



## **Problem-Based Learning: Enhancing Scholarship of Teaching and Learning in Accounting Education**

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### **Abstract**

The primary aim of this study is to provide a deeper insight into the role of Problem-Based Learning in enhancing the Scholarships of Teaching and Learning in accounting education. The central issue in this study is the ineffectiveness of implementing Problem-Based Learning in accounting education. The paper is couched in the Critical Emancipatory Research theory. Participatory Action Research was employed in this study to collect data, and a thematic approach was used to analyse data. A WhatsApp group was established to facilitate group conversations for data collection. Participants in this study included two accounting methodology instructors and three fourth-year students enrolled in an accounting education program. The study's findings revealed that a lack of innovative skills and knowledge to construct problem cases, Inadequate time to prepare problems for PBL, and the Inability of systems to find accounting-related cases are major challenges for the implementation of PBL. Additionally, Problem-Based Learning can be effectively implemented by availing systems to search for accounting information, providing clear guidance, and peer evaluation and review of the Problem-Based Learning process. Based on these findings, the study concludes that professional development is required for instructors to effectively implement Problem-Based Learning. Furthermore, instructors must collaborate with accounting industries to obtain real-world problem cases. This research makes a significant contribution to the body of knowledge in accounting education scholarships, particularly in the areas of teaching and learning.

*Keywords: Accounting Education, Scholarship of Teaching and Learning, Problem-Based Learning, Critical Emancipatory Research, Implementation*

### **Introduction**

Higher education programmes are designed to prepare undergraduate students for the workforce. Furthermore, the programmes are envisaged to develop students' knowledge and skills for all life spheres. Students in programmes such as accounting education are always perceived as individuals who will solve economic and societal problems and contribute to economic growth due to the nature of the course. Therefore, higher education always puts a critical eye on the approaches instructors use to impart knowledge and skills of the established programmes. Although accounting education instructors employ different approaches to meet the above goals of higher education programmes. Problem-based Learning approach is not actively implemented. This limited adoption of problem-based Based Learning is also notable in accounting education. Wondie, Yigzaw, and Worku (2020) commented that although Problem-Based Learning has been adopted as a core educational strategy in most higher education institutions in Ethiopia, its effectiveness has yet to be researched. The authors indicate that factors such as buy-in from instructors, clear curriculum design, inadequate infrastructure, limited coordination, and monitoring hinder the effective implementation of Problem-Based Learning.

Stanley and Marsden (2012) noted that Problem-based learning (PBL) has been successfully applied in disciplines such as medicine, nursing, law, and engineering; however, a review of the literature reveals that there has been limited use of this approach in accounting. Wyness and Dalton (2018) concur that the literature on the use of Problem-Based Learning is scant in accounting education. The implementation of problem-based Learning has not been more effective due to obstacles such as teachers' unpreparedness, difficulties in utilising it in assessment, and unequal student cooperation (Jailani, Sugiman & Apino, 2017). According to Hung (2011), Problem-Based Learning (PBL) has focused on theoretical conceptions. However, implementation is absent. The problem at hand in this study is the ineffectiveness of implementing Problem-Based Learning in accounting education; hence, the study is steered. Furthermore, although the above findings reveal that implementation of Problem-Based Learning is lacking, this study distinguishes itself by concentrating on accounting in teacher training institutions.

Gerstein, Winter and Hertz (2016) maintain that Problem-Based Learning (PBL) is an effective method of learning in many ways but there is not enough research that has been conducted to date that has focused specifically on how it can be used effectively to teach ethics in the accounting classroom. The above-mentioned studies focused on accounting education for firms such as accountancy. In addition, this study employed a unique theoretical framework, Critical Emancipatory Research, to guide the study. This paper commences by outlining the literature and the theory that guided the study, and thereafter, the research methodology was highlighted. The paper concludes by reporting key findings, conclusion, implications and limitations of the study.

#### Literature review

This section provides a brief review of the literature related to Problem-Based Learning in accounting education.

#### Conceptualisation of Problem-based learning approach

Problem-based learning (PBL) is a learner-centred, constructivist approach that was pioneered in the 1980s by medical educators (Hallinger & Lu, 2011). It is an educational approach that encourages students to learn through real-world experiences. Students are presented with complex problems that simulate real-world scenarios, prompting them to think critically and explore multiple solutions (Mokhampanyane, 2018). This approach enables students to take ownership of their learning by collaborating to gather information and working together to develop solutions. The advantages of problem-based learning are that it embodies the principles of learning practice and is student-centered in nature (Sada et al., 2016). It can also provide the basis for diagnostic assessment during feedback as well as gauging the benefits of experiential learning. Jacobs et al. (2011) refer to this learning approach as the major point of departure, in which a student acquires knowledge through innate and distinctive experiences. Problem-based learning (PBL) is an educational strategy in which "problems are used as a trigger for learning, students collaborate in small groups, learning takes place under the guidance of a tutor, learning is student-initiated; and the curriculum includes ample time for self-study (Schmidt, Rotgans & Yew, 2011)

The study conducted by Putra et al. (2024) reiterated that problem-based learning could help students develop their creative thinking during the learning process. They further demonstrated that digital mind mapping plays a role as a tool to organise students' concepts and knowledge information. Students will also develop problem-solving skills and utilize their cognitive abilities to enhance their self-concept and perception. Therefore, using the problem-based learning approach is beneficial to both students and lecturers, as they all reap positive effects from the process of lecturing and learning. PBL a method for promoting student-centered learning and students could engage in project-based learning (Østerlie, & Killian, (2025).

#### Challenges of implementing problem-based learning in a classroom

The challenges considered as hindrances to the effective implementation of PBL in classrooms were encountered by educators and students in PBL classes. The study conducted by Ansarian et al. (2018) identified the following challenges encountered by tutors, challenges perceived by learners, and challenges arising from the use of conventional teaching materials in PBL language classes. The study further showed that excessive additional information, which clarifies the problem for learners, can lead to the misapplication of the approach. It is further suggested that the learning materials should convey the need for change and engage learners in the process of improving the given situation. Learners should determine the actions to take based on the information in the material and act accordingly.

In addition, a study conducted on PBL in a Technology and Engineering Education Course by Massa et al. (2012) reiterated that the lack of instructional resources and training is one of the main reasons PBL tutors find themselves challenged by the new curriculum. Mathews-Aydinli (2007) argues that administrators implementing

PBL in language classes should provide tutors with the necessary resources and sufficient training. The researcher found that the lack of training of the facilitators was regarded as another significant problem in the implementation of PBL in language classes. Yaiche (2021) and Lee (2025) also holds the view that the most commonly used teaching method was lecturing due to hesitancy, unfamiliarity, and inexperience in using PBL. The analysis also demonstrated that the students had not previously experienced PBL at the university level. Thus, they did not report a positive perception of the approach. The results indicated that students prefer direct instruction and handouts more than PBL. According to Gewurtz, Coman, Dhillon and Jung (2016, p.59) effective PBL at a university in educational programme is informed by eight theories of teaching and learning, “1) Adult learners are independent and self-directed; 2) Adult learners are goal oriented and internally motivated; 3) Learning is most effective when it is applicable to practice; 4) Cognitive processes support learning; 5) Learning is active and requires active engagement; 6) Interaction between learners supports learning; 7) Activation of prior knowledge and experience supports learning; and 8) Elaboration and reflection supports learning”.

### **Theoretical framework**

This study employed Critical Emancipatory Research (CER) as its theoretical framework to achieve its objectives. CER's origins are from the critical theory of the Frankfurt School, which arose in Germany in the 1920s. Jürgen Habermas, a member of the Frankfurt School, developed the theory of Critical Education Research (CER). This left-wing group aimed to redress the contested terrain in Europe and find a solution to it (Dube & Hlalele, 2018). It emerged from a group of men who witnessed the atrocities inflicted by humans on one another (Noel, 2016). The concept of CER aimed to dismantle the structures that oppressed people and enable them to identify and emancipate themselves from the sources of oppression (Ndaba & Dube, 2021). It empowers those who are marginalised. The major assumptions of CER are based on advancing the agenda of equity, social justice, peace, freedom, and hope (Mahlomaholo, 2009), thus requiring that its objectives become participatory and collaborative. Through CER, those who are oppressed are liberated from the conditions of domination, powerlessness, and oppression (Mahlomaholo, 2009) as it is geared towards social justice and enhances the principles of democracy. With CER, we are committed to empowering individuals affected by challenges in implementing an effective Problem-Based Learning approach with the classrooms to develop solutions to their problems. The following section discusses Participatory Action Research (PAR), the methodology employed in this study.

### **Method**

The section below covers the research methodology this study followed.

### **Research Paradigm**

The transformative paradigm is a methodology that promotes social justice by analysing social inequalities and power dynamics in society and bringing about significant changes by mitigating the disparities (Omodan, 2022). The transformative paradigm was particularly relevant for identifying the challenges that hinder the effective implementation of PBL in higher education classrooms, with the aim of enhancing the Scholarship of Teaching and Learning. The paradigm enables participants, along with the researchers, to develop strategies to overcome these challenges. This process required significant trust among all stakeholders. The transformative paradigm recognises and addresses social inequalities and power dynamics, which are vital for successfully implementing PBL within classrooms at that institution of higher learning. The transformative paradigm enabled researchers to conduct focus groups, where participants shared their views on the challenges that hinder the effective implementation of Problem-Based Learning within classrooms and suggested ways to mitigate those challenges.

### **Qualitative approaches**

The study is located within a qualitative approach. Qualitative research was chosen as the most suitable approach for this transformative paradigm. Qualitative methods, such as focus groups, can tackle the challenges affecting effective PBL implementation and explore the experiences, perspectives, and behaviours of all parties involved. By documenting the experiences and viewpoints of university members, researchers can pinpoint the obstacles that impede effective PBL implementation and analyse how lecturers and student teachers are navigating these challenges.

### **Participants**

The study participants consisted of two instructors and three fourth year students specialising in accounting education. These are the individuals who are expected to implement and ensure the success of effective PBL in

the university classroom. The instructors, who are at the forefront of teaching and learning, were brought in because they are responsible for delivering the curriculum and ensuring that student teachers acquire the necessary teaching skills before completing their academic studies. Student teachers were included in the discussion because the researchers wanted to determine whether they had acquired the necessary skills and what they thought could be done to overcome the challenges.

### **Sample and Sampling Procedure**

To implement PAR and gather data for this research, we employed purposive sampling and identified a single university where the study took place. In total five participants from this university were selected, specifically focusing on senior lecturers and fourth-year students who were nearing graduation. They were best positioned to provide insight into the research questions under investigation. These individuals were chosen due to their substantial knowledge and experience regarding the issue of PBL within their university classrooms. The formation of this team aimed to discover effective solutions from those who have experienced and been impacted by the problem. Additionally, these participants were selected through purposive sampling due to their extensive knowledge and experience with implementing PBL in classrooms.

### **Data Collection Tools**

The research employed a focus group discussion as a method to elicit information from the five selected participants in this study. This method was deemed relevant for exploring the challenges of implementing effective PBL in classrooms. Using focus groups, those affected by the problem at hand were given a voice, and their experiences and perspectives were documented (Carey & Asbury, 2016). This is because focus group interviews, which are semi-structured discussions with a small group of approximately 4 to 12 participants, enable researchers to request additional information to clarify participants' responses (Hung et al., 2024). Therefore, for this research, the focus group consisted of 5 participants. The focus group discussion aligned with the participatory action research design because it promotes collaboration and active participation among participants. These discussions enabled participants to share their experiences and perspectives with one another, facilitating the development of a shared understanding of the challenges that hinder the effective implementation of PBL in accounting classrooms. This allowed the participants to challenge and build on each other's viewpoints. The use of focus groups helped identify common themes and patterns across different perspectives, allowing thematic analysis to be used to analyse the data.

### **Data analysis**

Thematic analysis was employed to analyse the data. Data was first transcribed into word text. We then familiarise ourselves to data through listening to audio recording and data with similar text were grouped together. Codes were used to develop themes during data analysis. Themes were developed to answer the research questions. The data was returned to the participants for member checking. The participants agreed with the researchers that the themes for analysis reflected their ideas and reflections on the challenges they were experiencing with implementing PBL within the accounting classrooms.

### **Ethical Consideration**

This study received ethical approval from the relevant ethics committee. The ethical clearance number for this study is CUT/HREC 2024/000348. As soon as the study received its ethical approval from the ethics committee, the participants' consent was sought, and the necessary information about the study was provided to them. The participants were informed that their participation was voluntary and that they had the right to withdraw from the study at any time if they felt uncomfortable, without any consequences. They were informed of the use of pseudonyms instead of real names, thus protecting their identities and that of their school. The participants' pseudonyms were ACC 1, ACC 2, Stu 1, Stu 2, and Stu 3. All participants provided their consent to participate.

### **Findings and discussion**

This study sought to address two research questions: the first question was, what are the challenges in implementing Problem-Based Learning in accounting education? In addressing this question, three themes emerged.

#### **Lack of innovative skills and knowledge to construct problem cases.**

It was apparent that participants felt they lacked the skills and knowledge necessary to develop problem cases related to accounting education content. As a result, students did not have a chance to construct their own understanding within the learning context (AlAli, 2024). This is what participants announced:

*"What I have observed is that we are not well-equipped with the skills and knowledge to develop problems for Problem-Based Learning in accounting. There are limited problems with the sources related to accounting."* ACC 2.

Added to the ACC 2 was ACC 1:

*"I think I am not knowledgeable on implementing Problem Based Learning as it demands more skills in constructing problem cases"*

On a similar note, Stu 3 has this to say;

Our lecturers in accounting education lectures mostly use a case study and lecture method. I am not sure if it's me who is not cognitive, but I cannot remember seeing Problem-Based Learning effectively used. The participants during the discussions indicated that there is still a lack of innovative skills in the application of problem-based learning within the accounting sessions. They even indicated that there are limited problems with the sources related to accounting as a subject. Another issue that the participants have highlighted is their lack of capacity in effectively implementing the problem-based learning approach. Gonzalez-Argote and Castillo-González (2024), in their study on health education, reiterated that if there is no problem, there is no learning. Therefore, the participants also indicated that, through the use of only case studies and lecturing approaches, accounting students are not learning in the way they are supposed to as they are not acquiring lifelong learning but rather theoretical learning. To show that students could not relate to problem-based learning, they could not even recall instances when they were allowed to engage in their own learning.

### **Inadequate time to prepare for Problem Based Learning**

Inadequate time to prepare for PBL was raised as another challenge that participants identified as one of the hindering aspects in implementing effective PBL in their classes. participants further indicated that More time has to be spent on analysing the problem, and students sometimes are inactive; thus, time becomes a factor. During the interview, participants disclosed the following:

*"The challenge is the limited time academics have; there is no time to search for problems and select the best one for each topic. This is a struggle even during teaching and learning. Problem-Based Learning requires time, which we do not have."* ACC 2

*"Yes, the time allocated for our lectures is insufficient to cover the detailed accounting content. In most cases, our lecturers will send us information before class to prepare, allowing us to focus on the content during the lecture rather than reading it. So, for me, time is a challenge cause even with our learning, we complete it after the lecture."* Stu 3

The findings of this study reveal that participants in accounting education do not have sufficient time to prepare problem cases for all accounting topics. Participants felt that accounting education is broad on its own, and using problem cases for every topic is sometimes impossible, as they need to spend more time selecting relevant sources. It was mentioned that the time allocated for preparing a lecture and teaching is insufficient; hence, there is no time to gather sources and identify problems that will be used for learning. Problem-based Learning requires time, as one must read and compare relevant materials. Participants also felt that the time allocated for lectures does not accommodate approaches such as Problem-Based Learning, where students are required to engage and deliberate on the problem to find better solutions. problem-based classes are structured so students acquire the subject matter in their own time, while class time is used to work on that material. Markus, Milne and McConnell (2001) point out that for effective learning to take place in terms of memory, recall and further application, the learning context needs to provide a matching time of the learning and the time of retrieval.

### **Inability of systems to find accounting related problem cases**

Participants felt that it could be simpler for them if there were a portal with various accounting industry problems or cases, as it would make it easier for them to choose. Currently, instructors rely on online sources, which can be difficult to find. ACC 1 has this to say:

*"The challenge is also in retrieving these problem scenarios for Problem-Based Learning. On the internet, there are not many resources that can be directly related to the content or topic one is teaching. So, if there is at least a portal for accessing them, it would be easy."*

Concurring with ACC 1 was ACC 2, who asserted:

*I think what makes the implementation inactive is the limited knowledge of the systems to identify the accurate problems for Problem-Based Learning. Sometimes they are too general to be used in accounting, but we try."*

Accounting education instructors often struggle to find accounting-relevant problems beyond the standard search engine, Google. Participants acknowledge that search engines may have problems, but they might not be able to pinpoint exactly the content of accounting. Another challenge was identifying where to access problem cases for the accounting education curriculum that focuses solely on accounting. Markus, Milne and McConnell

(2001) support these findings by indicating that the level of available accounting education resources remains unclear resulting in limited experiencing on the full benefits of PBL.

The above three findings highlight the challenges that cause the ineffective implementation of Problem-Based Learning in accounting education. The next section offers an understanding of the second research question.

The second research question of the study was how problem-based Based Learning can be implemented in accounting education to enhance the Scholarship of Teaching and Learning. Three themes emerged in answering this research question:

#### **Availing systems for searching for accounting information**

Participants alluded to the need for resources and where to access help with accounting context-related problems. Based on the participants' discussion, they argue that the lack of systems to assist in accessing accounting data presents a challenge. This is what the participants had to say:

*The implementation of Problem-Based Learning can be achieved through systems that provide easy access to problem scenarios. The challenge is that the systems for accessing data are limited, so I think that if available sources can be identified, implementation will be possible.* ACC 2

*I believe that if we can identify and address problems that arise when adopting problem-solving approaches, then implementation will not be a challenge. It is easy to implement something when resources are available."* ACC 1

Accounting education instructors highlighted that having access to systems with more accounting-related cases will ease their implementation of PBL. Participants felt that if systems provide them with information, implementing the approach will not be a problem, as they are mostly hindered by constructing problem cases. If information specific to the accounting curriculum is provided, implementation can be effective. In support of the effectiveness of PBL, if the approach is incorporated appropriately, Chen et al. (2024) argue that it enables students to develop self-directed learning skills, problem-solving skills, written and oral communication skills and teamwork skills. It was evident that participants believed that implementing PBL problems must be specific to the content of the accounting curriculum rather than general. Accounting instructors will download the problem sources and use them to teach. Problem-Based Learning (PBL) programs can address Sustainable Development Goals (SDGs) in Higher Education (HE) curriculum, teaching materials and relevant assessments, supporting learning at scale for HE institutions (Filipe, Aragon, & Saur-Amaral, 2023).

#### **Provision of clear guidance and guidelines**

The participants believe that clear guidance and guidelines would assist in effectively implementing the PBL approach in their classes. The clear guidelines for facilitators are of great importance in the effective implementation of PBL (AlAli, 2024). If the objectives are realistic, that would improve students' abilities in professional and accounting competencies (Novak, 2024). With clear guidelines, both students and lecturers would enjoy the experience and perceive the activity as worthwhile, effective, and relevant. This is what the participants said based on the provision of clear guidelines and guidance of the lecturers.

ACC 1 pointed out that:

*We understand what Problem-Based Learning is; however, guidelines are nowhere to be found, especially those that focus on accounting education. We should have knowledge what is expected from us lecturers and what students are expected to do."*

Stu3 shared a similar view:

*"I think we are not sure of what we should do to meet our lecturers halfway when they adopt Problem Based Learning. We also expect our lecturer to provide instructions."*

It was that accounting education instructors are informed about the Problem-Based Learning approach and require guidance. Participants acknowledged that it is necessary for them to understand all procedures to implement PBL adequately. The guidance must be clear from selecting sources and working with students in the classroom. Participants disclosed that they need to know what to do and how to do it, especially in classrooms with large student populations. Participants acknowledge that, to effectively implement Problem-Based Learning, the curriculum structure must clearly indicate which topics should be taught using this approach, ensuring that students are also prepared to participate. The guidelines must be detailed to the extent that each step is outlined for both the instructor and the student. Hung (2011) and Osman and Kriek (2021) opines that in some faculties PBL curriculum might not have followed the tutoring guidelines from the curriculum designers while the success of an intervention depends not only upon its theoretical soundness, but also on proper implementation that reflects the guidelines derived from its theoretical conception.

### **The Problem Based Learning process must be peer reviewed and evaluated**

Participants believed that giving each other feedback on progress will improve their understanding of Problem-Based learning. Participants were quoted saying,

*“Problem-based Learning can be implemented effectively if we, as accounting lecturers, work together to evaluate how we implement the process and then review whether what we are doing is effective or not. If we work together, it is possible.”* ACC 1

*I believe that teamwork in our lectures is essential because I think one person cannot address it alone, so we need to implement Problem-Based Learning by working with our classmates to generate strategies together.* Stu 3.

Findings showed that to implement Problem-Based Learning, the process must be peer-reviewed. This means that instructors will evaluate each other's lectures to gain an understanding of how they are administered in the teaching and learning process. In addition to peer evaluation, instructors have to review each other's process of implementing Problem-Based Learning. Participants believed that evaluating and reviewing each other's implementation processes can enhance their own. It was apparent that for effective implementation of Problem-Based Learning, instructors have to work as a team or with one another. All the above findings attempted to address the second research question: whether participants are certain that the proposed ideas are considered. PBL models were implemented as active teaching methods, encouraging students to be the key protagonists in their learning journey thus every task of it have to reviewed and moderated for feedback purposes (Cottafava et al., 2019; Sartika, Rahman, & Irfan, 2023).

### **Conclusions**

The main objective of this study was to report on the challenges with the implementation of the Problem Based Learning approach in accounting education in a teacher training institution. To achieve the above objective, two research questions were developed to guide the study. Namely, what are the challenges in implementing problem-based Learning in accounting education, and how can problem-based learning be effectively implemented in accounting education to enhance the Scholarship of Teaching and Learning? To address these questions, three accounting education instructors and three students were involved in data collection. Further Critical Emancipatory Research theory foregrounded the study. Findings revealed that a lack of innovative skills and knowledge to construct problem cases, Inadequate time to prepare them, and the Inability of systems to find accounting-related cases are major challenges for the implementation of PBL. Additionally, Problem-Based Learning can be implemented by utilizing systems for searching for accounting information, providing clear guidance, and peer evaluation and review of the Problem-Based Learning process. Pagander and Read (2014) confirm the above findings by arguing that by using peer review and self-assessment for PBL allows the group of students to interact, build independence and problem-solving skills on their own.

### **Recommendations**

The following suggestions were made for the effective implementation of Problem-Based Learning in accounting Education. To begin with, professional development is necessary for accounting instructors to be adequately oriented with the PBL approach in teaching and learning; only then can implementation be effective. The concern was the lack of professional development in implementing PBL in accounting; thus, training instructors was perceived as a way of implementing PBL in accounting education. This professional development must include training on instructors' perceptions of PBL approaches, as many of them believe it's challenging. Secondly, work with accounting firms to obtain real-world cases that will be utilised in a Problem-Based Learning approach for accounting. These cases or scenarios will be relevant as the curriculum is structured in a manner that prepares students for the world. On the issue of inadequate time, tutors must be trained to use Problem-Based Learning in the extra classes to familiarise students with it. This suggested recommendation is in line with Markus, Milne and McConnell (2001) who maintain that PBL works much better than lectures method as they get more contact time with peers and it becomes easier to achieve learner activity and interaction with others.

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