planning | Experimental | 38 | 16,211 | 3,580 | 4,339 | 0,000 | sig. at 0.01 |
| | Control | 38 | 12,026 | 4,745 | | | |
| Communication skills | Experimental | 38 | 16,500 | 3,415 | 4,388 | 0,000 | sig. at 0.01 |
| | Control | 38 | 12,211 | 4,966 | | | |
| Problem solving | Experimental | 38 | 11,263 | 2,956 | 4,594 | 0,000 | sig. at 0.01 |
| | Control | 38 | 7,868 | 3,465 | | | |
| Decision making | Experimental | 38 | 11,421 | 2,500 | 3,922 | 0,000 | sig. at 0.01 |
| | Control | 38 | 8,421 | 3,998 | | | |
| Self confidence | Experimental | 38 | 16,289 | 3,502 | 3,790 | 0,000 | sig. at 0.01 |
| | Control | 38 | 12,474 | 5,124 | | | |
| Presentation skills | Experimental | 38 | 11,816 | 2,577 | 4,024 | 0,000 | sig. at 0.01 |
| | Control | 38 | 8,737 | 3,950 | | | |
| Time management | Experimental | 38 | 12,211 | 2,683 | 3,968 | 0,000 | sig. at 0.01 |
| | Control | 38 | 9,132 | 3,960 | | | |
| Teamwork \ group work | Experimental | 38 | 12,289 | 2,324 | 3,800 | 0,000 | sig. at 0.01 |
| | Control | 38 | 9,421 | 4,031 | | | |
| Personal effectiveness | Experimental | 38 | 14,842 | 3,054 | 3,989 | 0,000 | sig. at 0.01 |
| | Control | 38 | 10,974 | 5,139 | | | |
| Initiation | Experimental | 38 | 12,553 | 2,321 | 3,869 | 0,000 | sig. at 0.01 |
| | Control | 38 | 9,579 | 4,131 | | | |
| Opportunity of personality | Experimental | 38 | 12,500 | 2,334 | 3,951 | 0,000 | sig. at 0.01 |
| | Control | 38 | 9,395 | 4,246 | | | |
| Total degree | Experimental | 38 | 147,895 | 24,309 | 4,562 | 0,000 | sig. at 0.01 |
| | Control | 38 | 110,237 | 44,703 | | | |

t table value at df 74 and sig. level 0.05 = 2.00

t table value at df 74 and sig. level 0.01 = 2.66

As shown in Table 3.1, the calculated value for *t* (4.562) exceeds the corresponding value in the *t* table (2.00), meaning that there are statistically significant differences at $\alpha \leq 0.05$ in the mean total score on the post-application observation card between the experimental group and the control group, the experimental group showing higher scores. The mean of the post-application observation card in the experimental group reached 147.895, whereas the mean of the control group was 110.237. This result indicates that using the project-

based learning strategy is more effective than the traditional method for developing students' leadership skills.

The effect size of the project-based learning strategy on the experimental group in the post-application observation card was measured and the results are presented in Table 3.2.

Table 3.2 : Values of t , η^2 , and d for the Total Degree

| Skills | t | η^2 | d | Effect size |
|-------------------------------|-------|----------|-------|-------------|
| Planning | 4,339 | 0,203 | 1,009 | Large |
| Communication skills | 4,388 | 0,206 | 1,020 | Large |
| Problem solving skills | 4,594 | 0,222 | 1,068 | Large |
| Decision making | 3,922 | 0,172 | 0,912 | Large |
| Self confidence | 3,790 | 0,163 | 0,881 | Large |
| Presentation skills | 4,024 | 0,180 | 0,936 | Large |
| Time management skills | 3,968 | 0,175 | 0,922 | Large |
| Teamwork \ group work | 3,800 | 0,163 | 0,884 | Large |
| Personal effectiveness | 3,989 | 0,177 | 0,928 | Large |
| Initiation | 3,869 | 0,168 | 0,899 | Large |
| Opportunity of responsibility | 3,951 | 0,174 | 0,919 | Large |
| Leadership skills | 4,562 | 0,220 | 1,061 | Large |

The values of η^2 and d are shown in Table 3.2, highlighting the large effect size of the project-based learning strategy in the total level of leadership skills. This can be attributed to the enjoyable, motivating, and interactive learning circumstances created in the classroom as a result of using the project-based learning strategy.

Answer to the third research question. The third question is the following: *What are the statistically significant differences ($\alpha \leq 0.05$) in the level of leadership skills of students in the experimental group between the initial and final stages of the experiment?* To answer this question, the researcher tested the null hypothesis that there are no statistically significant differences at $\alpha \leq 0.05$ in the level of leadership skills of the experimental group students between the pre- and post-application observation card. To examine this hypothesis, the mean scores of the experimental group results of the pre- and post-application observation card were computed. A paired samples t -test was used to analyze the data. The results are outlined in Table 3.3.

Table 3.3 : Results of the Paired Samples t-Test - Differences Between the Pre- and Post-Application Observation Card of the Experimental Group

| Skill | Group | N | Mean | Std. Deviation | <i>t</i> | Sig. Value | Sig. Level |
|-------------------------------|-----------|----|----------|----------------|----------|------------|--------------|
| Planning | Pre test | 38 | 11,3158 | 3,662 | 9,573 | 0,000 | sig. at 0.01 |
| | Post test | 38 | 16,2105 | 3,580 | | | |
| Communication skills | Pre test | 38 | 11,5526 | 3,151 | 7,334 | 0,000 | sig. at 0.01 |
| | Post test | 38 | 16,5000 | 3,415 | | | |
| Problem solving skills | Pre test | 38 | 7,6053 | 2,955 | 7,709 | 0,000 | sig. at 0.01 |
| | Post test | 38 | 11,2632 | 2,956 | | | |
| Decision making | Pre test | 38 | 7,2632 | 2,544 | 8,251 | 0,000 | sig. at 0.01 |
| | Post test | 38 | 11,4211 | 2,500 | | | |
| Self confidence | Pre test | 38 | 11,6842 | 3,103 | 12,904 | 0,000 | sig. at 0.01 |
| | Post test | 38 | 16,2895 | 3,502 | | | |
| Presentation skills | Pre test | 38 | 8,1579 | 2,727 | 6,626 | 0,000 | sig. at 0.01 |
| | Post test | 38 | 11,8158 | 2,577 | | | |
| Time management skills | Pre test | 38 | 8,5263 | 2,128 | 8,499 | 0,000 | sig. at 0.01 |
| | Post test | 38 | 12,2105 | 2,683 | | | |
| Teamwork\group work | Pre test | 38 | 9,3947 | 2,636 | 9,844 | 0,000 | sig. at 0.01 |
| | Post test | 38 | 12,2895 | 2,324 | | | |
| Personal effectiveness | Pre test | 38 | 10,2895 | 2,710 | 10,479 | 0,000 | sig. at 0.01 |
| | Post test | 38 | 14,8421 | 3,054 | | | |
| Initiation | Pre test | 38 | 8,5789 | 2,213 | 11,744 | 0,000 | sig. at 0.01 |
| | Post test | 38 | 12,5526 | 2,321 | | | |
| Opportunity of responsibility | Pre test | 38 | 8,7368 | 2,901 | 7,327 | 0,000 | sig. at 0.01 |
| | Post test | 38 | 12,5000 | 2,334 | | | |
| Leadership skills | Pre test | 38 | 103,1053 | 23,625 | 17,164 | 0,000 | sig. at 0.01 |
| | Post test | 38 | 147,8947 | 24,309 | | | |

t table value at df 37 and sig. level 0.05 = 2.02

t table value at df 37 and sig. level 0.01 = 2.70

As shown in Table 3.3, the calculated value for *t* (17.164) exceeds the corresponding value in the *t* table (2.02), meaning that there are statistically significant differences at $\alpha \leq 0.05$ between pre-application and post-application mean scores in leadership skills for the experimental group, post-application scores being higher. This shows that using the

project-based learning strategy improve leadership skills among students. As a result, the null hypothesis is rejected.

To measure the effect size of the project-based learning strategy on the experimental group in the post-application observation card, the researcher tested for effect size as shown in Table 3.4.

Table 3.4 : Values of t , η^2 , and d for the Total Degree

| Skill | t | η^2 | d | Effect size |
|-------------------------------|--------|----------|-------|-------------|
| Planning | 9,573 | 0,712 | 3,148 | Large |
| Communication skills | 7,334 | 0,592 | 2,411 | Large |
| Problem solving skills | 7,709 | 0,616 | 2,535 | Large |
| Decision making | 8,251 | 0,648 | 2,713 | Large |
| Self confidence | 12,904 | 0,818 | 4,243 | Large |
| Presentation skills | 6,626 | 0,543 | 2,178 | Large |
| Time management skills | 8,499 | 0,661 | 2,794 | Large |
| Teamwork / group work | 9,844 | 0,724 | 3,237 | Large |
| Personal effectiveness | 10,479 | 0,748 | 3,445 | Large |
| Initiation | 11,744 | 0,788 | 3,861 | Large |
| Opportunity of responsibility | 7,327 | 0,592 | 2,409 | Large |
| Leadership skills | 17,164 | 0,888 | 5,643 | Large |

Values for η^2 and d shown in Table 3.4 indicate the large effect size of the project-based learning strategy in the total degree of leadership skills.

Answer to the fourth research question. The fourth question is the following: *Are there statistically significant differences ($\alpha \leq 0.05$) in the level of leadership skills between male and female students in the experimental group?* To answer this question, the researcher tested the hypothesis that there are statistically significant differences ($\alpha \leq 0.05$) between men and women in the level of leadership skills of students in the experimental group. To examine this hypothesis, the means and standard deviation of the male and female students' scores on the post-application observation card were calculated. An independent samples t -test was used to test for significant differences. The results are shown in Table 3.5.

Table 3.5 : Results of the Independent Samples t-Test - Differences Between Male and Female Students in the Experimental Group

| Skill | Gender | N | Mean | Std. Deviation | <i>t</i> | Sig. Value | Sig. Level |
|-------------------------------|--------|----|---------|----------------|----------|------------|------------|
| Planning | Male | 16 | 17,000 | 2,828 | 1,165 | 0,252 | not sig. |
| | Female | 22 | 15,636 | 4,006 | | | |
| Communication skills | Male | 16 | 17,125 | 2,754 | 0,961 | 0,343 | not sig. |
| | Female | 22 | 16,045 | 3,823 | | | |
| Problem solving skills | Male | 16 | 11,750 | 2,793 | 0,863 | 0,394 | not sig. |
| | Female | 22 | 10,909 | 3,085 | | | |
| Decision making | Male | 16 | 12,250 | 2,017 | 1,795 | 0,081 | not sig. |
| | Female | 22 | 10,818 | 2,684 | | | |
| Self confidence | Male | 16 | 16,938 | 2,792 | 0,972 | 0,338 | not sig. |
| | Female | 22 | 15,818 | 3,936 | | | |
| Presentation skills | Male | 16 | 11,938 | 2,516 | 0,245 | 0,808 | not sig. |
| | Female | 22 | 11,727 | 2,676 | | | |
| Time management skills | Male | 16 | 12,625 | 2,306 | 0,808 | 0,424 | not sig. |
| | Female | 22 | 11,909 | 2,942 | | | |
| Teamwork / group work | Male | 16 | 12,125 | 2,156 | -0,368 | 0,715 | not sig. |
| | Female | 22 | 12,409 | 2,482 | | | |
| Personal effectiveness | Male | 16 | 15,063 | 2,265 | 0,375 | 0,710 | not sig. |
| | Female | 22 | 14,682 | 3,564 | | | |
| Initiation | Male | 16 | 13,125 | 1,857 | 1,309 | 0,199 | not sig. |
| | Female | 22 | 12,136 | 2,569 | | | |
| Opportunity of responsibility | Male | 16 | 12,625 | 2,217 | 0,278 | 0,783 | not sig. |
| | Female | 22 | 12,409 | 2,462 | | | |
| Leadership skills | Male | 16 | 152,563 | 20,202 | 1,010 | 0,319 | not sig. |
| | Female | 22 | 144,500 | 26,850 | | | |

t table value at df 36 and sig. level 0.05 = 2.02

t table value at df 36 and sig. level 0.01 = 2.70

As shown in Table 3.5, the calculated value for *t* (1.010) is lower than the corresponding value in the *t* table (2.02), meaning that there are no statistically significant differences at $\alpha \leq 0.01$ in the level of leadership skills among students in the experimental group in the post-application observation card due to gender.

Discussion

This section discusses the results of the study. It summarizes the conclusions that are to be drawn from the study results. It also contains suggestions and recommendations for further study and other recommendations that should be useful for course designers, English teachers, supervisors, students, and educators. These recommendations could ultimately improve the teaching of English.

Study findings

Based on the results of this study, statistically significant differences were found at $\alpha \leq 0.01$ in the mean total score assigned to leadership skills on the post-experimental observation grid between the experimental and control groups, to the benefit of the experimental group. In addition, statistically significant differences were found at $\alpha \leq 0.05$ between the scores for leadership skills on the pre-application observation grids and those on the post-experimental observation grid in the experimental group. In addition, no statistically significant gender-related differences were found at $\alpha \leq 0.01$ in the level of leadership skills of students in the experimental group on the post-experimental observation grids. In sum, the overall results of the study showed that the experimental group, who experienced the project-based learning strategy, performed better than the control group, who were taught using traditional methods. In conclusion, after six weeks of experimentation, all students in the experimental group showed clear improvements in their leadership skills after the implementation of the project-based learning strategy, as shown in the post-experimental observation grid.

Discussion of findings

The study aimed at investigating the effectiveness of using project-based learning in developing third graders' leadership skills. To achieve this objective, the researcher adopted the experimental approach, where the results of an experimental group were compared with those of a control group.

The experiment was designed to determine if third graders' leadership skills would be improved by the application of a project-based learning strategy. After six weeks of experimentation, all students in the experimental group showed clear improvements in their leadership skills after the implementation of the project-based learning strategy, as shown on the post-application observation card.

Discussion of the first and second hypotheses findings. Because of the close relationship between the first and the second hypotheses, the researcher is going to discuss their findings

together. The results showed that there were statistically significant differences at $\alpha \leq 0.01$ in the mean total score for leadership skills in the post-application observation card between the experimental and control groups, the experimental group showing higher scores. The findings also showed that there were statistically significant differences at $\alpha \leq 0.05$ in the mean scores between the pre-application and the post-application observation card of the experimental group, the post-application observation card showing higher leadership scores. In addition, the researcher found that the effect size was large in the total scores of the post-application observation card. The effectiveness of the project-based learning strategy for developing students' leadership skills and its large effect size could be attributed to six factors.

Firstly, the activities and tasks that the students were asked to perform were simple and suitable to their age and characteristics (Appendix 2). The activities and tasks involved a lot of movement and interaction, which helped the students perform and complete them easily. This promoted self-confidence in students and encouraged them to express their opinions and feelings without hesitation.

Secondly, implementing projects gave the students the opportunity to participate in the planning stage where they were expected to set goals and prepare materials needed for each project in the initial stages of project implementation. This strategy helped to improve their planning skill, which is one of the most important leadership skills.

Thirdly, during the projects, students communicated with each other positively, politely, and friendly in order to achieve the main project goals. Moreover, they shared and exchanged ideas and information using effective written, verbal, and nonverbal skills. In addition, they were more involved in discussing their projects with members of the group. Communication skills were thus developed through the project-based learning strategy.

Fourthly, students were asked to complete each activity within a set time frame, which led them to divide each task or activity into smaller tasks in order to finish them in time. The teacher trained them in this skill and encouraged them by creating a competitive atmosphere that enhanced their time management skill, which is considered an important leadership skill.

Fifthly, all the students, even the low achievers, were motivated and excited by the activities. They all raced to participate effectively by bringing the needed materials, helping each other, acting different roles inside the class, and asking the teacher any questions they had. This helped promote an initiative mindset, which is necessary to be an effective leader.

Sixthly, each project had to be presented. The group members had to prepare for this presentation and had to choose the leader to present the project. A different leader was chosen for each project presentation, giving many students the opportunity to play the role of presenter. The student who presented the project was aware to use body language and gestures properly and to face the audience confidently to explain their project. These presentation skills, which are essential for effective leaders, were clearly developed among many students in the experimental group.

Finally, the results reveal the development of leadership skills through applying the observation cards of the leadership skills on the students by both, the researcher and another teacher, in the final stages of the experiment. The results revealed obvious changes in students' leadership skills. The researcher's observations were consistent with the other teacher's observations, ensuring that the results were accurate. These results support the effectiveness of project-based learning on leadership skills acquisition and are consistent with the findings of Al-Jamal (2014), who observed the effectiveness of project-based learning on students' character to create a community of autonomous learners, and with the findings of Bagheri, et al. (2013), who found that project-based learning promotes self-directed learning skills, which is one of the leadership skills.

Discussion of the third hypotheses findings. The third hypothesis findings showed that there are no statistically significant differences at $\alpha \leq 0.01$ in the level of leadership skills in the post-application observation card of the experimental group due to gender. This result could be attributed to two factors. Firstly, the activities were distributed among all students equally and every student had to play a role to achieve the project goals. The teacher herself did not differentiate between male and female students while distributing the activities. In addition, the groups were mixed, consisting of both male and female students. Secondly, all students were the same age and had the same characteristics, needs and abilities that depend on movement, games, pictures, real objects, repetition and motivation. They all received the same treatment.

Conclusions

Students were significantly more engaged with the PPA strategy than with the traditional method, with the PPA strategy appearing to interest them more and capturing their attention for longer. Our results also suggest that the PPA strategy increased student motivation and class participation. As well, classroom interactions among students appear to be increased. Developmentally, our results suggest that the PPA strategy helped students develop their intellectual, social, emotional, and moral skills, which are fundamental skills that learners need to develop in school. In addition, it appears to help students develop many thinking

skills, such as critical thinking, creativity and research skills. In light of the findings of this study, we suggest that further research be conducted on the effect of project-based learning on the development of various thinking skills. It would also be insightful to conduct similar studies on different school subjects and explore the effects of project-based learning on the development of different leadership skills of children in kindergarten.

References

- Adair, J. E. (2010). *Effective strategic leadership: The complete guide to strategic management*. Pan Books.
- Alshaya, H., & Oyaid, A. (2015). The Use of GOOGLE+ in Project Based Learning with Students of Princess Nourah University and their Satisfaction Towards it. *Special International Educational Journal*, 4 (1), 527-543.
- Ardeo, J. M. G. (2003). Attitude towards English and ESP acquisition as an L2 or L3 at university. *Ibérica: Revista de La Asociación Europea de Lenguas Para Fines Específicos (AELFE)*, 6, 109–133.
- Astin, H. S., & Astin, A. W. (1996). *A Social Change Model of Leadership Development* (University of California).
- Ayto, J. (1999). *Twentieth century words: The story of the new words in English over the last hundred years*. Oxford University Press.
- Bagheri, M., Ali, W. Z. W., Abdullah, M. C. B., & Daud, S. M. (2013). Effects of project-based learning strategy on self-directed learning skills of educational technology students. *Contemporary Educational Technology*, 4(1), 15–29.
- Baş, G. (2011). Investigating the effects of project-based learning on students' academic achievement and attitudes towards English lesson. *The Online Journal Of New Horizons In Education*, 1(4), 1-15.
- Bisland, A. (2004). Developing leadership skills in young gifted students. *Gifted Child Today*, 27(1), 24–27.
- Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M., & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational Psychologist*, 26(3–4), 369–398.
- Boudersa, N., & Hamada, H. (2015). Student-Centered Teaching Practices: Focus on The Project-Based Model to Teaching in the Algerian High-School Contexts. *Arab World English Journal*, 25-41.
- Branch, L. J. (2015). The impact of project-based learning and technology on student achievement in mathematics. In W. W. K. Ma., A. H. K. Yuen, J. Park, W. W. F. Lau, & L. Deng (eds), *New media, knowledge practices and multiliteracies* (pp. 259–268). Springer.

- Cameron, L. (2001). Children learning a foreign language. *Lynne Cameron, Teaching Languages to Young Learners*, 1–20.
- Chang, C.-S., Wong, W.-T., & Chang, C.-Y. (2011). Integration of project-based learning strategy with mobile learning: Case study of mangrove wetland ecology exploration project. *Journal of Applied Science and Engineering*, 14(3), 265–273.
- Chard, S. C. (2013). *The Project Approach to Teaching and Learning*. <https://www.communityplaythings.com/resources/articles/2013/the-project-approach-to-teaching-and-learning>
- Chen, C.-H., & Yang, Y.-C. (2019). Revisiting the effects of project-based learning on students' academic achievement: A meta-analysis investigating moderators. *Educational Research Review*, 26, 71–81. <https://doi.org/10.1016/j.edurev.2018.11.001>
- Creghan, C., & Adair-Creghan, K. (2015). The positive impact of project-based learning on attendance of an economically disadvantaged student population: A multiyear study. *Interdisciplinary Journal of Problem-Based Learning*, 9(2), 7.
- Curtis-Bey, L. (2009). *Project-based learning: Inspiring middle school students to engage in deep and active learning*. NYC Department of Education.
- Doğan, Y., Batdi, V., & Yildirim, B. (2012). Teachers' Views on the Practice of Project-Based Learning Approach in Primary School Science Education. *New perspectives in science education*, 5.
- Eskrootchi, R., & Oskrochi, G. R. (2010). A study of the efficacy of project-based learning integrated with computer-based simulation-STELLA. *Educational Technology & Society*, 13(1), 236–245.
- Foss, P., Carney, N., McDonald, K., & Rooks, M. (2008). Project-based learning activities for short-term intensive English programs. *The Philippine ESL Journal*, 1, 57–76.
- Fragoulis, I., & Tsiplakides, I. (2009). Project-Based Learning in the Teaching of English as A Foreign Language in Greek Primary Schools: From Theory to Practice. *English Language Teaching*, 2(3), 113–119.
- Gill, R. (2011). *Theory and practice of leadership*. Sage.
- Hallermann, S., Larmer, J., & Mergendoller, J. R. (2011). *PBL in the elementary grades: Step-by-step guidance, tools and tips for standards-focused K-5 projects*. Buck Institute for Education.
- Harun, Y. B. (2006). Project-Based Learning handbook “educating the millennial learner”. *Educational Technology Division Ministry of Education, Malaysia*.
- Hay, I., & Dempster, N. (2004). Student leadership development through general classroom activities. *Educating: Weaving Research into Practice*, 141–150.
- Helm, J. H., & Katz, L. G. (2016). *Young investigators: The project approach in the early years*. Teachers College Press.

- Hooper, A., & Potter, J. (2020). *Business of leadership: Adding lasting value to your organization*. Routledge.
- Jokinen, T. (2005). Global leadership competencies: A review and discussion. *Journal of European Industrial Training*, 29(3), 199–216.
<https://doi.org/10.1108/03090590510591085>
- Kennedy, J. (2015). *Leadership Skills: Developing the Skills You Need to Lead*. https://nls.ldls.org.uk/welcome.html?ark:/81055/vdc_100063642750.0x000001
- Keshta, A. S. (2001). *Alternative approaches for teaching English literature to undergraduate students in Gaza Strip*. Houston Press.
- Kokotsaki, D., Menzies, V., & Wiggins, A. (2016). Project-based learning: A review of the literature. *Improving Schools*, 19(3), 267–277.
<https://doi.org/10.1177/1365480216659733>
- Koparan, T., & Güven, B. (2014). The Effect of Project Based Learning on the Statistical Literacy Levels of Student 8th Grade. *European Journal of Educational Research*, 3(3), 145–157.
- Megayanti, T., Busono, T., & Maknun, J. (2020). Project-based learning efficacy in vocational education: Literature review. *IOP Conference Series: Materials Science and Engineering*, 830, 042075. <https://doi.org/10.1088/1757-899X/830/4/042075>
- Melesse, T. (2015). Differentiated instruction: Perceptions, practices and challenges of primary school teachers. *Science, Technology and Arts Research Journal*, 4(3), 253–264.
- Mergendoller, J. R., & Thomas, J. W. (2001). *Managing project-based learning: Principles from the field*. Buck Institute for Education.
- Mincemoyer, C. (2012). *I can be a leader! Leadership Fun for Children*. Better Kid Care. <https://extension.psu.edu/programs/betterkidcare/knowledge-areas/environment-curriculum/activities/all-activities/i-can-be-a-leader-leadership-fun-for-children>
- Moody, G. (2000). *Using How People Learn Model with Leadership Skills Development*. Arizona State University.
- Nassir, S. M. S. (2014). *The Effectiveness of Project-based Learning Strategy on Ninth Graders' Achievement Level and their Attitude towards English in Governmental Schools-North Governorate*. The Islamic University of Gaza.
- Nikolaeva, S. (2012). *Improving initial teacher education by using the project-based approach*. *Educational Research eJournal*, 1(1), 51-60.
- Northouse, P. G. (2021). *Introduction to leadership: Concepts and practice* (Fifth edition). SAGE.
- Patton, A. (2012). *Work that matters: The teacher's guide to project-based learning*. Paul Hamlyn Foundation.
- Pont, B., Nusche, D., Moorman, H., & Hopkins, D. (2008). *Improving school leadership*. OECD.

- Proulx, J. (2004). *L'apprentissage par projet*. Presses de l'Université du Québec.
- Richards, J. C., Richards, J. C., & Renandya, W. A. (2002). *Methodology in language teaching: An anthology of current practice*. Cambridge university press.
- Ryan, J. (2010). *Five Leadership skills you and Your Organization Can't do without*. Center for Creative Leadership.
- Satralkar, M. (2006). *Child leadership*. Training and Research Institute. INDUS.
- Schroder, K. Noble, S. Christie, M. Goodman, S. Junes, G. and Rogers, R. (2001). *Linking Leadership Development to Instruction. A Leadership Development Curriculum for Virginia Public Schools*. Commonwealth of Virginia Department of Education.
- Shafaei, A., Poorverdi, M., & Parvizi, B. (2007). Use of project-based learning in increasing students' vocabulary knowledge & communicative ability. In *The Second Biennial International Conference on Teaching and Learning of English in Asia: Exploring New Frontiers (TELiA2)* (pp. 1-11), 14-16 June 2007, Holiday Villa Beach & Spa Resort, Langkawi. Faculty of Communication and Modern Languages, Universiti Utara Malaysia, Sintok.
- Western, S. (2019). *Leadership: A critical text*. Sage.
- Wilkins, D. A. (1972). *Linguistics in language teaching*. E. Arnold.
- Xiong, R. (2008). *Leadership in project management*. Georgia Institute of Technology.
- Yalcin, S. A., Turgut, U., & Büyükkasap, E. (2009). The effect of project-based learning on science undergraduates' learning of electricity, attitude towards physics and scientific process skills. *International Online Journal of Educational Sciences*, 1(1), 81–105.
- Yule, G. (2005). *The Study of Language* (3rd ed.). Cambridge University Press.

Annexes**Annex 1 : Observation card**

| No. | Skill | Item | Degree | | | | |
|-----|-----------------------------|--|--------|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 |
| 1 | Planning | The student can set the main goals of the project. .1 | | | | | |
| | | She can determine and prepare the materials. .2 | | | | | |
| | | She can use alternative materials and procedures to achieve the goal. .3 | | | | | |
| | | She can rearrange the activities according to their importance. .4 | | | | | |
| 2 | Communication skills | She interacts with her colleagues positively. .5 | | | | | |
| | | She exchanges her colleagues the opinions and ideas. .6 | | | | | |
| | | She speaks with other politely. .7 | | | | | |
| | | She acts the role of teacher well. .8 | | | | | |
| 3 | Problem-solving | She can determine the problem clearly. .9 | | | | | |
| | | She can collect data about the problem. .10 | | | | | |
| | | She can put many solutions to the problem. .11 | | | | | |
| 4 | Decision making | She searches for logical solutions to face the problem. .12 | | | | | |
| | | She chooses the best solution. .13 | | | | | |
| | | She makes decisions in the right time. .14 | | | | | |
| 5 | Self-confidence | She says her opinion confidently. .15 | | | | | |
| | | She expresses her feelings without hesitation. .16 | | | | | |
| | | She accepts the constructive criticism. .17 | | | | | |

| No. | Skill | Item | Degree | | | | |
|-----|---|--|--------|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 |
| 6 | Presentation skill | She can face the audience confidently. .18 | | | | | |
| | | She has linguistics fluency. .19 | | | | | |
| | | She can use the body language properly. .20 | | | | | |
| | | She can attract and motivate others. .21 | | | | | |
| 7 | Time management | She divides the activities according to the time. .22 | | | | | |
| | | She completes the tasks in the definite time. .23 | | | | | |
| | | She writes the tasks and activities in her own notebook. .24 | | | | | |
| 8 | Team work | She doesn't hesitate helping her colleagues. .25 | | | | | |
| | | She tends to work in groups. .26 | | | | | |
| | | She works with others by team spirit. .27 | | | | | |
| 9 | Personal effectiveness skill | She can persuade others easily. .28 | | | | | |
| | | She is interested of others' feelings. .29 | | | | | |
| | | She always encourages others. .30 | | | | | |
| | | Her colleagues usually emulate her. .31 | | | | | |
| 10 | Initiation | She tends to help others quickly. .32 | | | | | |
| | | She acts different roles inside the class. .33 | | | | | |
| | | She tends to ask the teacher questions. .34 | | | | | |
| 11 | Opportunities for responsibilities | She depends on herself to complete the mission. .35 | | | | | |
| | | She does her best to achieve the goal. .36 | | | | | |
| | | She is responsible of her behaviors and decisions. .37 | | | | | |

Annex 2 : Lesson example

| | |
|---|---|
| Topic : At the Market | |
| Project Title : Favourite Food Questionnaire | |
| Objectives: At the end of this project students are expected to: <ul style="list-style-type: none"> • identify the vocabulary of food. • use the food words to express their likes and dislikes. • describe others' likes and dislikes. | |
| Vocabulary: apples – figs – onions – melons – oranges – carrots – tomatoes – bananas – grapes – potatoes – food – chips – fish – biscuits – chicken – ice cream – meat – lemons | |
| Structures: <div style="display: flex; justify-content: space-around;"> I like ☺ I don't like </div> | |
| Strategies : <ul style="list-style-type: none"> • Group work • Pair work • Brain storming | |
| Time : Six sessions among 2 weeks | |
| Materials : | |
| <ul style="list-style-type: none"> ▪ Pictures of food ▪ Papers ▪ Pens ▪ Posters | <ul style="list-style-type: none"> ▪ Scissors ▪ Glue ▪ Flip chart ▪ Work sheets |

| Step | Teacher Role | student Role |
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| Procedures : | | |
| Define Problem and Task | <u>Warming up:</u> | <ul style="list-style-type: none"> • Students describe what they can see in groups. |

| Step | Teacher Role | student Role |
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| | <ul style="list-style-type: none"> Teacher displays a picture of several types of food at the market. <p><u>Revision:</u></p> <ul style="list-style-type: none"> Teacher distributes work sheet No. (1). Teacher checks the answers. <p><u>Presentation:</u></p> <ul style="list-style-type: none"> Teacher presents the new words using real objects, flash cards and word cards. carrots – onions – tomatoes – potatoes Teacher draws ☺ I like..... I don't like Teacher discusses the main topic of the project with students. Teacher discusses the goals of the project. | <ul style="list-style-type: none"> Students say the words they know in English and the new words in Arabic. Students match each word with its picture using work sheet No. (1). Students play a matching game Students work in pairs to express themselves. Students share the discussion with the teacher. Each group write the goals of the project with the help of the teacher. |
| Develop a Plan | <ul style="list-style-type: none"> Teacher distributes a simple project proposal form that includes the objectives, production type, tie schedule and the role of each member. Teacher divides the class in to 7 groups of 5 members. Teacher gives students their tasks and appoints a leader for each task. Teacher discusses the project plan with the group members. | <ul style="list-style-type: none"> Students work in groups to write the plan with the help of the teacher. <ul style="list-style-type: none"> Student 1: design the questionnaire. Student 2&3: go outdoors to collect information. Student 4: analyse the information to describe others. Student 5: present the project. |

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| Investigate and Implement | <ul style="list-style-type: none"> Teacher displays a poster as a model of the questionnaire on the board and starts to paste the pictures and words of food. Teacher helps and monitors. Teacher discusses the next step. | <ul style="list-style-type: none"> Each group has the materials which they need to design the questionnaire. Groups start to design their own questionnaires by the help of the leader. |
| Collect Information | <ul style="list-style-type: none"> Teacher asks the leader of this task to implement the questionnaire on a member of his group Teacher encourages students. | <ul style="list-style-type: none"> Student 1: What food do you like? Student2: answers. Student1 records the answers ticking in front the favourite food. The leader of the second task implements the questionnaire on other persons. For example, his mum, dad, teacher or headmaster. |
| Provide Feedback | <ul style="list-style-type: none"> Teacher asks student4 from each group to analyse the information. Teacher distributes empty posters. Teacher gives sentences as examples. Teacher goes around checking and helping. | <ul style="list-style-type: none"> Students come back to the classroom with data they have collected Students summarize all the information related the previous task with the teacher. Students write sentences describing the person they have asked |
| Present the Project | <ul style="list-style-type: none"> Teacher monitors and gives help when necessary. Teacher encourages students. | <ul style="list-style-type: none"> Each group prepares its poster. Student5 from each group goes out to present the project. The leader of this task describes the likes and dislikes using the |

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| | | questionnaire they ticked and the poster they wrote. |
| Reflect up and Evaluation | <ul style="list-style-type: none"> • Teacher gives a work sheet. • Teacher checks the answers. | <ul style="list-style-type: none"> • Students discuss the findings. • Students do the work sheet as a summative evaluation. |