Raising Libyan EFL undergraduate students’ awareness about environmental issues through project-based learning

Hameda Suwaed, Sabratha University, QFXR+PHC, Sabratah, Libya

Suggested Citation:

Received from April 20, 2022; revised from June 26, 2022; accepted from August 22, 2022.

Abstract

Although project-based learning, as a language teaching strategy, is considered important for developing college students' academic and soft skills is still a neglected approach in EFL teaching in Libya. This study aims to investigate the use of project-based learning in EFL writing classrooms to raise students’ awareness about environmental issues. It is carried out in the Department of English at Sabratha College of Arts. The findings of this study, based on an open-ended questionnaire and students’ reflection journals, show that PBL enhanced the students’ English language knowledge and skills. Also, students gained content knowledge about the environment, soft skills, autonomy, and self-confidence in using the English language in its context. Finally, the PBL experience promoted the students’ awareness of the environment and how to protect it. This research provides good evidence of the effectiveness of PBL to engage and enhance students’ learning.

Keywords: EFL; environmental issues; Project-based learning; soft skills.
1. Introduction

Libya faces many manmade environmental issues such as air pollution, soil erosion, and deforestation which lead to damaging the environment and animal life. Thus, raising people’s awareness about environmental issues is a must mainly among the young generation, of who a greater number are students. There is a great demand to include environmental issues such as species extinction, global warming and soil erosion in English language lessons, Cates (1990, p.4) points out that ‘We can’t call our English teaching successful if our students, however fluent, are ignorant of world problems, have no social conscience by using their communication skills for international crime, exploitation, oppression or environmental destruction.

This implies that EFL teachers could use their lessons in raising their students’ awareness and building up a sustainable environment (Fanzeres & Cruz-Santos, 2018). However, integrating environmental issues in English language classrooms does not seem to be the concern of most Libyan EFL teachers. This is where project-based learning enters the equation. This study aims to integrate project-based learning in English writing classrooms to raise students’ awareness about environmental issues.

PBL, according to Praba et al (2018), has been considered a teaching method for closing the gap between current students' learning of knowledge and skills needed for the 21st century. Based on Dewey’s (1938) concept of learning by doing, it is a student-centered and teacher-facilitated approach to learning (Bell, 2010). Moving away from traditional learning and memorization, Project-based Learning allows students to explore their interests and ability and be responsible for their education, (Praba, et al, 2018)

1.1. Literature review

One of the central learning theories that have been highly considered for the 21st-century learning foundation is Constructivism ((Praba, et al, 2018). Dewey (1938) and Vygotsky (1987) emphasized the importance of experiential learning, learning by doing, and the development of constructivist theory. These concepts and theories provided the theoretical foundations for PBL (Baumgartner & Zabin, 2008).

It highlights that students learn when the new information is related to the previous one in an effective classroom environment (Utemissova, Danna & Nikolaevna, 2021). In this perspective, students play an essential role to develop their knowledge through active engagement during the learning process (Riga, Ioannidis & Papayiannis, 2020).

According to (Praba, et al, 2018), project-based learning is one of the applicable modern teaching and learning model which is based on constructivist learning theory. Bas (2011) defines project-based learning as ‘an authentic learning model or strategy in which students plan, implement, and evaluate projects that have real-world applications beyond the classroom’ (p.2). It aims to achieve 21st-century skills mainly the Four Cs which include critical thinking and problem solving, communication, collaboration, and creativity and innovation by allowing students to work in groups with hands-on experience in an authentic and meaningful context’ (Praba, et al, 2018, p. 2).

Project-based learning also enhances students’ autonomy as they become more responsible for their learning process. Through their engagement in authentic tasks, students can develop their language skills, and gain self-confidence and communication skills, (Fragoulis, 2009)). The teacher plays the role of a facilitator and mentor guiding students’ learning toward intended learning outcomes (Savin-Baden & Major, 2004).

1.1.1. What are the criteria for PBL

Thomas (2000) sets five criteria for PBL: projects should be integrated with the curriculum, focused on challenging questions, topics, or problems, and involve student-centered activity whereby students plan, search, complete, and present the task in which students use authentic resources (Gozcu & Caganaga,
2021). Furthermore, Grant (2002) adds that students’ scaffolding, collaboration, and reflection are among the common features of PBL. Simpson (2011) adds that the collaborative learning environment and assessing the process of work and the final product are quite important, (Sedgh et al, 2016).

1.1.2. **Teacher’s role in project-based learning**

Unlike traditional classrooms, where the teacher transmits the knowledge, Project-based learning requires the teacher to play a more flexible role (Levy, 1997). Rather than being a controller, the teacher act as a facilitator and a guide (Frank & Barzilai, 2004). ‘In implementing the project method, the focal point of the learning process moves from the teacher to the learners, from working alone to working in groups’, Sukerti & Yuliantini, (2017, p.14). As Stauffacher et al. (2006, p.255) explain: “The teacher’s role changes from a distributor of knowledge to a process manager, helping students in their learning process by initiating reflection processes and supporting them, if necessary, on substantive matters.

1.1.3. **The stages of project-based learning**

According to Fraguolis, (2009) teachers who want to implement PBL should follow the following stages:

Stage

1: Speculation- This stage includes the choice of project topic and raises students’ interest to investigate and find information about the given topic.

2: Designing the project activities- This stage includes the formation of groups and assigning roles and responsibilities, sources of information, and activities that will take place.

3: Conducting the project activities- At this stage, the groups implement the activities designed in the previous stage. Students collect information, process and categorize it. The next phase is the synthesis and processing of the information gathered. The final products are presented in the school or the community.

4: Evaluation- This stage requires assessing the activities and discussion about whether the initial aims and goals have been achieved, implementation of the process, and final products. Brina (2006, p.82) adds that ‘evaluation also entails assessment of the experience at individual and group level, identification of errors and problems, but also appraisal of the rich cognitive and experiential material gathered’.

1.1.4. **Why teach Environmental Education in English language classrooms**

There is growing interest over the last decade to incorporate environmental issues into English language teaching, Cates (1990). Integrating environmental issues in the EFL curricula is necessary because successful language learning requires relevant and authentic materials that inspire students to think and learn through the practice of the English language.

According to Nkwetisam, (2011), language teachers need to rethink and extend the aim of their sessions. This requires using more practical teaching approaches such as Project-based learning which focuses on the topic and contents given to students rather than focusing on the structure of the task (Dehghani, 2021). Integrating environmental issues in EFL contexts is essential for successful English language learning, (Cates, 1990). Silver (1991) mentioned that students learn best when they are involved in meaningful and relevant tasks, especially from authentic materials which help them to practice the language in context.

1.1.5. **Previous research on PBL**

There is general agreement, however, within the literature, that PBL learning help students develop a range of skills beyond the academic subject knowledge. According to Dornyei (2001, p.100-101), project work reduces learners’ anxiety, enhances learners’ motivation, and fosters group cohesiveness. (Bass, 2011). Another set of reported benefits pertains, as stated by (Allen, 2004), that project-based learning
develops learners’ critical thinking and problem-solving skills. Similarly, Neo and Neo (2009) stated that students’ critical thinking, communication skills, teamwork, and presentation skills were enhanced when they were engaged in PBL tasks.

A further benefit is that PBL enhances learners’ motivation, enjoyment of language learning, and class participation, (Lee, 2002). According to Brophy (2004), this is because authentic tasks are more meaningful to students and that increases their interest and motivation. Similarly, Sadeghi, et al (2016) investigated the impact of PBL on 36 Iranian EFL learners writing skills. The findings showed that students who were taught by PBL outperformed the students who were taught by traditional methods (Svagzdiene, Jasinskas, Simonavicius, Grants & Vazne, 2018).

Nugraha, & Ridwan, (2019) explored 20 secondary school students’ attitudes towards the implementation of PBL, especially concerning the ways the students learn English as well as raising students’ environmental awareness. The data were collected through classroom observation and interviews. The result indicated that students’ attitudes towards the implementation of PBL was positive. It was beneficial in improving student’s writing ability and their awareness of environmental issues (Azhmoldaeva, Zharylkasynovna, Shildebayev, Zhunisov, Azhibaevna & Ganievna, 2022).

Although there are many benefits to PBL, there are also some disadvantages that should be taken into consideration before using this approach in the classroom. Kavl (2017) states that PBL is demanding for many teachers because it requires extra work to provide guidance and find resources along with the time spent on classroom preparation and assessment. Consequently, this requires a shift of teachers’ and learners’ roles, (Grant & Hill, 2006). However, teachers might not find it easy to change their roles.

In addition, Barak (2005) identified that the assessment in project-based learning is mostly summative of the final products which are hard for the teacher to assess the contribution of each group member. Kavl (2017), identifies another problem related to teamwork such as disagreements among group members which might affect the process of learning. Furthermore, students might lack the interest to complete their projects so it is another burden for the teacher to keep them on track (Mousavi & Heidari Darani, 2018).

1.2. Purpose of study

While there is some evidence in the literature of the benefits of PBL, few studies investigate the implementation of this approach at the higher education level in the EFL contexts including Libya. Thus, this study aims to link theory with practice and investigate the practical aspects of integrating project-based learning in a college setting, reporting benefits from the approach, difficulties encountered, and pedagogical implications.

1.3. Research questions

To investigate the use of PBL in EFL academic writing course from students’ perspective by answering the following research questions:

RQ1. What do EFL fourth-year students think about the use of Project-based learning in their writing class?
RQ2. What are the possible gains for EFL learners when incorporating PBL in the writing classroom?

2. Materials and Methods

2.1. Participants

A total of 34 undergraduate English language students participated in this research. There were 28 females and 6 males among the participants. Their ages ranged from 20–23 years of age.
2.2. Research design

A qualitative research design was selected to investigate students’ perceptions about the use of PBL in the writing classroom. Johnson & Christensen (2004) mention that “qualitative research is often exploratory and is used when little is known about a certain topic” (p. 30). Data were gathered from an open-ended questionnaire, students’ reflection journals, and the researcher’s observation notes.

2.3. Data Collection Process

The stages of learning projects presented by Fragoulis (2009) were implemented as follows:

In the speculation stage, students agreed to make a project about an environmental issue. Projects were given in a form of structured tasks and the outcome was six presentations to be presented in front of the class.

In designing the project activities, students were divided into groups of four. Then, they were given instructional guidelines for writing and providing solutions to a problem essay. Each group had a meeting to discuss which area they would focus on with the teacher’s agreement. All the groups agreed to make a project about the environment including the following activities:

- A short video/scene about environmental issues in Libya such as rubbish, and air pollution (written – acted – directed by students)
- A presentation about their selected issue
- Writing an essay to discuss the environmental issues and provide two solutions to it
- Designing some posters to raise their students’ awareness of the environment

After the topic and outcome of the project were defined, the students and teacher discussed project details that guide students from the opening activity to the completion of the project. At this step, students consider their roles, responsibilities, and collaborative work groups. After negotiating a deadline for project completion, students arrange the timing for gathering, sharing, and compiling information, and then presenting their final project.

In the stage of conducting the project activities, the six groups worked on the activities which were planned in the previous stage. They collected information and then grouped them. After group discussions and sharing views, they modified their plans and activities. The draft was written in groups with the lecturer’s comments and suggestions for improvements to write their final drafts. Students were asked to reflect on the ideas and content of their essays, the style of writing, appropriate linking words and phrases, and grammatical structures.

During the implementation of project-based learning, the students were encouraged to read about the environmental issues in Libya and choose one issue to write about it. Most groups selected rubbish as a common problem in most of the Libyan cities and one group selected air pollution. After submitting the final draft of the essays, the small groups presented the problem that they selected and their solutions. There was general agreement among the groups that the main problem is people’s awareness of the environment and how to protect it. Based on that, students designed posters and signs to raise awareness among the students about the environment. One group suggested recycling as a solution to the rubbish problem so they brought three rubbish bins with different signs and colors and put them in the writing classroom to tell their colleagues about recycling and its benefits to the society and environment.

At the evaluation stage, students were asked to keep their views and thoughts in reflection journals. Also, a questionnaire for the students about using PBL was used.

At the end of the process, students were given an open-ended questionnaire to investigate their views about the projects and their attitude toward completing writing tasks using the PBL approach. In addition,
students were asked to express their thoughts in reflection journals. After completing the projects, students were informed about the aim of this research and that participation is voluntary. To ensure anonymity, students were informed that they do not need to write their names anywhere on the paper. After explaining the aim of the questionnaire, the researcher left the classroom, and a teacher assistant distributed the questionnaire and collected the answers from the students in the allocated time.

The open-ended questionnaire, created by the researcher, was selected because it would give more detailed data concerning the students’ views and experience of project work. The 3 questions in the questionnaire were designed to investigate students’ views about their project work. The first question was about the advantages (if any) of working on projects. The second question pertained to the challenges that they faced in their project work. The final question allowed students to express their views about what should be done to protect the environment. The questionnaire was validated by piloting it to three students to check its clarity and reliability. In addition, all of the writing students were asked to submit reflection journals about each stage of the project to elicit their views about the projects, their plans, and their concerns.

2.4. Data Analysis

After receiving the questionnaire answers and the reflection journals, all data sources were read, coded, and analyzed (Kazmierczak-Piwo, Dybikowska & Janczewski, 2019). There were three emergent themes: the benefits of project-based learning, the challenges that students faced, and the implications that may be apparent from the study. To triangulate the data (Merriam, 2002), the researcher kept observation notes about students’ project work in all the stages of the task.

3. Results

3.1. What do EFL fourth-year students think about the use of Project-based learning in their writing class?

From the students’ views in their reflection journals and the questionnaire, they asserted that this experience of project work has a tremendously positive impact on their learning, compared with traditional classroom teaching. Most students who participated in this study described their experience as enjoyable, beneficial, and productive one. Selected comments follow: S 1 mentioned ‘even though we were under stress, we have done an amazing job. We can describe our feelings as excited to be motivated, creative, and independent. Also, S4 stated ‘unlike the traditional way of teaching, this idea of doing the project in the group is wonderful. It encouraged us to express our views and discover our talents. For example, I did not know before that I am good at drawing’. This is similar to Ali & El-Henawy’s (2015) research findings which showed that students considered PBL a successful and effective teaching tool.

According to Lee (2002), PBL creates a productive and interesting learning environment because it integrates students’ knowledge, attitudes, and skills. Similarly, Hernandez-Ramos and Paz (2009) stated that students learning through PBL showed a more positive attitude toward learning and were more motivated about working collaboratively on their presentations.

3.2. What are the possible gains for EFL learners when incorporating PBL in the writing classroom?

3.2.1. Enhancement of academic skills

As far as academic skills are concerned, most students mentioned that they improved their English language skills. S22 said ‘working on this project did not only improve our writing ability to write essays but also motivated us to read a lot to select the information that we need. We did also practice speaking a lot by discussing our ideas, arguing about them, and presenting them. Some students also mentioned that they improved their research skills. S3: Also, we did a lot of research and learned how to search for information from reliable resources. These findings seem to support the findings in many studies such as
Poonpon’s (2011), which showed that project work results in an improvement in students’ language and academic skills.

3.2.2. Increased students’ autonomy

The activities presented in this research are a different way of teaching English academic writing, ‘adopting the pedagogical principle of exploratory learning’, (Fragoulis, 2009). Students learn through the process of forming groups, collaborating, searching for information, using authentic materials and resources, evaluating them, discussing, and making decisions. These activities encourage them to be autonomous learners because they have choices, develop a sense of responsibility and control for their learning, and present their projects in a way that suits their level and preference. S13: ‘what I find interesting about projects is that students have the freedom to choose any design they want for their project. The teacher gave us the topic and the layout but we have to think, search, select ideas, write and rewrite, and think of creative ideas for the presentation’. According to (Praba, et al, 2018), students’ autonomy and responsibility for their learning are the key characteristics of PBL.

3.2.3. Improvement in soft skills and teamwork

As a constructivist instructional model, PBL requires teamwork. According to Kapp (2009), students' ability to work together is the most difficult aspect of PBL. Students might feel challenged and insecure when they are asked to work in groups mainly when teachers lack the skills in creating a classroom culture of collaboration where students learn from each other, (Kolodner et al, 2003). This is in contrast with the findings of this research in which most of the participants mentioned that they enjoyed working together and learned from their colleagues. However, it is worth mentioning that the participants of this study are used to working in groups throughout the academic year. S15: ‘it is the first time us to work on a project. It is good that we worked as a group because this helped us to learn from each other, share ideas, respect each other’s opinions and search for information.

The observation notes showed improvement in students’ soft skills such as collaboration and communication (Celik & Yavuz, 2018; Monica Cristina Garbin, Edison Trombetta de Oliveira, & Telles, 2021). In addition, their computer skills improved significantly, mainly, their ability to use the internet to search for reliable information and PowerPoint presentations. This is consistent with findings from previous research (Fragoulis, 2009). This builds students' self-confidence and motivates them to do their best and achieve their goals. In addition, share their ideas and provide feedback to their group members, (Baghoussi, & El Ouchdi, 2019).

Also, one of the cited advantages was that this experience encouraged them to express their ideas on paper and be creative in their posters. This is in line with Noe & Neo's (2009) findings in which they mentioned that PBL enhances students’ presentation and communication skills, critical thinking, interest, and the ability to work in groups.

Another aspect of PBL that drew students’ attention was that while they were focusing on the communicative aspect of language, they learned content knowledge about environmental issues. In addition, students gathered information about environmental issues in Libya from a variety of sources (articles, reports, news, and the internet), learned a lot about the environment, and gained an in-depth understanding of issues related to local issues such as rubbish and plastic pollution. S1 stated ‘through reading about environmental issues in Libya, I read about waste materials….. I read about topics that I won’t normally read about. These findings are similar to findings suggesting that project-based learning enhances learners’ content knowledge about the given topic (Gu, 2004), (Nugraha & Ridwan, 2019).

Most importantly, however, selecting the environment as a topic allowed students to develop more meaningful learning about the world around them. Most students seemed to have developed a sense of
responsibility and caring toward the environment. More than half of the students who participated in this study stated that an important aspect of what they learned from PBL was how to be more responsible and take care of the environment. S21: ‘I read a lot about pollution and loss of green spaces everywhere. The fire in Australia was hilarious. We should grow more trees and encourage people to do that..’

All the groups decided to ‘go the extra mile and raise the other students’ awareness about the environment. They prepared posters, and quotations and stick them in the classroom for other students to read them. They also decided to grow trees in their surroundings (Mimoso, Bravo & Gomes, 2018). In addition, they planned for a ‘clean the beach campaign’ but unfortunately, it was not possible to arrange it because of the pandemic.

Consequently, students asked for more opportunities to do projects rather than just write essays individually and focus on accuracy and grades. S6: ‘writing subject doesn’t have to be only about guided tasks in the classroom. It could be more interesting and useful if the teacher will let students take part in searching, preparing, and creating. This will help them to be more aware of the subject. I hope that we will have more activities like this to improve our writing and our understanding of topics that are not common to us’.

3.2.4. Challenges of implementing PBL

The PBL has many pedagogical strengths; however, several factors may limit its applicability. Limited resources were one of the challenges that the two groups mentioned. Due to the poor internet connections, some students faced problems in finding information related to their topic to write about. This is in line with Nugraha & Ridwan’s (2019) findings which showed that poor facilities such as internet connection is one of the main issues that the participants in their research mentioned.

In addition, the time constraints were another challenge. Students needed more time in their planning and discussions but they had other subjects and assignments. This is similar to Ali & Elhenawi’s (2015) research findings which indicate that limited time was one of the factors that hinder students’ work on projects. S1: ‘the time was not enough. We have a lot of lectures and assignments in other subjects that we need to work on at the same time.

4. Discussion

This study investigated raising students’ awareness about environmental issues through the use of project-based learning in the Libyan EFL context. The data analysis pointed to three themes. First, PBL enhanced the participants’ English language knowledge and skills. Second, students gained soft skills and confidence in using the language in its context. Third, the project work promoted the students’ content knowledge and awareness about the environment. These three themes support the literature related to using PBL as an effective approach in English language classrooms.

Students’ views about their experience of project work were resoundingly positive. As the literature suggests, PBL improved students’ academic and soft skills. Artini et al (2018) mentioned that PBL enhances students’ language skills and motivates them to use the English language in context. In addition, students’ autonomy was also greatly enhanced, as also suggested by the literature. More importantly, PBL improved students’ content knowledge about the environment, and learned new information about global and local issues.

Consequently, this project work taught students to be good citizens. Students had a much clearer perspective on the role that they can play to raise people’s awareness about the environment. Their opinions about the damage that we cause to the environment were challenged and changed. In addition, the students were able to transfer their language knowledge to real-life situations. They discussed their daily routine and what habits they need to change to be ‘environment friends’. According to Praba et al
project work could be viewed as natural learning context in ‘which language learning, writing in particular, is contextualized and presented in the way that learning becomes integrated with the task of communication about some theme’ (p5).

Most of the participants in this research asked for more projects rather than just writing individually in the classroom or at home. An essential transition from a teacher-centered teaching method to one that is student-centered underpins such a call for more project work (Morrison, 2016). This in-depth PBL experience may reveal the necessity for teaching and learning plans that equip students to be responsible citizens who are aware of their society’s issues. This change in the teacher’s role may provide new obstacles in implementing the PBL, necessitating the allocation of additional resources and training. According to Kahn and O’Rourke (2004), the new position implies the class is more student-centered, and students are encouraged to assume more responsibility for their learning.

5. Conclusion

The current situation in Libya, calls for the youth’s involvement in serving their society by using their knowledge and skills. The study identifies PBL as an effective method of learning, consequently, involving students in such projects could be a viable solution to raise Libyan youth’s awareness about the environmental issues that Libya faces and improve their skills and attitudes toward citizenship and engagement in Libyan society.

This research investigated the use of project-based learning in EFL writing classrooms. The findings show that project-based learning provides students with opportunities to use the English language contextually. In addition, students have positive views about PBL because it provides a safe zone for all students to share their ideas and learn from each other. Even shy and passive students have a role to play in their groups. Thus, this study lends credence to the views that PBL has positive effects on students' academic skills. Therefore, English language teachers are suggested to consider PBL as a viable alternative for teaching English language skills, mainly writing.

However, there are several challenges faced while using PBL. Time was a constraining factor as students have assignments to submit and lectures to prepare. The other factor that most students mentioned was the poor internet facilities.

Based on the findings of this study, the following recommendations can be made:

- The PBL method should be incorporated within English language courses in the sense that it ensures a benefit to undergraduate EFL students to improve their language skills and to society by raising people’s awareness about environmental issues.
- To use PBL in the Libyan context successfully, English language teachers need to be trained about how it works and assess. Thus, in-service training courses should be provided for teachers because PBL is still a new method of teaching and not yet familiar to most Libyan EFL teachers.
- Language teachers should provide students with activities that improve their autonomy and a sense of responsibility which motivates them to participate actively in class.
- This research may help the educational community and policymakers to investigate PBL as an alternative teaching approach that may improve students' learning, motivation, and academic engagement.

References

University (18-19), "Towards a Child-Friendly School ". 412
https://www.researchgate.net/profile/Walaa-El-
Henawy/publication/281935708_U sing_Project-
Based_Learning_for_Developing_E nglish_Oral_Performance_A_Learner-
Friendly_Model/links/55ff1d708aeaf8ac8b98a6/Using-Project-Based-Learning-for-
Allen, L., Q. (2004). Implementing a culture portfolio project within a constructivist paradigm. Foreign
Artini, L. P., Ratminingsih, N. M., & Padmadewi, N. N. (2018). Project-based learning in EFL classes:
Material development and impact of Implementation. Dutch Journal of Applied Linguistics, 7(1),
26-44.  https://doi.org/10.1075/dujal.17014.art
Z. (2022). Student-centered technology in the professional training of future biology teachers for the
854.  https://doi.org/10.18844/wjet.v14i3.7366
282.  https://dx.doi.org/10.2139/ssrn.3367584
1-15.  https://www.tojsat.net/journals/tojned/volumes/tojned-volume01-i04.pdf#page=8
39-4  https://doi.org/10.1080/00131728609335764
Cates, K. (1990). Teaching for a better world: Global issues in language education. TheLanguage Teacher,
62–73.  https://doi.org/10.18844/ijire.v5i3.3951
41–61.  https://doi.org/10.1080/0260293042000160401


Simpson, J. (2011). Integrating Project-Based Learning in an English Tourism Classroom in a Thai University. *Australian Catholic University, Doctoral Thesis.* Sydney, Australia [https://doi.org/10.4226/66/5a961e4ec68b](https://doi.org/10.4226/66/5a961e4ec68b)


