

BENEFITS AND DRAWBACKS OF PROJECT-BASED LEARNING IN UPPER SECONDARY EFL CLASSROOMS

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ABSTRACT

This desk research investigates project-based learning (PBL) at the upper secondary level, employing secondary research methodology. A thorough literature review was conducted using academic databases, focusing on PBL's application, benefits, drawbacks, methodologies, and outcomes. The findings are organized thematically, covering PBL's origins, definition, comparison with problem-based learning (PBL), advantages, drawbacks, and best practices. The study reveals PBL's roots in Dewey's pragmatism and its emphasis on student-centered, inquiry-driven learning. PBL fosters student engagement, critical thinking, collaboration, and real-world connections, benefiting both students and educators. However, challenges such as limited teacher training and parental understanding hinder its implementation. The study underscores the significance of PBL as a transformative instructional approach in upper secondary education, despite its limitations. It calls for further research to deepen understanding and inform evidence-based practices in educational settings.

Keywords: PBL, Benefits, Drawbacks, Teaching Methodology, Upper Secondary Level, EFL Classrooms

INTRODUCTION

“Tell me and I forget. Show me and I remember. Involve me and I understand.”

(Chinese Proverb)

Project-based learning (PBL) has gained increasing attention in educational settings due to its potential to enhance students' learning experiences and outcomes. In the realm of English as a Foreign Language (EFL) instruction at the upper secondary level, PBL emerges as a promising approach to engage students actively in language acquisition while fostering critical thinking, collaboration, and problem-solving skills. However, like any instructional method, PBL carries both benefits and drawbacks that warrant exploration and consideration. This research aims to examine the advantages and challenges associated with implementing PBL in upper secondary EFL classrooms, throwing light on its effectiveness and implications for language learning and teaching. By critically evaluating its impact, educators can better understand how to optimize the integration of PBL into EFL curricula to meet the diverse needs of students and enhance their language proficiency.

Hypothesis

The implementation of project-based learning (PBL) in upper secondary EFL education will positively impact student engagement, academic performance, and teacher-student relationships due to its student-centered, inquiry-based, and active learning approach.

Aim of the study

This study aims to investigate the effects of project-based learning (PBL) on EFL students' engagement, academic performance, and teacher-student relationships.

Research question

How does the implementation of project-based learning (PBL) in upper secondary education affect student engagement, academic performance, and teacher-student relationships?

Theoretical Background

PBL or Project-Based Learning, has gained a lot of attention from academics, scientists, educators, and instructors in recent times. It is a modern approach that has been in use since the 1900s, and researchers have produced several definitions of it. In this literature chapter, you can learn more about PBL, including its qualities, history, importance, and drawbacks. There is a wealth of research available on this subject, and in this chapter, you will be introduced to some of the papers that specifically discuss its application in the Upper secondary level.

2.1 The Beginnings of Project-Based Learning

Project-based learning (abbreviated PBL) is a method of teaching that is founded on the premise that students should be doing something to help them learn. PBL, in particular, refers to student-centered activities that are inquiry-based and built on active learning. While current public education attitudes favor education approaches with these characteristics (student-centered, inquiry-based, and active learning), PBL does not apply well in all disciplines, nor do all educators choose PBL as an approach when it may be well-suited to their disciplines. Following that will be a summary of what PBL is and a discussion of the reasons for and against PBL. (Perry, 2020) The project approach is based on Pragmatism, a philosophical movement that emerged in the mid-nineteenth century that advocates action and the practical application of knowledge in everyday life (Frey, 1996, 31). PBL has its origins in the experiential education of American educational reformer John Dewey at the turn of the nineteenth and twentieth centuries in the United States. He is regarded as the PBL's ideological forefather. (Yimwilai, 2020) This idea, put out by Dewey, is still supported today and is commonly referred to as learning by doing. Over the past century, researchers have gradually integrated Dewey's principles of learning by doing into PBL; yet, it's not always clear what the differences are (if any) between PBL and problem-based learning and learning by doing. (Perry, 2020) Dewey saw a child as a multifaceted human being and wanted pupils who had an inner desire to learn as well as an understanding of why they were studying. Coufalová (2006) enforced the motto "learning by doing" and laid the theoretical foundations of PBL; however, the founder of the PBL method is considered his fellow worker American pedagogue William Heard Kilpatrick who emphasized students' interest and proposed instructors to put content into project works in which learners' responsibility for their learning was encouraged. (Yimwilai, 2020)

2.1.1 What is Project-Based Learning?

"Project-based learning is the instructional strategy of empowering learners to pursue content knowledge on their own and demonstrate their new understandings through a variety of presentation modes," state Stripling, Lovett, and Macko (2009). To complete the work, students must participate in many phases of activities that involve conducting in-depth research on the subject through observation, interviews, internet research, and other means to get the data needed for the study. (Devkota, 2017)

The following qualities of project-based learning are effective:

-Guides pupils in researching significant concepts and issues.

-Is organized around a process of inquiry.

-It requires the use of information skills, critical thinking, and creative thinking to research, analyze, and create content.

-It is differentiated based on student needs and interests.

-It is focused on student-independent production and presentation rather than teacher-delivered content.

It connects to real-world and authentic problems and issues. (Klein, 2009)

Due to the long-term nature of PBL, a project-based learning experience may last for several days, weeks, months, or even years. This contrasts with instructional strategies that separate lessons from one another. PBL mandates that lessons be connected, with each day's session forcing students to reflect on earlier teachings. As a result of this method of learning, there will be more challenges to overcome during the project. These issues might hamper the project's overall development. In the real world, students can lie in bed contemplating the assignment while trying to figure out a current issue. (Perry, 2020) As "an active student-centered form of instruction characterized by students' autonomy, constructive investigations, goal-setting, collaboration, communication, and reflection within real-world practices," PBL is a unique kind of educational method. (Kokotsaki et al., 2016, p. 267) (Makkonen1, 2021) PBL is associated with a progressive educational movement that supports student-centered approaches and the development of 21st-century competencies.

PBL's roots are in the learning sciences. These include intrapersonal abilities like self-direction and preservation, as well as interpersonal competencies like communication and teamwork, as well as cognitive abilities like problem-solving ability and information literacy. (Makkonen1, 2021)

Multidisciplinary PBL is used. A project's completion requires drawing from a variety of subject areas. As opposed to more conventional teaching methods, where lessons, queries, and issues could exist independently of one another. This kind of seclusion is frequently observed during and in between class periods. PBL's multidisciplinary character allows for collaboration within and outside of the course, albeit not always across different courses. For instance, students construct a contraption to shield a raw egg from being thrown from a tall ladder onto a hard surface in a well-known middle school experiment. Lessons should be multidisciplinary within the course if PBL was taken into consideration when designing them. Maybe students talk about more than just the design. Maybe students talk about the ethical ramifications of utilizing animal eggs in a scientific experiment in addition to designing a low acceleration that (hopefully) saves the egg. Aside from the scientific classroom, students should also do a cost-benefit analysis of the protective equipment and compose a brief newspaper piece on the test, as the course should be multidisciplinary. (Perry, 2020)

2.2 Comparing Problem-Based and Project-Based Learning

Similar to problem-based learning, project-based learning involves students working together to achieve a common objective. The main distinction between both methods is that, whereas problem-based learning frequently provides a precise response to a question, problem-based learning typically involves students working toward a solution without a single (or predefined) solution. A team of students working to create a process for scheduling patients' treatments in an emergency department might serve as an illustration of PBL. On the other hand, a group of aspiring physicians diagnosing patients during medical rounds while being supervised by an attending physician might serve as an illustration of problem-based learning. *In the literature on instructional design, it is occasionally difficult to distinguish between project-based learning and problem-based learning. The acronym "PBL" can be used to refer to either teaching approach without distinction, although these are two distinct concepts and should be addressed as such.* (Perry, 2020)

2.3 Possible Advantages of Project-Based Education

Fallik, Eylon, and Rosenfeld (2003) report that instructors saw more advantages than disadvantages while using PBL. Advantages for students were highlighted more often than those for professors. They include improved teacher-student interactions and more cooperation among colleagues in addressing PBL challenges (Harrigan, 2014; Tamim & Grant, 2013). (Hugerat, 2006; Thomas, 2000; Va den Bergh, et al., 2006). Additional advantages for students are mentioned, including better academic performance, enhanced engagement, and skill development. (Sathappan, 2021)

The study conducted by (Sathappan, 2021) provides us with a clear understanding of the advantages that this teaching approach offers to both educators and learners. Better relationships between teachers and students and improved discipline are the two benefits that this study revealed.

Improved Discipline- Instructors respond that PBL helps them maintain discipline and foster a positive learning environment in the classroom. For instance, when it comes to this, English language instructors state that "it is the students' task to do everything." It would be simpler for the teacher to keep them under control in this situation. This

shows that even when students complete the majority of the work, it is still simpler for teachers to maintain discipline and arrange the class. (Sathappan, 2021)

Better teacher-student Relations- Developing strong bonds with kids is perhaps one of the most significant advantages of PBL for educators. It may be essential as more intimate relationships and in-depth knowledge of their pupils lead to more open communication between them and the teachers, who may then be better equipped to assist them with their issues. Based on the comments, all instructors in different ways say that PBL gives them the chance to build extremely good relationships with the students, which might result in a more relaxed and cooperative learning environment in the classroom. This might then inspire students to go further into their projects and create a community of inquiry and collaboration that enhances the teaching and learning process. For instance, the English language instructor said that a warm relationship and increased trust are created between the teacher and the pupils when the teacher comes closer to them. Since the pupils will be more forthcoming and honest with the instructor, it is important to have faith in them. It is simpler to work with children if we recommend that they complete the assigned activities with greater enjoyment, based on their answers. (Sathappan, 2021)

Benefits of using PBL for Students- The following are the key benefits of PBL for students, according to the instructors' responses: Three main benefits: (1) increased proficiency, (2) practical experience, and (3) improved student connections (Sathappan, 2021).

Most educators think that PBL assists learners in developing particular abilities. According to an English language instructor, "In this case, students will think not in the way you teach them, but they will get out of the box and can have many great ideas," she clarifies her viewpoint. This implies that students have more room and flexibility to be creative and are not limited to learning what their teachers teach.

PBL gives students the chance to go out into the field and complete the practical portion of their projects, which is one of the most significant advantages of adopting PBL for them. As per the English Language teacher, learners are not restricted to certain subjects; instead, they are free to observe anything that piques their interest. Surveys, public opinion, and other real-world issues can be examples.

PBL gives educators the chance to get to know their students better and build strong relationships with them, which may help them better organize, lead, and manage the classroom. Not to be overlooked is the fact that PBL fosters peer support and friendliness among students in each group. Since PBL is a group work technique, students in each group have a similar job to complete, which may indicate that they will attempt to participate equally in the project and assist one another when needed. In response, the English language instructor states that the students "share ideas, listen to partners, trying to understand them, find the common points" while working in a group. Students in groups encourage one another, listen to one another, and look for areas of agreement based on this statement. This implies that students may get along better with one another if they provide a hand and share. (Sathappan, 2021)

Following a literature review, another fascinating study (Yimwilai, 2020) shows us some of the benefits of applying PBL in the EFL classroom.

PBL requires students to work and learn cooperatively. When individuals have numerous opportunities to discuss ideas with their colleagues, they are highly driven. Finally, projects allow students to become active learners. They ask questions, make decisions, evaluate, think critically, create, and present. PBL helps students learn topics more effectively. The aspect of choice is critical to the success of pupils. Differentiation encourages pupils to explore deeper learning and develop their interests (Bell 2010). PBL allows kids to study independently, with materials tailored to their reading levels and interests. Students will also read increasingly difficult literature to obtain the knowledge they desire. Furthermore, students benefit from learning when they apply their topic knowledge and language skills to organize, manage, and complete projects (Kloppenborg & Baucus, 2004). (Yimwilai, 2020)

PBL also fosters student inventiveness. According to Taddei (2013), innovation is vital these days. He contends that education should aim to inspire kids to be creative. He underlines the need for schools to develop creative programs where kids may work on projects. According to Svobodová, Lacko, and Cingl (2010), PBL promotes the development of creative thinking since, with the assistance of teachers, students assume greater responsibility for their project development and determine how to achieve the stated goal.

The primary thing teachers should remember throughout the preparation phase is to assist students in creating real, interesting, and relevant projects and to lead them through the sequence of preparatory activities. The preparation

includes the following steps: 1) determining the purpose 2) Establishment of educational objectives 3) Choosing the finished product 4) Establishing a broad structure, a timetable, and regular check-ins 5) Creating teams; and 6) Creating the final textual structure. The realization phase includes the steps of starting project work, planning and carrying out tangible actions, and ending the project. It is made up of two parts: 1) the information-gathering cycle and 2) the information-processing cycle. Students convey the outcome based on original judgments and criteria during the presentation phase. According to Stoller (2013), this stage is an information reporting cycle in which teachers construct language exercises to assist students in successfully presenting the final project conclusions. Depending on how students will show their work, such practice exercises frequently entail training in paraphrasing and presenting skills. PBL assessment does not involve solely the result in the evaluation phase; students should be examined throughout the PBL process. Self-evaluation, peer assessment, and instructor or outside expert/audience assessment are examples of assessment in PBL (Patton, 2012). (Yimwilai, 2020)

2.4 PBL's possible drawbacks

The study done by (Kies, 2018) provides us with more details about the possible drawbacks of implementing PBL at the Upper secondary level. There may be certain disadvantages to using PBL, as there are with any teaching strategy. For a variety of reasons, not every teacher will be able to implement PBL successfully in their classroom. PBL teaching would initially look foreign because it is not a skill that many teachers are taught during their teacher preparation (D'Orio, 2018). Some teachers might be discouraged from even trying to include a PBL lesson in their classroom because of the possible disadvantages. However, the evidence demonstrates the true value of PBL, particularly for talented and outstanding kids as well as pupils with special needs. (Kies, 2018) As has been said several times, PBL is unfamiliar to a lot of teachers. Although many educators may have heard of PBL, they may not fully comprehend what it is or how to apply it (Hovey & Ferguson, 2014). The thing that will scare instructors and keep them from trying to apply PBL is his ignorance of its meaning. Humans have a natural fear of things they do not comprehend. Several literary works show this idea. There is nothing to be frightened of while using PBL, but comprehension is essential for correct use. Again, most instructors do not receive PBL training from their school systems or teacher preparation programs, thus the idea frequently stays alien and unsettling to many. Not only may this misunderstanding of PBL be detrimental to instructors, but it can also lead to issues for parents and kids. (Kies, 2018) PBL will undoubtedly be unfamiliar to parents and kids if it is unfamiliar to instructors (Barron et al., 1998). The conventional, teacher-centered classrooms that have been a feature of education for decades are familiar to many parents. They know enough about what's going on at school to get by. PBL upends everything. That upheaval is going to confuse, which is going to cause parents to become puzzled and maybe even furious. This will be particularly relevant when it comes to grading. When parents notice their child has no grades in the grade book, they could start to question if their child is attending school. This concern about what they are truly doing extends to the pupils as well. A middle school science teacher who had his students develop rockets that the National Aeronautics and Space Administration (NASA) might utilize was the example provided by Brigid Barron (1998) and her colleagues. Ultimately, the kids would create the blueprints and construct their rockets. (Kies, 2018) Ultimately, the kids would create the blueprints and construct their rockets. The teacher frequently observed that students were more focused on "doing" the assignment than on "doing with understanding" (Barron et al., 1998, p. 274). In contrast to some of the teacher's learning objectives and the reasoning behind the rocket launches, the children were more preoccupied with the actual rocket launches. In contrast to some of the teacher's learning objectives and the reasoning behind the rocket launches, the children were more preoccupied with the actual rocket launches. Many instructors who try PBL for the first time will be plagued by this concentration on the project rather than the learning that goes into the project, and this is another situation where it will be crucial to make sure the teacher has a solid understanding of what PBL is and is not. The PBL approach will bring about a complete overhaul of the current system, and educators must ensure that all stakeholders are aware of these changes and know what is expected of them. This will even apply to the district administration because they are also thinking about other things, such as standardized testing. (Kies, 2018)

Standardized testing is another possible disadvantage of PBL implementation. Since the passage of the Every Student Succeeds Act and the No Child Left Behind (NCLB) Act in 2001, schools have been held responsible for their students' academic progress based on standardized exams' findings. There isn't much free time for PBL in the classroom since administrators and state governments are under pressure to ensure children succeed based on these standardized assessments (Garran, 2008). (Kies, 2018) Another possible disadvantage of using PBL in the classroom is time. It is challenging to cover a subject in detail in just fifty minutes, even in a typical, teacher-centered classroom (D'Orio, 2018). The kids move on to the next topic as soon as the bell sounds, and those little periods fly by (D'Orio, 2018). Schools using block schedules will do better in this situation than those with the conventional seven- or eight-period

plan. The majority of schools will have a typical class schedule, so the administration could decide it is not worth overhauling the entire thing only to accommodate a few instructors who wish to use PBL. This suggests that a large number of these initiatives would necessitate working after school (Garran, 2008). While doing work outside of class is not unusual, PBL sessions typically need more time outside of the classroom (Garran, 2008). This implies that the parents must also assist their child in managing the project (Garran, 2008). Once more, this could not sit well with the parents, who might feel that it is the teacher's job to support their child's educational path rather than their own. It may be less of a priority for the parents to help their child keep on top of their project because they have other concerns. (Kies, 2018)

None of these possible disadvantages of using PBL in the classroom relate to PBL as a teaching strategy in and of itself. They're all related to the participants and the surrounding environment. Not PBL itself, but teachers lack training, and parents and children are unfamiliar with possible grading, the significance of standardized testing, and time. The little amount of genuine research on PBL's efficacy has revealed that there are several advantages to using it in the classroom that outweigh any possible disadvantages.

METHODOLOGY

This study employs a desk research approach to investigate the available literature on project-based learning (PBL), specifically at the upper secondary level. Desk research, also known as secondary research, involves the collection and analysis of pre-existing information from academic sources such as scholarly articles, books, reports, and other academic sources. The methodology for this literature review is outlined as follows: To research project-based learning at the upper secondary level, the initial step is to identify relevant literature. Use keywords like "project-based learning," "PBL in education," and "upper secondary level" to search academic databases like PubMed, Google Scholar, JSTOR, and ERIC. It will be only considered literature that specifically addresses project-based learning (PBL) at the upper secondary level, and provides insights into its application, benefits, drawbacks, methodologies, and outcomes. We will exclude studies that focus on PBL at other educational levels or unrelated topics. The literature review will extract key information, organized under themes such as PBL's origins, definition, comparison with other methodologies, advantages, drawbacks, and best practices. The synthesized data will be critically analyzed to identify common themes, patterns, and trends across the literature by comparing and contrasting findings from different studies and evaluating the quality and reliability of the literature. The results of the literature review will be presented thematically, following the structure outlined in the literature review chapter. Sections include PBL's history, definition, comparison to problem-based learning, advantages, drawbacks, and best practices. Evidence from the synthesized literature will support each section. The text is written in plain language, using everyday words and the active voice.

FINDINGS

Project-based learning (PBL) has emerged as a prominent instructional strategy in contemporary education, drawing significant attention from educators, researchers, and policymakers. This chapter presents findings based on a comprehensive literature review focused on the application of PBL in upper secondary education. The chapter is structured around key themes identified in the literature, including the origins and definition of PBL, its qualities, and benefits, comparisons with problem-based learning (PBL), as well as potential drawbacks and challenges associated with its implementation.

1. Origins and Definition of Project-Based Learning (PBL)

PBL traces its roots to the philosophical underpinnings of pragmatism, championed by educational reformer John Dewey in the late 19th and early 20th centuries. Dewey advocated for learning through practical application and hands-on experiences, emphasizing the importance of student-centered, inquiry-based approaches. While the concept of "learning by doing" has evolved, PBL remains grounded in Dewey's principles, with contemporary scholars building upon his ideas (Yimwilai, 2020).

The literature provides various definitions of PBL, emphasizing its student-centered, inquiry-driven nature. Stripling, Lovett, and Macko (2009) describe PBL as an instructional strategy that empowers learners to pursue content knowledge independently and demonstrate their understanding through diverse presentation modes. PBL is characterized by its focus on significant concepts and issues, inquiry processes, information and critical thinking skills, differentiation, real-world connections, and multidisciplinary approaches (Klein, 2009; Kokotsaki et al., 2016).

2. Qualities and Benefits of Project-Based Learning

PBL offers several advantages for both students and educators, as highlighted in the literature. For students, PBL fosters increased proficiency, practical experience, and improved connections to learning (Sathappan, 2021). It promotes active engagement, critical thinking, creativity, and collaboration, aligning with the development of 21st-century competencies (Makkonen 1, 2021). Furthermore, PBL enhances teacher-student relationships, discipline, and student motivation, contributing to a positive classroom environment (Sathappan, 2021).

Educators also benefit from PBL through enhanced teacher-student interactions, collaboration, and skill development (Hugerat, 2006; Tamim & Grant, 2013). PBL encourages instructional innovation, fosters creativity, and allows for personalized learning experiences (Yimwilai, 2020). Teachers report greater satisfaction with their roles and improved classroom management, leading to more effective teaching practices (Sathappan, 2021).

3. Comparing Problem-Based and Project-Based Learning

While PBL shares similarities with problem-based learning (PBL), it differs in its approach to problem-solving. While PBL often entails working towards a predefined solution, it focuses on collaborative efforts to address complex issues without a singular answer (Perry, 2020). Despite some confusion in the literature, it is essential to recognize the distinction between these two approaches and their respective applications in educational settings.

4. Possible Drawbacks and Challenges of Project-Based Learning

Despite its benefits, PBL presents certain challenges for implementation in upper secondary education. Limited teacher training and unfamiliarity with PBL concepts hinder its adoption in classrooms (D'Orio, 2018; Hovey & Ferguson, 2014). Parents and students may also encounter difficulties understanding PBL, particularly regarding grading practices and standardized testing requirements (Barron et al., 1998; Garran, 2008). Additionally, time constraints and logistical concerns pose challenges, especially in traditional school settings with fixed schedules (Kies, 2018).

DISCUSSIONS AND CONCLUSIONS

The findings presented in the previous chapter reflect on the complexities and nuances surrounding the implementation of Project-Based Learning (PBL) in upper secondary education. This section provides a discussion of key themes, implications, and considerations derived from the literature review. The literature highlights the numerous benefits of PBL, including enhanced student engagement, critical thinking, and collaboration. PBL aligns with contemporary educational paradigms, emphasizing student-centered, inquiry-driven approaches and the development of 21st-century competencies. However, the discussion also acknowledges the challenges associated with PBL implementation, such as limited teacher training, unfamiliarity among stakeholders, and logistical constraints. Effective implementation of PBL requires comprehensive support structures and professional development opportunities for educators. Teacher training programs should incorporate PBL principles and strategies to equip teachers with the necessary skills and knowledge. Additionally, efforts to engage parents and students in understanding the value of PBL and addressing concerns about grading practices and standardized testing are essential. School administrators play a crucial role in providing resources, time, and flexibility to accommodate PBL within existing curricular frameworks. Strategic design and planning are essential for maximizing the benefits of PBL while mitigating potential challenges. Curriculum development should prioritize authentic, real-world tasks that stimulate inquiry and creativity. Multidisciplinary approaches and collaborative projects can foster deeper learning experiences and connections across subject areas. Moreover, assessment practices should align with PBL principles, emphasizing formative feedback, self-assessment,

and peer evaluation throughout the project cycle. The discussion emphasizes the importance of fostering a culture of continuous improvement within educational institutions. Reflection, feedback, and adaptation are essential components of effective PBL implementation. Educators should engage in ongoing professional learning communities to share best practices, troubleshoot challenges, and refine instructional strategies. By embracing a growth mindset and embracing iterative processes, educators can create dynamic, student-centered learning environments that empower learners to thrive in an ever-changing world.

In conclusion, project-based learning (PBL) holds immense promise as an instructional approach that promotes deep learning, critical thinking, and collaboration in upper secondary education. While the literature highlights numerous benefits associated with PBL, including increased student engagement, improved teacher-student relationships, and the development of essential 21st-century competencies, challenges related to implementation, including limited teacher training, parental understanding, and logistical constraints, must be addressed. By fostering a culture of continuous improvement, strategic design, and comprehensive support structures, educators can harness the full potential of PBL to prepare students for success in a rapidly evolving global society.

SIGNIFICANCE OF THE STUDY

This study examines the implementation of Project-Based Learning (PBL) in upper secondary education. It explains the theoretical foundations and practical applications of PBL, its potential benefits for students and educators, as well as its challenges and limitations. PBL can foster student engagement, critical thinking, collaboration, and real-world connections, contributing to positive learning outcomes and a positive school climate. However, PBL implementation can face challenges such as limited teacher training and parental understanding. In summary, this study highlights the significance of PBL as a transformative instructional approach that can enhance teaching and learning experiences in upper secondary education.

LIMITATIONS

It is important to acknowledge certain limitations in this study. Firstly, the literature review may have been affected by a lack of available research studies. Secondly, the findings are based primarily on existing research and may not fully encompass the intricacies and subtleties of PBL implementation. Thirdly, the perspectives and experiences of stakeholders were not directly investigated. However, despite these limitations, the study affords us valuable insights into the potential advantages and obstacles of PBL in upper secondary education. Moving forward, further research should build upon these findings to deepen our comprehension and inform evidence-based practices in educational settings.

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