Studies in Learning and Teaching (SiLeT)
Homepage: https://scie-journal.com/index.php/SiLeT
Email: silet@scie-journal.com

p-ISSN: 2722-399X; e-ISSN: 2722-1857
SiLeT, Vol. 6, No. 3, December 2025
Page 822-844

Critical Reflection as a Transformative Learning Approach in an Accounting Classroom: A Case Study of Accounting Education Pre-Service Teachers

***F Mhlongo[1]**
[1]Department of Commerce Education, School of Education, University of KwaZulu-Natal, South Africa

Article Info

Article history:

Received August 5, 2025
Revised September 15, 2025
Accepted October 25, 2025
Available Online December 31, 2025

Keywords:

Accounting;
Critical reflection;
Pre-service teachers;
Reflective practice;
Student outcomes;
Teacher education;
Transformative learning;

ABSTRACT

Attaining favorable student outcomes, including effective learning behaviors, skills, and attitudes that facilitate deep learning, is paramount for numerous universities globally. Research focusing on accounting students indicates that many encounter difficulties attaining the desired outcomes regardless of their degree program. Meanwhile, such outcomes are particularly vital in subjects like accounting, where fundamental understanding of knowledge must be obtained before its application. Among the factors that have emerged in the literature as influencing the achievement of desirable student outcomes in accounting are the approaches employed in teaching and learning the subject, one of which is reflective practice. However, there is a paucity of research examining the impact of reflective practice on the outcomes of accounting students, particularly pre-service teachers, as this population of accounting students remains underexplored, especially in developing nations such as South Africa. The present qualitative study followed a case study research design, employing a phenomenological approach to describe how a study sample of fifteen accounting students who were preservice teachers enrolled for a content knowledge-focused accounting module offered in the Bachelor of Education degree at one particular South African university experienced the application of the reflective practice and how it impacted their capacity to attain desired student outcomes in accounting. Employing content analysis and drawing on the reflective and transformative learning theories, this study's findings frame critical reflection employed in accounting education as a transformative approach for enhancing learning and achieving favorable outcomes for accounting students who are pre-service teachers. Critical reflection was found to have the potential to transform accounting students' learning behaviors, critical thinking dispositions, and attitudes, potentially supporting them to achieve better outcomes.

https://doi.org/10.46627/silet

INTRODUCTION

Fostering effective learning behaviors, skills, and attitudes for effective learning lies at the heart of academic success in higher education. This has been the catalyst for a range of interventions to enhance higher education students' deep learning strategies, skills, and attitudes that support effective learning (Al-Abyadh & Abdel Azeem, 2022; Gordanier et al., 2019; Kadiyono & Hafiar, 2017; Naseer et al., 2024; Sölpük, 2017; Talaei Khoei et al., 2023; van Zyl et al., 2020). Evaluations of these interventions have revealed significant variations in their success, suggesting that success lies in both the context of interventions and the strategies used in the interventions.

With specific reference to accounting as a subject that generally enjoys high respect and reputation, especially from students (DaRin, 2017; Germanou et al., 2009; Sam et al., 2021), the academic outcomes of students, whether they are enrolled for teacher-related degrees or professional degrees, irrespective of where in the world they are studying, are often unsatisfactory (Mahboub, 2022; Mdingi, 2018; Mokhampanyana, 2018; Papageorgiou, 2017). Provided that, much research has been done to determine the factors that affect accounting students' outcomes (Mahboub, 2022; Mdingi, 2018; Shaffee et al., 2019). It is not surprising that research studies across the globe seem to suggest that accounting students' learning approaches (Alanya-Beltran, 2021; Alfordy & Othman, 2021; Sam, 2020), their skills such as critical thinking (Papageorgiou, 2023; Pehlivan, 2013; Pienaar, 2019), and positive student attitudes are potential predictors of accounting students' outcomes in accounting as a subject.

Student outcomes in accounting have been shown to improve when students adopt deep learning as a learning behavior, where understanding is the goal, as opposed to surface learning, where students merely memorize information related to tasks without understanding it (Ficco et al., 2025; Sam, 2020; Velasco, 2021). In accounting, the two learning behaviors result in different outcomes. In contrast to surface learning, which merely helps students memorize accounting principles and procedures by heart, deep learning helps them comprehend and apply complex accounting concepts and principles, solve problems, and make sound decisions (Betakan et al., 2024). Equally important, it has been argued that when students can exercise higher-order thinking abilities like critical thinking, they engage in deep learning. Critical thinking skills are essential and should be exercised by students to achieve better and sustainable academic outcomes in accounting (Papageorgiou, 2023; Seow et al., 2014; Wolcott & Sargent, 2021). Further, if it warrants, students must be willing to change their attitudes towards particular teaching and learning approaches used in accounting, as that also impacts their academic outcomes (Adetayo, 2010; Olifant et al., 2024).

Since the achievement of desirable academic outcomes is important to all accounting students, irrespective of the degree they are registered for, it is imperative for accounting students who are pre-service teachers because good achievement is closely related to teacher performance during teaching practice (Corcoran & O'Flaherty, 2018; Fitzsimons et al., 2025). The achievement of effective learning behaviors by this cohort of accounting students is critical because teachers are fundamental to the teaching process, and their abilities significantly impact learners' learning outcomes and how the curriculum is implemented (Katshuna & Shikalepo, 2023; Poulton, 2025).

In accounting, despite the added call for more student-centered approaches, the use of the traditional lecture approach by some university lecturers is still observed in the South African context (Moyo et al., 2023). The use of the lecture approach persists in many accounting classrooms, despite the benefits of student-centered approaches being revealed in the literature. One of the student-centered approaches that has been deemed beneficial to the achievement of desirable student outcomes in other disciplines and contexts is the reflective practice (Dunlap, 2006; Harvey et al., 2025; Tsingos et al., 2015; van Breda & Agherdien, 2012). For one, the reflective practice has been linked to learning behaviors such as deep learning in other fields (Setiyawati et al., 2024; Simamora & Pasaribu, 2023; Tsingos et al., 2015). However, the use of reflective practice in teaching and learning accounting remains uncommon, and its influence on the students' ability to achieve desired student outcomes in the subject remains under-researched. Also, when investigating how different interventions and approaches influence the academic outcomes of accounting students, many research studies seem to focus mainly on accounting students in professional accounting degree programs. Considering those aspects, there appears to be limited understanding regarding the impact of reflective practice on accounting students, particularly those who are pre-service teachers, in achieving favorable outcomes, especially among accounting students in South Africa. This highlights a deficiency in the literature, particularly as pre-service teacher accounting students constitute an understudied demographic within the accounting student community.

Given the dearth of studies focusing on the use of the reflective practice approach in the teaching and learning of accounting, more especially in the South African context, the current study seeks to understand the impact of reflective practice, through journal writing, on the learning behaviors, critical thinking abilities, and attitudes of accounting students who are pre-service teachers. The novelty of this research lies in its focus on pre-service accounting teachers and how this under-researched population of South African accounting students learn accounting content knowledge using the reflective approach and how this approach shapes their learning approaches, skills, and attitudes. The findings of this study will advance knowledge about the potential advantages of non-lecture-based strategies in accounting classes. The study's findings will provide insight to academics and help inform them when choosing methods to teach accounting. They will also be a beneficial resource for accounting students when choosing learning strategies to employ when learning accounting for improved outcomes.

This study drew on the Reflective Learning Theory (RLT) and the Transformative Learning Theory (TLT) to describe how accounting students who are pre-service accounting teachers experienced the use of the reflective practice in the teaching and learning of accounting as a content subject and to describe how this approach transformed their attitudes, learning behaviors, and skills. The RLT was coined by John Dewey, who believed reflection to be crucial to learning. According to the RLT, reflection can deepen one's understanding and help one make sense of past events to pave the way forward (Dewey, 1933). The TLT, on the other hand, was developed by Mezirow and Marsick in 1978. Transformative learning changes problematic frames of reference to become more reflective, inclusive, discriminating, open, and emotionally malleable (Mezirow, 2018). According to the TLT, critical reflection could cause one's understanding to transform, and learning must be transformed by the students through critical self-reflection. Like Mezirow (2018), Helyer (2015) argues that reflection is essential to transformative learning. In line with the RLT, which had a complementary role with the TLT in this study, effective learning is believed to occur in a setting that encourages thinking, reflecting, and connecting the old and the new (Mezirow, 1997).

Having been studied for over one century, it is not surprising that people hold different views about what reflection is, when and how it takes place, what it entails, and its benefits. Correspondingly, there are many definitions of reflection in education, from the one coined by Dewey in his seminal book written in 1910 titled 'How We Think,' where he defined reflective thought as "an active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusion to which it tends" (Rodgers, 2002, p. 850). According to another seminal study, reflection is considered an essential practice that should occur both before and after an action (reflection-on-action and reflection-in-action) (Schön, 1987). Despite the varying views about reflection, a common understanding shared by several scholars is that reflection should give rise to various outcomes, such as creating an action plan or theory, formulating decisions, or even eradicating some doubt (Aljahromi & Hidri, 2023; Liu, 2019; Zhai et al., 2023). Also, in an educational context, the student must make many action plans and decisions when reflecting (Cavilla, 2017; Dunne et al., 2024; Olteanu, 2017). The action plan or decision could be to pay more attention during lectures or study a particular section of academic content for better understanding, among others, thus enhancing learning. Indeed, reflection has been linked with learning (Bailey & Rehman, 2022; van der Loo et al., 2019; Veine et al., 2020), specifically higher-level thinking (Dunfee et al., 2008; Jarvis & Baloyi, 2020; Whalen & Paez, 2021) in taxonomies such as Bloom's Taxonomy (Bloom, 1956) and for the development and learning of skills (Aprilya & Saifuddin, 2021). Given these accounts, it would appear that reflection and learning are interconnected.

The reflective practice encompasses the skills, talents, and abilities one uses in reflection and the activities one engages in (Heydari & Beigzadeh, 2024). Reflective practice has been studied in specific courses taken by students at higher education levels, and its benefits are noted (Chang, 2019; Hartmann et al., 2023; Winberg et al., 2023). According to some scholars, such a strategy enables students to consider their views, values, experiences, and notions on relevant subjects (Chan & Lee, 2021; Minott, 2008). This is especially important for students who will soon enter the field as accounting teachers (Bradbury et al., 2020; Choy et al., 2021). Adie and Tangen (2014) share the same view and suggest that encouraging students to engage in reflective practices is one of the key objectives in higher education for successfully preparing students for their future professional careers as teachers.

A distinction is made between reflection and critical reflection. According to Whitaker and Reimer (2017), critical reflection is a multidimensional and intricate phenomenon that entails extensive knowledge and participation in reflection processes to improve interpersonal interactions, increase self-awareness, and reconsider theoretical assertions and their application in real-life situations. While critical reflection targets the specifics of a task or problem, it also looks at preconceived notions to broaden one's perspective and open one's mind to different approaches to thinking and acting (Grey). It is crucial to practice and engage in critical reflection to support effective learning (Harvey et al., 2016), especially critical reflection (Chang, 2019).

The significance of critical reflection for both practicing educators and those aspiring to become educators is paramount (Diseth, 2025; Weaver et al., 2022; Williams & Nel, 2023). Reflective practice benefits pre-service teachers while they are studying and practicing as teachers outside of the classroom (Krapivnyk et al., 2021). For example, it has been suggested that teachers might adopt appropriate educational strategies to meet the different needs of learners when they are in the field (Cintamulya & Mawartiningsih, 2024), and this could be achieved through transformational reflection, which enables them to question their presumptions and beliefs (Slade et al., 2019).

One of the commonly used tools to facilitate student reflection is RJs (Alt et al., 2021; Murillo-Llorente et al., 2021). Given their popularity and use in higher education, numerous claims have been made about how journals of reflection help students learn. For one, it has been argued that RJs allow students to develop personally and professionally (Dyment & O'Connell, 2011). The other benefit to students and their learning relates to the transformation that the reflective practice will likely bring to students as they reflect and start to include metacognition in their journal writing while simultaneously learning the subject matter (Gorlewski & Greene, 2011). Reflective journaling has also been said to benefit students' learning experiences, particularly in courses that are typically recognized as intellectually demanding (Denton, 2018).

Among the many benefits associated with the adoption of the reflective practice for teaching and learning, as revealed in research studies conducted in other fields and contexts, is its ability to foster deep learning, critical thinking skills, and transform student attitudes (Helyer, 2015; López-Cuello et al., 2024). Deep learning, as opposed to surface learning, involves the capacity to apply conceptual knowledge in different situations (Hattie & Donoghue, 2016) and enables students to locate themselves in their learning (Collins & van Breda, 2010). Deep learning also promotes students' participation in the learning process at a deep level, a deeper grasp of knowledge, exploring connections between concepts, linking ideas with past knowledge, and connecting concepts with practical experience (Asikainen, 2014; Kovač et al., 2025). Understanding and creating personal meaning—more particularly, incorporating new information into prior knowledge and altering one's perspective on certain parts of reality—are the outcomes of deep learning (Turner & Baskerville, 2011). Given these benefits, it is not surprising that across several fields, deep learning has been deemed necessary for students to achieve desirable outcomes (Chotitham et al., 2014; Jiayuan et al., 2025; Negash et al., 2022).

Achieving deep learning is especially important in subjects like accounting, where students are expected to apply theoretical knowledge in practical scenarios or cases (Shaffie et al., 2020).

The reflective practice has also been associated with achieving or refining skills necessary for effective learning, such as critical thinking skills. There are many definitions and understandings of critical thinking, from simple definitions such as "the ability to analyze and evaluate information" (Duron et al., 2006, p. 160) to many other complex definitions. For this study, critical thinking is understood to be made up of two parts: dispositions and skills, which reinforce each other as Facione (2011) suggested. A person's (1) willingness to plan, (2) cognitive flexibility, (3) persistence, (4) tendency to be self-critical, (5) mindfulness, and (6) consensus-seeking attitude are dispositions of a critical thinker (Harper, 2013). The skills side of critical thinking mainly comprises abilities that are also considered essential components of critical thinking, according to a seminal study done with a wide range of specialists, such as interpretation, analysis, evaluation, inference, explanation, and self-regulation (Facione, 1990). Various arguments pointing to an association between critical thinking skills and academic outcomes have been presented in several studies in other fields of study and subjects (Ghanizadeh, 2017; Karbalaei, 2012; Martín-Raugh et al., 2023; Murawski, 2014; Wicaksana et al., 2020).

Critical thinking skills have been linked with good academic outcomes in accounting (Papageorgiou, 2023; Pienaar, 2019; Seow et al., 2014). This is because these skills are crucial for analyzing and understanding accounting transactions and for correctly understanding and applying accounting principles, concepts, and standards. Even though it is generally understood that accounting students must have a solid conceptual foundation before acquiring analytical abilities, it is also evident that for students to succeed and grow in the subject, they need to possess the necessary skills, such as critical thinking, and should embrace effective teaching and learning approaches.

Students' attitudes towards teaching approaches used to teach them have been deemed as a factor that might positively or negatively influence their outcomes (Nja et al., 2022; Oladele et al., 2024). For this reason, teachers need to prioritize improving students' attitudes towards the teaching approach employed in the classroom. Put another way, the willingness to embrace other ways of learning a subject is crucial to achieving good academic outcomes (Hemati Alamdarloo & Moradi, 2013) and transforming as a student (Leal Filho et al., 2018). Indeed, students who want to succeed must constantly engage in self-renewal, self-development, and self-reflection to improve their learning outcomes. On this basis, it would appear that students should be willing to embrace other teaching and learning approaches as the situation warrants to achieve desired outcomes (Almoslamani, 2022; McChlery & Visser, 2009).

RESEARCH METHOD

Figure 1 below depicts the research flow, outlining the processes and decisions made for this study. The research processes followed include preliminary processes, including identifying the research problem; a review of the selection of the research design; the approaches employed; the sampling technique employed to select the sample of participants; and the steps undertaken in the data generation and analysis. The discussion of these processes will follow thereafter.

As shown in Figure 1 above, this study was grounded in phenomenology. Understanding how people understand and make meaning of experiences is the primary purpose of phenomenology, which highlights the subjective nature of experiences (Creswell & Poth, 2016). Phenomenology, thought to be how students experience the phenomenon, is pertinent to research that seeks to understand student learning in an educational setting. The phenomenon of interest in this study was the use of reflective practice by accounting pre-service teachers in an educational setting that focused on understanding subject matter in an accounting module.

Following a case study research design, a qualitative approach was adopted to address this study's research questions. The case study design, which, according to Yin (2014), is built on extensive research of a particular person, organization, or event to uncover the reasons behind the fundamental principles, was best suited for this study, as it aimed to conduct an in-depth exploration of the phenomenon within a real-life context. The case selected for this study was a group of accounting specialization students enrolled in a semester-long accounting content knowledge-focused Accounting Education module in the Bachelor of Education (B.Ed.) degree as accounting pre-service teachers at a single university in South Africa. The site university offers this four-year degree designed to train prospective teachers. The accounting specialization curriculum of the B.Ed. degree program comprises five accounting content knowledge modules designed to equip the accounting pre-service teachers with content or subject knowledge. In addition to the five content knowledge modules, four accounting method modules, each focusing on pedagogical knowledge to teach accounting, are to be completed by the students before they graduate as accounting teachers.

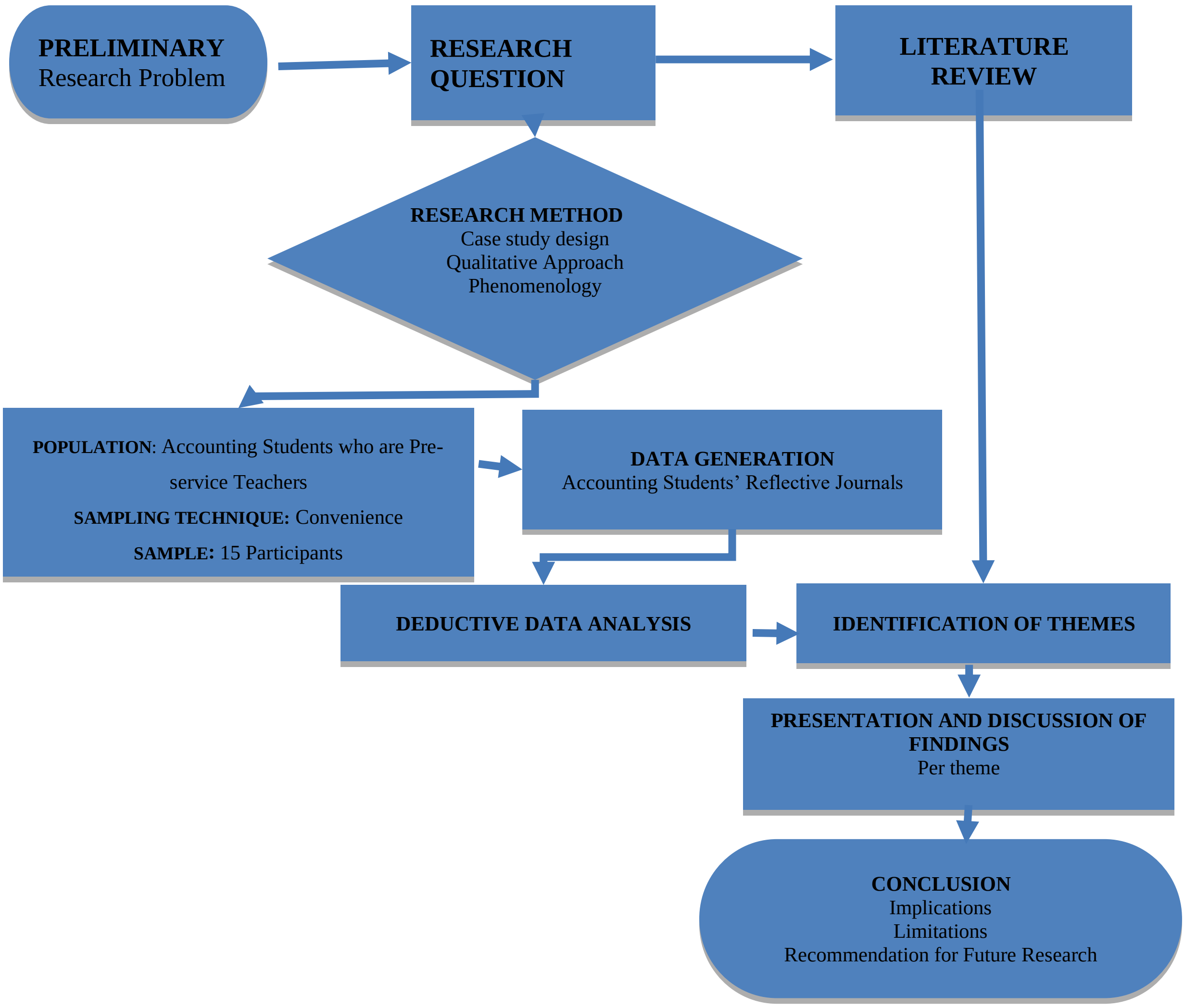

Figure 1. Research flowchart

The study's population comprised 107 accounting preservice teachers registered in the selected Accounting Education module in 2023. The students who participated in this study majored in accounting in the B.Ed. program, which meant that they were prospective accounting teachers. In addition, this cohort of students comprised mainly English First Additional Language (EFAL) students of predominantly African origin, more specifically of

Zulu origin, which embraces the *'ukuhlonipha'* (respect) of elders. According to Mbele et al. (2015), the concept of respect, '*ukuhlonipha,*' is an essential component of African culture, and it forms the foundation for existence and provides guidelines for living.

Convenience sampling was used to select the study participants from among the 107 students who were all exposed to the reflective practice in the Accounting Education module. Convenience sampling, a nonprobability or non-random sampling, involves selecting participants who meet specific practical criteria, such as easy accessibility, geographic proximity, availability at a specific time, or a willingness to participate (Phakiti & Paltridge, 2015). Only students who expressed an interest in the research study and were available to participate were selected for this study. A total of fifteen accounting students, five of whom were male (depicted by [M] and females by [F] after the pseudonyms), agreed to participate in the study and agreed to maintain RJs throughout the semester. To lessen the burden on the students' part, their reflections were handwritten. No marks were awarded for the reflection exercises, the submission of the RJs' entries was voluntary, and no compensation was promised or given to students who participated. Students who chose not to submit their reflections were not in any way penalized.

Accounting students were tasked with developing and maintaining RJs throughout the semester-long accounting content subject. The RJs developed and maintained by accounting students served as data for this study. The students were required to reflect on three aspects critically; firstly, the students were tasked with reflecting on their learning experiences and insights on how the reflective practice approach was contributing to their learning of accounting as a content subject, given that this approach was a new change introduced in the accounting module they were registered for. The second aspect that accounting students were also asked to reflect on was their understanding of accounting topics and content covered in the accounting module each month for the entire semester. As part of the second aspect, they had to reflect on the content knowledge covered and the practical exercise done during each lecture (where they were expected to apply the theoretical knowledge learned in a practical scenario). Lastly, students were asked to reflect on a suitable action plan they would adopt to improve their understanding of the accounting content covered if they felt their understanding was lacking. To encourage reflection and avoid an additional burden for them, students were given the last 20 minutes of each 1.5-hour lecture session to document their experiences. Students were allowed to write their RJ entries by hand on loose pages (to facilitate collection by the lecturer). In total, five RJ entries were prepared by each student who participated in the study over the semester. The study participants were notified before they agreed to participate that their RJs would be read and reviewed by the researcher, who is also a lecturer of the accounting module in which the students were registered.

The students' first RJs submitted to the lecturer were not anonymous, as students' names appeared in the RJs they submitted. Upon reviewing the first set of journal entries, the lecturer observed that students wrote short reflections focusing on general issues and were merely descriptive, not critical. To encourage honest, free, and critical reflection, the lecturer instructed the students not to indicate their real names in their subsequent submissions but to give themselves pseudonyms and write those pseudonyms in all their reflections. The lecturer did not collect the RJs from students to maintain anonymity but requested one student to facilitate the collection. As instructed by the lecturer, the following two sets of reflections (the second and third sets) were anonymous.

Upon reviewing the second and third sets of RJs, it seemed their journal entries improved in terms of length and issues reflected on. Another discovery was that a few students had done some critical reflection. The lecturer appreciated the improvement but noticed that the students were not reflecting on all aspects as expected. Considering that, as an intervention, the lecturer decided to coach students on how to reflect critically and offered to mentor those who were struggling to reflect critically. A reflection guide was provided as an added intervention to

https://doi.org/10.46627/silet.v6i3.686

support students in critically reflecting. The reflection guide, which was inspired by Gibbs' reflective learning cycle (Gibbs, 1988), was intended to assist accounting students in reflecting systematically and critically. The reflection guide consisted of questions that prompted students to reflect on various aspects of their learning in the accounting module. Therefore, the last two reflections were anonymous and included a reflection guide (template). The review of the last two RJs revealed that using the reflection guide seemed to help students reflect on all aspects they were expected to reflect on. Further, it was noted that more students were writing critical reflections and not merely descriptive entries, especially in the last set of RJs. In the end, each participant submitted all five reflections, stapled together, which were then subjected to analysis.

Data generated for this study were subjected to content analysis by the researcher, who was also the lecturer in the accounting module for which pre-service teachers were enrolled. All the RJs prepared by the accounting students in this study were subjected to content analysis. As a qualitative research technique, content analysis requires the researcher to analyze documents to offer context and meaning regarding a topic under investigation (Bowen, 2009). Like other analytical techniques, content analysis aims to elicit meaning, gain understanding, and develop empirical knowledge (Strauss & Corbin, 1990). Analytical techniques include finding, choosing, assessing (making meaning of), and synthesizing document data. When undertaking content analysis, materials are analyzed using excerpts, quotations, and complete passages to discover themes, categories, and case examples (Labuschagne, 2003).

The accounting students' RJs were read several times by the researcher, line by line, to explore the deeper meanings of the reflection entries. After reading the RJs several times, codes were identified in the data. The codes were then grouped into categories and themes within the domains of student learning behaviors, critical thinking, and student attitudes. These domains, which represent benefits of critical reflection to student outcomes observed in other fields/subjects and contexts, were determined through a literature review conducted before the data was collected and before the research questions were formulated. In this study, the documented experiences of students in their RJs enabled the researcher to analyze how the students' learning behaviors, skills, and attitudes were transformed by the introduction of the change, which was the introduction of the reflective practice in the teaching and learning of accounting as a content subject in this context. Analyzing this data allowed the researcher to evaluate the potential benefits of the reflective practice to the successful learning of accounting as a content subject in teacher education.

Ethical considerations were observed during the entire research process. Gatekeeper permission and ethical clearance were sought and obtained from the site university (Reference: HSSREC/00005843/23). Care was also taken to ensure that participants remained anonymous in reporting findings and that their reflection entries were not divulged to any other party. For this reason, completed RJ entries were not made accessible to members outside the research project; these were locked away in an access-controlled location. Pseudonyms were also used to protect the research participants' thoughts and identities. Additionally, informed consent was sought from all participants. The aims and objectives of the study were indicated in the consent letter, which was signed by all those willing to participate. Lastly, no minors, abused, or vulnerable individuals were involved in the study.

RESULTS AND DISCUSSION

The findings of this study revealed that the reflective practice has the potential to transform accounting students' outcomes. The areas where the students were transformed are revealed in three themes: 1) student learning behaviors resulting in deep learning; 2) critical thinking dispositions; and 3) students' attitudes and perspectives. The findings below are presented through excerpts from accounting students' RJs and discussed per theme.

Transformation of Student Learning Behaviors for Deep Learning

The analysis of the students' RJ entries revealed that not only did accounting students benefit from identifying their problem areas in accounting content knowledge, but critical reflection also enhanced their ability to learn deeply. Initially, when students were asked to explain narratively the relevant accounting procedures they had performed in their journal entries, many struggled because they relied on surface learning, cramming, or memorizing the accounting procedures. Surface learning, such as cramming to pass a test, has been proven to be a learning approach that does not benefit the student academically in accounting (Sam, 2020) because, in a subject like accounting, it is critical to make connections between new and existing knowledge (Papageorgiou, 2022). Many students who use the cramming approach forget what they learned over time because, when cramming, the brain is not provided with enough time to process and make critical connections between the current knowledge and other previously acquired knowledge. Many students acknowledged in their RJs that before engaging in reflective practice, they were unsure of their understanding of the current topic in accounting.

At first, I was just doing exercises and getting answers correct and sometimes incorrect. My understanding was not so good. I was not fully understanding the topic, I only had a surface understanding (Zuziwe [F]).

Before engaging in reflection, some students could not create a connection between the current accounting topic and the earlier topics covered in the subject during the semester and in previous accounting modules.

We learn new accounting procedures every day. It is a lot. You have to learn new stuff in each topic, and it's always different stuff from what we have done before (Barry [M])

After engaging in reflection for some time, when reflecting on their understanding of the current accounting topic, many students revealed that they understood accounting content knowledge clearly. Their explanations of the accounting procedures they undertook improved, too. This finding substantiates previous findings in the literature that reflective practice supports students to learn deeply and to understand accounting topics better (Bisman, 2011; Daff et al., 2023). The following are excerpts taken from some of the students' final reflections:

Writing these reflections has helped me understand all the accounting topics we have covered this semester far better than I did before. This is because I don't have to memorise my work anymore (Zuziwe [F])

Reflection has helped me change my learning style. Writing down and explaining what I am doing in words rather than going straight to practical exercises has made me not cram my work, but understand it fully (Melody [F])

Before, my focus was on learning to pass accounting. Now I focus on understanding more than just passing tests. I can even explain what I know to someone else with confidence (Monica [F])

Since I started writing these notes in my journal, I now think about what I understand and don't understand. This has helped me to focus on the stuff I don't understand, and now I am confident that I know this topic fully (Cary [F])

The students' ability to connect new knowledge with previous knowledge, showing elements of deep learning, was evident in many RJs after engaging in critical reflection. An example of such an observation is taken from one student's RJ:

Reflecting on this topic has helped me see that the accounting procedures followed in this topic are very similar to the ones we used in our last topic. I can see the connection and understand the reasoning behind recording transactions this way (Barry [M])

The same observation was made in previous studies; for instance, it has been previously concluded that to improve and achieve in-depth learning, students must reflect on what they have learned (Howell, 2021; Sung, 2025). The connection between students' reflection and their ability to learn deeply has also been discovered in other contexts (Maqsood et al., 2025; Nhat &

Van Le, 2023) and other accounting courses, including post-graduate accounting courses (Bisman, 2011).

The students' understanding of the gaps in their accounting content knowledge, aided by critical reflection, lends support to the conception that deep learning can be enhanced by carefully selecting and adopting effective teaching and learning approaches. However, accounting students, like those in other fields (Ramezani et al., 2022), need to be flexible to try new approaches to achieve desirable academic outcomes, and critical reflection has been linked to desirable outcomes due to its promotion of deep learning. Indeed, deep learning ought to improve students' understanding of accounting topics, principles, and concepts, resulting in enhanced academic outcomes in accounting (Wolcott & Sargent, 2021). A competing perspective, however, points out that even though deep learning is ideal, the nature of accounting education, which is typified by ever-expanding content knowledge material, makes achieving deep learning challenging (Lau & Lim, 2015). Indeed, time constraints and a lengthy accounting curriculum are a reality across the globe. Given that, accounting students could be encouraged to complete most of their reflections outside of lecture hours as a mitigating measure to achieve the deep learning made possible by the reflective practice.

Transformation of Critical Thinking Dispositions

Confirming findings from other contexts, subjects, and fields on the benefit of reflective practice on critical thinking skills (Ghanizadeh, 2017; Gogus et al., 2019; Khoshgoftar & Barkhordari-Sharifabad, 2023; Prayogi et al., 2025; Shin et al., 2023; Tlale-Mkhize & Liebenberg, 2024), the findings of this study revealed that the critical reflection undertaken by accounting students improved their critical thinking, more specifically, their critical thinking dispositions, such as self-awareness and metacognition. Supporting prior evidence indicating increased awareness and cognition due to reflective practice (Ho & Lau, 2025), the data showed that as students critically engaged with reflection, they became more aware of their strengths and weaknesses and became more aware of their own thoughts. The following excerpts are some examples taken from the students' RJs:

> *I can surely learn the theory, but when I am expected to apply it, that's where the problem starts (Emily [F]).*
>
> *Since I started reflecting, I have noticed that I am becoming more aware of what I am thinking and what I know and don't know. Before, I was not so aware (Monica [[F]).*

The data above suggests that students' self-awareness was improved. This suggests that metacognition, a critical thinking component, can be refined through reflection. Metacognition refers to thinking about, comprehending, and managing one's learning (Schraw & Dennison, 1994). Awareness, also known as metacognitive knowledge, on the other hand, is the state in which a person is aware of his/her knowledge about specific tasks (Alt et al., 2021). The findings also revealed that as students engaged more with reflective writing, they became more aware of their learning styles and could monitor their learning of various sections and topics in accounting better than before. This finding confirms what has been found before, that reflective practice makes students more aware of their learning and their learning styles, which is crucial for improved outcomes (Bhagat et al., 2015; Goosen & Steenkamp, 2023).

Another transformation took place in the way students approached problem-solving. Initially, many students documented how they did not like to be presented with opportunities to solve problems in accounting. One example of such a student's reflection is taken from Zinzi's second RJ:

> *I don't enjoy challenging accounting exercises, more especially those that involve problem solving (Zinzi [F]).*

With continued reflection, a change started showing in the students' ability to solve and enjoy problem-solving. Another observation was that by reflecting on what they do and how they have been doing things before, some students were able to challenge their own biases and assumptions, which is in line with the TLT. Also, in line with the RLT, through reflecting, some students, like Zinzi, were able to make sense of past experiences and realize how such experiences shaped their assumptions and beliefs. All these observations, as shown in the excerpts below, taken from the last two sets of RJs, suggested that the critical thinking dispositions of students were transformed.

Before, I could never understand how I was getting answers wrong in accounting. Writing down and explaining what I am doing and reflecting on why I am doing things like that has helped me. I now see what I used to do wrong, and I know I must solve this problem. I plan on getting more help from others and my lecturer. I am also planning on trying YouTube videos (Leila [F]).

Before, I was very biased. I preferred only one way of learning accounting, where we cover the theory and then tackle examples or exercises. Adding reflection to our usual way of learning accounting actually benefits me. I've changed my mind. Other ways of learning accounting can work as well (John [M]).

Reflecting has allowed me to question why and how I do things in accounting. For example, I always assumed that asking too many questions was not good. Maybe this is because in the past, since my school days, some teachers did not like to be asked questions. Reflecting on how I learn accounting has made me realise that asking questions to get a better understanding is okay. Thinking back, not asking questions not only limited my understanding of the work covered but also made me perform poorly in accounting. So now I always come to the accounting class with questions to ask, which has helped me cope with complex questions. I also enjoy solving accounting problems now, unlike before (Zinzi [F]).

Another aspect that was noted in the data was that through critical reflection, the majority of students experienced a change in their ability to understand knowledge fully to a point where they felt they could apply it correctly to other real-life scenarios. One such observation was seen in Emily's fifth RJ entry.

I have been thinking hard about what I know and don't know. I've made a list of all the things I don't understand…I am working hard to understand the hard stuff, and I am now confident that I will be able to apply my knowledge correctly to all scenarios given (Emily [F])

Overall, from the accounts above, it would appear that critical reflection enabled students to be more mindful and self-critical. Also, the data showed that some students, upon engaging in critical reflection, became more committed to learning accounting successfully and were even planning to improve their outcomes by drawing up action plans, whereas they were not open to drawing up action plans in the past, and this has been found in previous studies as well (Spiteri, 2025). The support given to the students in the form of coaching and reflection guides substantiates the notion that academics can teach students critical thinking skills, as Suryanti (2017) concluded. Overall, the findings under this theme show that having the ability to reflect and think critically can benefit the accounting pre-service teachers, as it was found to do for students from other subjects and fields (Akpur, 2020). These findings also confirm assertions put forward by Harvey et al. (2025) that guiding students is crucial to achieving the full benefits of reflection.

Transformation of Students' Attitudes and Perspectives

The findings of this study revealed that accounting students' attitudes and perspectives were transformed over the reflection period. Individuals transform when they experience a change that makes them different from before. This was evidenced by the students' approach to reflecting, their mindset, and their attitudes towards reflecting, which showed a change over time.

Several observations were made when an analysis of the first set of reflections was conducted. Firstly, several students found themselves anxious and confused as to what constitutes a 'good reflection' and stressed over the length of their reflection journal entries.

Secondly, what was also noted was that many students wanted to write something that would be pleasing to the lecturer, like praising her for her teaching skills, and were not sharing any negatives, suggesting that their motive was to write 'the correct or expected' reflection initially. Surprisingly, the data also showed that some students were comfortable reflecting on aspects with which they were dissatisfied and not aspects they were satisfied with, and this showed that initially, such students used reflective journal writing as an opportunity to complain or to document their frustrations with the accounting module.

Another observation was that several students felt that the introduction of the reflective practice added to their already heavy workloads and thus had a negative attitude towards its use and potential benefits. Such students believed that reflective practice had no value and was a waste of time that should have been devoted to the teaching and learning of accounting, the normal way.' An example of a student who held this belief is John, who wrote the RJ entry shown below in his third anonymous RJ entry.

> *I am not sure why we are doing this. How is this going to help me know accounting? I think that we must go back to our normal way. I don't really like this (John [M]).*

From the journal entry written by John above, it was obvious that remaining anonymous allowed him to reflect honestly. It was not surprising that when students were asked not to write their names on their RJs, a change was noted, as many of them felt 'safe' to write their true feelings and to be vulnerable. It is very likely that without the anonymity, some students, just like John, would not have been so free to share their true feelings since many students of African origin uphold 'ukuhlonipha' [respect] and would not have wanted their lecturer to feel like he was disrespecting them. Also, his initial reluctance to use and maintain a reflective journal, like the other male student participants, was not surprising for an African male, as many of them grew up and were socialized into thinking that talking about feelings, keeping diaries, and recording their thoughts on paper were all 'female' activities, not for them.

Most female student participants, as expected, had a different stance. This was evidenced by a quote from one student's first journal entry.

> *[I am] So excited about this. I'm going to give it a try (Lettie [F])*

Similar findings were observed in another study, which revealed that some students' attitudes and perceptions about the value and usefulness of reflection were mixed, with some perceiving reflective practice favorably and others negatively (Abuhussein, 2022; Robinson & Rousseau, 2018). The favoring of this approach by female students rather than male students was also reported by Tabassum et al. (2024) and Ahmed (2019).

Over time, after several reflections, a change started showing. After a few attempts at RJ writing, some students, including male students, slowly changed their minds about the usefulness of reflective practice. This was observed in many students' journal entries, two of which are quoted below.

> *This reflection thing is so helpful. I never used to think about what I know and don't know in accounting. I was just learning and doing my exercises. Now I think about things. I never thought this would work (Lorraine [F]).*

> *When I was asked to reflect on what I had learned, at first, I couldn't do it. I didn't know what to write, but now I can. Reflecting on what I've been learning helped me know what I don't understand in accounting. I'm starting to like this (Barry [M]).*

Even though the changes observed in some students' attitudes and perspectives seemed to reflect how they approached change in general, change in how some students slowly began to embrace reflection as a learning approach suggested transformative learning. This finding was one of the several similarities with those of Dellaportas et al. (2023), who, in contrast with this study, concluded the same but with professional accounting students who were enrolled in an accounting ethics course in Australia as a population. Prior research has also revealed that as students become more familiar with the practice of reflection due to their exposure to the practice during their years at university, their attitudes towards reflective practice change for the better (Rosales et al., 2023). This study's findings also corroborate those of Hussein (2018), who found that students' mindsets can grow due to reflection. The change in how some students embraced the reflective practice showed they had gained a new perspective on its usefulness, and their open-mindedness was consistent with transformative learning.

Another change was noted in how the nature of their reflection changed for the better. Initially, some students did not reflect critically but wrote descriptive journal entries. The journal entry below is one example of a descriptive entry written by a student in the first RJ:

> *Today, the lecture was on partnerships. The topic deals with the admission and retirement of partners. The topic also focuses on the dissolution of a partnership. This topic is not explained nicely in the textbook. I use my lecturer's notes instead of the book (Mike [M]).*

Subsequently, after the lecturer reviewed and provided feedback to students on how to reflect critically and even coached them, most accounting students shifted from writing merely descriptive entries in their journals to critically reflecting on their learning and thinking, requiring them to take on the role of "external observers." This change was first noted in the third reflection exercise. An example of this change was observed in the following student's fourth RJ entry:

> *I have discovered what my weaknesses are in accounting. Can't believe I've been doing it wrong! I tend to jump to doing exercises before I fully understand the theory. I now see that this method is wrong. I think that I must work on understanding the content first before doing exercises (Mike [M]).*

Mike's journal entry above shows that reflective capacity, a person's ability, inclination, and desire to think reflectively (Rogers et al., 2019), differs in students and may flourish with practice. As evidenced by this, the lecturer's decision to support and coach students in critical reflection and emphasize the value of honest, critical thought opened their eyes to the importance of reflection for deep learning and creating action plans to improve their academic outcomes in accounting. Also, after attempting reflection a few times, most students, who previously held a different perspective, realized that they could improve their learning of accounting content knowledge by genuinely reflecting on it and on how well they understood it.

Another aspect relating to students' attitudes and perspectives that was observed was that many accounting students had the opinion that accounting could only be taught and learned in a specific way or by following a specific approach, primarily the lecture style and using practical exercises and tutorials. Their perspectives seemed to be based on their prior experience in the subject, given that many of them began their journey in this subject when they were still in school. At the beginning, several students were not convinced they could learn accounting content knowledge by reflecting on it. One such student who initially held that view was Michael [M]. The following excerpt is taken from various sections of his second RJ:

> *This is not how we learn accounting… Not sure why we're doing this… I started doing accounting in Grade 10, and this is not how we've been doing it all along (Michael [M]).*

Monica [F] also did not believe the reflective practice could be used in a technical subject like accounting. She believed this approach was more suitable for other subjects and the teaching practice that they do as part of their teaching practicals. Excerpts taken from different sections of her second RJ reveal her thoughts:

> *Not sure how this will help us… We've never been asked to do this in accounting… We do our reflections when we come back from Teaching Practice… I can't believe we are asked to do this in accounting…. [I'm]…. Not used to this, not in accounting (Monica [F]).*

Student resistance to a lecturer's exploration of different teaching approaches has also been revealed in previous research (Seidel & Tanner, 2013). Indeed, it has been shown that students have personal choices about how they prefer to learn accounting (Abeysekera, 2015). Although this may be true, it was concerning to corroborate findings that suggest that some students may be unwilling to try alternative approaches to learning accounting, which places limitations not only on their learning of accounting as a content subject but also on their likelihood of using reflection as a strategy in their future teaching.

With time and after the introduction of an intervention by the lecturer in the form of coaching, mentoring, and the inclusion of the reflection guide, it was pleasantly surprising when a change was noticed in how some accounting students eventually embraced the reflective practice in the accounting classroom. Students who initially did not appreciate the use of the reflective practice in the accounting classroom became more and more open to this approach. With each reflection, their resistance to this change seemed to disappear, and they seemed to be happy to immerse themselves in the reflective practice and open up. The students' openness to this new way of learning showed they had gained a new perspective and could adjust their thinking, as emphasized in the TLT. This was observed in Monica [F]'s entry in her fourth RJ submitted and in the last set of RJs of the other two students:

> *Learning accounting like this was strange at first. I was so used to going through the theory and then doing exercises. Now that I have to reflect on what I learned and on what I was able to understand and not understand, I see how this way of learning accounting works (Monica [F]).*
>
> *I can finally see how reflecting on what you do helps you to learn effectively (Michael [M]).*
>
> *I can't believe that this is me, enjoying reflecting and seeing a difference in my understanding of accounting topics because of it (John [M]).*

These findings fit in with the TLT's suggestion that people change their frames of reference on the assumptions that underpin their viewpoints, habits, beliefs, and interpretations by critically reflecting on them (Mezirow, 1997). Overall, the importance of the willingness to embrace critical reflection by this cohort of accounting students was pleasing because, as future accounting teachers, they ought to encourage their accounting learners to reflect just as much as they ought to reflect on their practice (Simamora et al., 2024).

CONCLUSION

This article aims to describe how using RJs in accounting transforms students' learning behaviors, skills, and attitudes of accounting pre-service teachers. Clearly, students could express their thoughts, beliefs, and feelings freely through reflection, enabling them to think autonomously and responsibly. As observed in other fields and subjects, critical reflection through journal writing holds promise for changing accounting students' learning behavior, skills, and attitude to promote better learning outcomes in accounting. More specifically, the students' ability to learn accounting deeply and their critical thinking dispositions, attitudes, and perspectives were potentially transformed. Accounting students, however, required support in the form of a reflection guide with prompting questions for the reflective practice using journal writing to produce a desirable transformation of their outcomes. Also, for students to be able to reflect critically and refrain from writing simply descriptive entries in their journals, they needed to be coached on how to write critical reflective journal entries. Furthermore, it was shown that preserving student anonymity during the reflection submission process was crucial to achieving sincere and meaningful reflection. The transformation evidenced will hopefully benefit the accounting pre-service teachers in their future professions as accounting teachers.

One of the positive contributions of this study lies in the selection of accounting students who were pursuing a teaching qualification as opposed to accounting students enrolled in the professional accounting degrees because of the dearth of literature about how pre-service teachers learn the subject matter that they will teach and teaching strategies they might deploy to promote their own students' learning after graduation. This study's findings hold implications for practice and reinforce the ongoing focus on learner-centered teaching and learning strategies in accounting education. Given the advantages of critical reflection, it is advised that the reflective practice be given serious thought in the teaching and learning of accounting, despite the time constraints and the typically lengthy accounting curriculum challenges faced by various universities offering academic programs where accounting is a subject. This study had two limitations. Firstly, selecting only one university and a limited sample size in this study limits the findings' generalizability. Secondly, the selection of accounting students who belonged to one school/field of study instead of accounting students across all fields/schools offering accounting as a content subject in the selected university may also impact the extent to which the findings could be generalized. Future research may explore how the adoption of the reflective practice in accounting classrooms influences the learning of specific accounting content knowledge topics and further examine how the advantages of this approach are retained and contribute to enhanced academic achievement, utilizing large-scale longitudinal studies.

REFERENCES

Abeysekera, I. (2015). Student preferences for instructional methods in an accounting curriculum. *International Journal of Teaching and Learning in Higher Education, 27*(3), 310–319. http://www.isetl.org/ijtlhe/

Abuhussein, H. F. (2022). EFL learners' attitudes towards online reflective journals' impact on creative writing: An analytical study. *International Journal of Professional Development, Learners and Learning, 4*(2), Article ep2208. https://doi.org/10.30935/ijpdll/12326

Adetayo, J. O. (2010). Predicting students' achievement in financial accounting using study habit and attitude scores. *Journal of Social Science and Public Policy, 2*, 78–85. https://www.cenresinjournals.com

Adie, L., & Tangen, D. (2014). The use of multimodal technologies to enhance reflective writing in teacher education. In *Teaching reflective learning in higher education: A systematic approach using pedagogic patterns* (pp. 127–138). Springer. https://doi.org/10.1007/978-3-319-09271-3_9

Ahmed, A. M. (2019). Students' reflective journaling: An impactful strategy that informs instructional practices in an EFL writing university context in Qatar. *Reflective Practice, 20*(4), 483–500. https://doi.org/10.1080/14623943.2019.1638246

Akpur, U. (2020). Critical, reflective, creative thinking and their reflections on academic achievement. *Thinking Skills and Creativity, 37*, Article 100683. https://doi.org/10.1016/j.tsc.2020.100683

Al-Abyadh, M. H. A., & Abdel Azeem, H. A. H. (2022). Academic achievement: Influences of university students' self-management and perceived self-efficacy. *Journal of Intelligence, 10*(3), Article 55. https://doi.org/10.3390/jintelligence10030055

Alanya-Beltran, J. (2021). Learning approaches of students in accountancy course and their relationship to academic performance in a higher learning institution of Peru. *Turkish Online Journal of Qualitative Inquiry, 12*(9). https://tojqi.net/index.php/journal/article/view/5935/4218

Alfordy, F. D., & Othman, R. (2021). Students' perceptions of factors contributing to performance in accounting principle courses. *International Journal of Higher Education, 10*(5), 18–32. https://doi.org/10.5430/ijhe.v10n5p18

Aljahromi, D., & Hidri, S. (2023). Using critical reflections in action research to enhance students' interactivity in online EFL learning contexts. *Educational Action Research, 31*(1), 153–171. https://doi.org/10.1080/09650792.2023.2165522

Almoslamani, Y. (2022). The impact of learning strategies on the academic achievement of university students in Saudi Arabia. *Learning and Teaching in Higher Education: Gulf Perspectives, 18*(1), 4–18. https://doi.org/10.1108/LTHE-08-2020-0025

Alt, D., Raichel, N., & Naamati-Schneider, L. (2021). Higher education students' reflective journal writing and lifelong learning skills: Insights from an exploratory sequential study. *Frontiers in Psychology, 12*, Article 707168. https://doi.org/10.3389/fpsyg.2021.707168

Aprilya, I. R., & Saifuddin, M. (2021). Problems in HOTS application: A study of teachers' reflection and decision making. *JET (Journal of English Teaching) Adi Buana, 6*(2), 163–170. https://doi.org/10.36456/jet.v6.n02.2021.4048

Asikainen, H. (2014). *Successful learning and studying in biosciences* (Doctoral dissertation, University of Helsinki). http://urn.fi/URN:ISBN:978-952-10-9367-8

Bailey, J., & Rehman, S. (2022, April). Don't underestimate the power of self-reflection. *Harvard Business Review*.

Betakan, M. B., Owusu, A. A., & Tufuor Kwarteng, J. (2024). Determinants of learning strategies among undergraduate accounting students: A study in an emerging economy. *Cogent Education, 11*(1), Article 2432738. https://doi.org/10.1080/2331186X.2024.2432738

Bhagat, A., Vyas, R., & Singh, T. (2015). Students' awareness of learning styles and their perceptions of a mixed-method approach for learning. *International Journal of Applied and Basic Medical Research, 5*(Suppl 1), S58. https://doi.org/10.4103/2229-516X.162281

Bisman, J. (2011). Engaged pedagogy: A study of the use of reflective journals in accounting education. *Assessment & Evaluation in Higher Education, 36*(3), 315–330. https://doi.org/10.1080/02602930903428676

Bloom, B. S. (1956). *Taxonomy of educational objectives: Vol. 1. Cognitive domain*. McKay.

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9*(2), 27–40. https://doi.org/10.3316/QRJ0902027

Bradbury, O., Fitzgerald, A., & O'Connor, J. (2020). Supporting pre-service teachers in becoming reflective practitioners using conversation and professional standards. *Australian Journal of Teacher Education, 45*(10), 18–34. https://doi.org/10.14221/ajte.2020v45n10.2

Cavilla, D. (2017). The effects of student reflection on academic performance and motivation. *SAGE Open, 7*(3), Article 2158244017733790. https://doi.org/10.1177/2158244017733790

Chan, C. K., & Lee, K. W. (2021). Reflection literacy: A multilevel perspective on the challenges of using reflections in higher education through a comprehensive literature review. *Educational Research Review, 32*, Article 100376. https://doi.org/10.1016/j.edurev.2020.100376

Chang, B. (2019). Reflection in learning. *Online Learning, 23*(1), 95–110. https://doi.org/10.24059/olj.v23i1.1447

Chotitham, S., Wongwanich, S., & Wiratchai, N. (2014). Deep learning and its effects on achievement. *Procedia – Social and Behavioral Sciences, 116*, 3313–3316. https://doi.org/10.1016/j.sbspro.2014.01.754

Choy, S. C., Dinham, J., Yim, J. S.-C., & Williams, P. (2021). Reflective thinking practices among pre-service teachers: Comparison between Malaysia and Australia. *Australian Journal of Teacher Education, 46*(2), 1–15. https://doi.org/10.14221/ajte.2021v46n2.1

Cintamulya, I., & Mawartiningsih, L. (2024). The development of project-based learning models that accommodate reflective and impulsive cognitive styles. *Studies in Learning and Teaching, 5*(1), 59–72. https://doi.org/10.46627/silet.v5i1.279

Collins, K., & van Breda, A. (2010). Academic support for first-year social work students in South Africa. *Social Work/Maatskaplike Werk, 46*(1). https://doi.org/10.15270/46-1-179

Corcoran, R. P., & O'Flaherty, J. (2018). Factors that predict pre-service teachers' teaching performance. *Journal of Education for Teaching, 44*(2), 175–193. https://doi.org/10.1080/02607476.2018.1433463

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.

Daff, L., Tame, C., & Sands, J. (2023). Enhancing accounting students' reflective practice skills. In *Proceedings of the 2023 Accounting and Finance Association of Australia and New Zealand Conference (AFAANZ 2023)*. Gold Coast, Australia.

DaRin, B. (2017). *The perceptions of accounting: What do you think?* (Honors thesis, Bryant University). https://digitalcommons.bryant.edu/cgi/viewcontent.cgi?article=1012&context=honors_accounting

Dellaportas, S., Stevenson-Clarke, P., Joshi, M., & De Fazio, T. (2023). Reflective practice and learning in accounting education. *Accounting Education, 32*(4), 355–381. https://doi.org/10.1080/09639284.2022.2076565

Denton, A. W. (2018). The use of a reflective learning journal in an introductory statistics course. *Psychology Learning & Teaching, 17*(1), 84–93. https://doi.org/10.1177/1475725717728676

Dewey, J. (1933). *How we think*. Prometheus Books.

Diseth, A. (2025). Reflection notes as a tool for professional development of pre-service psychology teachers. *Reflective Practice*, 1–11. https://doi.org/10.1080/14623943.2025.2504139

Dunfee, H., Rindflesch, A., Driscoll, M., Hollman, J., & Plack, M. M. (2008). Assessing reflection and higher-order thinking in the clinical setting using electronic discussion threads. *Journal of Physical Therapy Education, 22*(2), 60–67. https://doi.org/10.1097/00001416-200807000-00009

Dunlap, J. C. (2006). Using guided reflective journaling activities to capture students' changing perceptions. *TechTrends, 50*(6), 20–26. https://doi.org/10.1007/s11528-006-7614-x

Dunne, M., Penman, M., & Nisbet, G. (2024). Exploring the outcomes of a reflective teaching strategy with students: A feasibility study. *International Journal of Speech-Language Pathology, 26*(4), 532–543. https://doi.org/10.1080/17549507.2023.2223373

Duron, R., Limbach, B., & Waugh, W. (2006). Critical thinking framework for any discipline. *International Journal of Teaching and Learning in Higher Education, 17*(2), 160–166. https://isetl.org/ijtlhe/

Dyment, J. E., & O'Connell, T. S. (2011). Assessing the quality of reflection in student journals: A review of the research. *Teaching in Higher Education, 16*(1), 81–97. https://doi.org/10.1080/13562517.2010.507308

Facione, P. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction (The Delphi Report).* Academic Press.

Ficco, C., García, G., & Chiecher, A. (2025). Learning strategies of students of accounting and other economic science programs: Differences according to performance and academic subject. *Accounting Education*, 1–35. https://doi.org/10.1080/09639284.2025.2535302

Fitzsimons, S., Sexton, P., Lehane, P., Donlon, E., McDonald, E., Karakolidis, A., & McKeever, C. (2025). Understanding pre-service teachers' improvement in professional practice: A quantitative perspective. *Irish Educational Studies, 44*(2), 341–357. https://doi.org/10.1080/03323315.2024.2330883

Germanou, E., Hassall, T., & Tournas, Y. (2009). Students' perceptions of the accounting profession: A work value approach. *Asian Review of Accounting, 17*(2), 136–148. https://doi.org/10.1108/13217340910975279

Ghanizadeh, A. (2017). The interplay between reflective thinking, critical thinking, self-monitoring, and academic achievement in higher education. *Higher Education, 74*(1), 101–114. https://doi.org/10.1007/s10734-016-0031-y

Gibbs, G. (1988). *Learning by doing: A guide to teaching and learning methods*. FEU.

Gogus, A., Göğüş, N. G., & Bahadır, E. (2019). Intersections between critical thinking skills and reflective thinking skills toward problem solving. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, 49*, 1–19. https://doi.org/10.9779/pauefd.526407

Goosen, R., & Steenkamp, G. (2023). Activating accounting students' decision-making skills through a reflective self-assessment workshop on learning styles. *The International Journal of Management Education, 21*(3), Article 100858. https://doi.org/10.1016/j.ijme.2023.100858

Gordanier, J., Hauk, W., & Sankaran, C. (2019). Early intervention in college classes and improved student outcomes. *Economics of Education Review, 72*, 23–29. https://doi.org/10.1016/j.econedurev.2019.05.003

Gorlewski, J., & Greene, K. (2011). Research for the classroom: The power of reflective writing. *The English Journal, 100*(4), 90–93. https://doi.org/10.58680/ej201113546

Hartmann, A., Vinke-de Kruijf, J., & Van Weesep, R. (2023). Asking the right questions: The role of reflection for learning in and between projects. *International Journal of Project Management, 41*(5), Article 102494. https://doi.org/10.1016/j.ijproman.2023.102494

Harvey, M., Coulson, D., & McMaugh, A. (2016). Towards a theory of the ecology of reflection: Reflective practice for experiential learning in higher education. *Journal of University Teaching and Learning Practice, 13*(2). https://doi.org/10.53761/1.13.2.2

Harvey, M., Walkerden, G., Semple, A., McLachlan, K., Lloyd, K., & Bosanquet, A. (2025). Reflecting on reflective practice: Issues, possibilities and guidance principles. *Higher Education Research & Development*, 1–9. https://doi.org/10.1080/07294360.2025.2463517

Hattie, J. A. C., & Donoghue, G. M. (2016). Learning strategies: A synthesis and conceptual model. *NPJ Science of Learning, 1*(1), Article 16013. https://doi.org/10.1038/npjscilearn.2016.13

Helyer, R. (2015). Learning through reflection: The critical role of reflection in work-based learning (WBL). *Journal of Work-Applied Management, 7*(1), 15–27. https://doi.org/10.1108/JWAM-10-2015-003

Hemati Alamdarloo, G., & Moradi, S. (2013). The relationship between students' conceptions of learning and their academic achievement. *Psychology, 4*(1), 44–49. https://doi.org/10.4236/psych.2013.41006

Heydari, S., & Beigzadeh, A. (2024). Medical students' perspectives of reflection for their professional development. *BMC Medical Education, 24*(1), Article 1399. https://doi.org/10.1186/s12909-024-06401-2

Ho, W. W., & Lau, Y. H. (2025). Role of reflective practice and metacognitive awareness in the relationship between experiential learning and positive mirror effects: A serial mediation model. *Teaching and Teacher Education, 157*, Article 104947. https://doi.org/10.1016/j.tate.2025.104947

Howell, R. A. (2021). Engaging students in education for sustainable development: The benefits of active learning, reflective practices and flipped classroom pedagogies. *Journal of Cleaner Production, 325*, Article 129318. https://doi.org/10.1016/j.jclepro.2021.129318

Jarvis, M.-A., & Baloyi, O. B. (2020). Scaffolding in reflective journaling: A means to develop higher order thinking skills in undergraduate learners. *International Journal of Africa Nursing Sciences, 12*, 100195. https://doi.org/10.1016/j.ijans.2020.100195

Jiayuan, Z., Xiangzi, J., Yang, L., Hui, Z., & Li-Na, M. (2025). Deep learning approach in undergraduate nursing students and their relationship with learning outcomes: A latent profile analysis. *Nurse Education in Practice*, 104379. https://doi.org/10.1016/j.nepr.2025.104379

Kadiyono, A. L., & Hafiar, H. (2017). The role of academic self-management in improving students' academic achievement. In *Ideas for 21st century education* (pp. 117–120). Routledge. https://doi.org/10.1201/9781315166575-30

Karbalaei, A. (2012). Critical thinking and academic achievement. *Íkala, Revista de Lenguaje y Cultura, 17*(2), 121–128. https://doi.org/10.17533/udea.ikala.10948

Katshuna, H. M., & Shikalepo, E. E. (2023). Unpacking teachers' roles in the implementation of new school curriculum. *International Journal of Social Science and Human Research, 6*(10), 6430–6433. https://doi.org/10.47191/ijsshr/v6-i10-83

Khoshgoftar, Z., & Barkhordari-Sharifabad, M. (2023). Medical students' reflective capacity and its role in their critical thinking disposition. *BMC Medical Education, 23*(1), 198. https://doi.org/10.1186/s12909-023-04163-x

Kovač, V., Nome, D., Jensen, A., & Skreland, L. L. (2025). The why, what and how of deep learning: Critical analysis and additional concerns. *Education Inquiry, 16*(2), 237–253. https://doi.org/10.1080/20004508.2023.2194502

Krapivnyk, G., Tuchyna, N., Bashkir, O., Borysov, V., Gonchar, O., & Plakhtyeyeva, V. (2021). Modelling the process of reflection in pre-service teacher education. *Revista Românească pentru Educație Multidimensională, 13*(3), 116–133. https://doi.org/10.18662/rrem/13.3/443

Labuschagne, A. (2003). Qualitative research: Airy fairy or fundamental? *The Qualitative Report, 8*(1), 100–103. https://doi.org/10.46743/2160-3715/2003.1901

Lau, Y., & Lim, S. (2015). Learning approaches in accounting education: Towards deep learning. *Management Science Letters, 5*(9), 861–866. https://doi.org/10.5267/j.msl.2015.6.011

Leal Filho, W., Raath, S., Lazzarini, B., Vargas, V. R., de Souza, L., Anholon, R., Quelhas, O. L. G., Haddad, R., Klavins, M., & Orlovic, V. L. (2018). The role of transformation in learning and education for sustainability. *Journal of Cleaner Production, 199*, 286–295. https://doi.org/10.1016/j.jclepro.2018.07.017

Liu, Y. L. (2019). Using reflections and questioning to engage and challenge online graduate learners in education. *Research and Practice in Technology Enhanced Learning, 14*(1), 1–10. https://doi.org/10.1186/s41039-019-0098-z

López-Cuello, J., Uitdewilligen, S., & Sambeth, A. (2024). Triggers and conducive factors for reflection in university students: A focus group study. *Reflective Practice, 25*(4), 484–498. https://doi.org/10.1080/14623943.2024.2325418

Mahboub, R. M. (2022). Factors affecting accounting students' performance at university in Lebanon. *BAU Journal – Creative Sustainable Development, 3*(2), Article 2. https://doi.org/10.54729/QBUM4617

Maqsood, Z., Sajjad, M., & Yasmin, R. (2025). Effect of feedback-integrated reflection on deep learning of undergraduate medical students in a clinical setting. *BMC Medical Education, 25*(1), 66. https://doi.org/10.1186/s12909-025-06648-3

Martín-Raugh, M., Kell, H., Ling, G., Fishtein, D., & Yang, Z. (2023). Noncognitive skills and critical thinking predict undergraduate academic performance. *Assessment & Evaluation in Higher Education, 48*(3), 350–361. https://doi.org/10.1080/02602938.2022.2073964

Mbele, B., Makhaba, L., Nzima, D., Hlongwane, M., Thwala, J., Edwards, D., Sibiya, M., & Edwards, S. (2015). An experiential investigation into the phenomenon of respect in Zulu culture. *Indilinga: African Journal of Indigenous Knowledge Systems, 14*(1), 87–102. https://doi.org/10.10520/EJC174402

McChlery, S., & Visser, S. (2009). A comparative analysis of the learning styles of accounting students in the United Kingdom and South Africa. *Research in Post-Compulsory Education, 14*(3), 299–315. https://doi.org/10.1080/13596740903139404

Mdingi, M. S. (2018). *Academic performance of pre-service accounting education students at a university of technology* [Master's thesis, Cape Peninsula University of Technology]. http://hdl.handle.net/20.500.11838/2947

Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adult and Continuing Education, 1997*(74), 5–12. https://doi.org/10.1002/ace.7401

Mezirow, J. (2018). Transformative learning theory. In *Contemporary theories of learning* (pp. 114–128). Routledge. https://doi.org/10.4324/9781315147277-8

Minott, M. A. (2008). Valli's typology of reflection and the analysis of pre-service teachers' reflective journals. *Australian Journal of Teacher Education, 33*(5), 55–65. https://doi.org/10.14221/ajte.2008v33n5.4

Mokhampanyana, M. (2018). *A strategy guide to improve poor academic performance of first-year accounting students at a university of technology* [Doctoral dissertation, Central University of Technology, Free State]. http://hdl.handle.net/11462/1914

Moyo, G. N., Moreeng, B., & Mosia, M. (2023). Exploring the accounting teaching practices of lecturers in a higher education institution: A case at a South African university. *Social Sciences, Humanities and Education Journal (SHE Journal), 4*(2), 414–433. http://e-journal.unipma.ac.id/index.php/SHE

Murawski, L. M. (2014). Critical thinking in the classroom… and beyond. *Journal of Learning in Higher Education, 10*(1), 25–30. https://files.eric.ed.gov/fulltext/EJ1143316.pdf

Murillo-Llorente, M. T., Navarro-Martínez, O., Valle, V. I., & Pérez-Bermejo, M. (2021). Using the reflective journal to improve practical skills integrating affective and self-critical aspects in impoverished international environments: A pilot test. *International Journal of Environmental Research and Public Health, 18*(16), 8876. https://doi.org/10.3390/ijerph18168876

Naseer, F., Khan, M. N., Tahir, M., Addas, A., & Aejaz, S. H. (2024). Integrating deep learning techniques for personalized learning pathways in higher education. *Heliyon, 10*(11), e32628. https://doi.org/10.1016/j.heliyon.2024.e32628

Negash, T. T., Eshete, M. T., & Hanago, G. A. (2022). Students' learning approaches as a factor of academic achievement at selected public universities: A cross-sectional study. *Frontiers in Education, 7*, 965573. https://doi.org/10.3389/feduc.2022.965573

Nhat, T. N. M., & Van Le, T. (2023). Effects of reflective thinking on deep learning in theoretical linguistics classes. *International Journal of Instruction, 16*(4). https://doi.org/10.29333/iji.2023.1647a

Nja, C. O., Orim, R. E., Neji, H. A., Ukwetang, J. O., Uwe, U. E., & Ideba, M. A. (2022). Students' attitude and academic achievement in a flipped classroom. *Heliyon, 8*(1), e08792. https://doi.org/10.1016/j.heliyon.2022.e08792

Oladele, B. K., Ligali, O., & Ndlovu, M. (2024). Evaluation of the nexus between student attitude, teacher teaching methods, and achievement in junior secondary school mathematics. *EUREKA: Social and Humanities, 2*, 56–63. https://doi.org/10.21303/2504-5571.2024.003330

Olifant, T., Cekiso, M., Arends, J., Mandende, P., Dieperink, M., & Jadezweni, J. (2024). Students' perceptions and attitudes toward factors contributing to the high failure rate of first-year accounting students at a South African university. *South African Journal of Higher Education, 38*(6), 163–183. https://doi.org/10.20853/38-6-5495

Olteanu, C. (2017). Reflection-for-action and the choice or design of examples in the teaching of mathematics. *Mathematics Education Research Journal, 29*(3), 349–367. https://doi.org/10.1007/s13394-017-0211-9

Papageorgiou, E. (2017). Accounting students' profile versus academic performance: A five-year analysis. *South African Journal of Higher Education, 31*(3), 209–229. https://doi.org/10.20853/31-3-1064

Papageorgiou, E. (2022). Self-regulated learning strategies and academic performance of accounting students at a South African university. *South African Journal of Higher Education, 36*(1), 251–278. https://doi.org/10.20853/36-1-4546

Papageorgiou, E. (2023). The inclusion of critical thinking in an accounting curriculum: Students' perceptions. *Journal of Education, 91*, 132–154. https://doi.org/10.17159/2520-9868/i91a08

Pehlivan, A. (2013). The effect of the time management skills of students taking a financial accounting course on their course grades and grade point averages. *International Journal of Business and Social Science, 4*(5). https://ijbss.thebrpi.org

Phakiti, A., & Paltridge, B. (2015). Approaches and methods in applied linguistics research. In *Research methods in applied linguistics: A practical resource* (pp. 5–25). Bloomsbury.

Pienaar, J. (2019). *Academic performance and cognitive critical thinking skills of certificate in theory of accounting students at Nelson Mandela University* [Master's thesis, Nelson Mandela University]. http://hdl.handle.net/10948/43196

Poulton, P. (2025). Preservice teachers as curriculum deliverers or curriculum-makers? Exploring curriculum-making conceptions and opportunities in professional experiences. *The Australian Educational Researcher*, 1–27. https://doi.org/10.1007/s13384-025-00808-6

Prayogi, S., Verawati, N. N. S. P., Bilad, M. R., Samsuri, T., Asy'ari, M., Yusup, M. Y., Azmi, I., & Ernita, N. (2025). Emphasizing reflective processes in scientific inquiry and its impact on preservice science teachers' critical thinking skills. *Social Sciences & Humanities Open, 12*, 101895. https://doi.org/10.1016/j.ssaho.2025.101895

Ramezani, G., Norouzi, A., Arabshahi, S. K. S., Sohrabi, Z., Zazoli, A. Z., Saravani, S., & Pourbairamian, G. (2022). Study of medical students' learning approaches and their association with academic performance and problem-solving styles. *Journal of Education and Health Promotion, 11*(1), 252. https://doi.org/10.4103/jehp.jehp_900_21

Robinson, M., & Rousseau, N. (2018). Disparate understandings of the nature, purpose and practices of reflection in teacher education. *South African Journal of Childhood Education, 8*(1), 1–9. https://doi.org/10.4102/sajce.v8i1.599

Rodgers, C. (2002). Defining reflection: Another look at John Dewey and reflective thinking. *Teachers College Record, 104*(4), 842–866. https://doi.org/10.1111/1467-9620.00181

Rogers, S. L., Priddis, L. E., Michels, N., Tieman, M., & Van Winkle, L. J. (2019). Applications of the reflective practice questionnaire in medical education. *BMC Medical Education, 19*(1), 47. https://doi.org/10.1186/s12909-019-1481-6

Rosales, L., Seguel, A., & Lasekan, O. (2023). Attitudes towards pedagogical reflection among a group of pre-service English teachers. *Journal of Curriculum and Teaching, 12*(4), 20–30. https://doi.org/10.5430/jct.v12n4p20

Sam, L. (2020). Relationship between learning approaches and academic achievement of accounting education students. *International Journal of Scientific and Research Publications, 10*(7), 919–923. https://doi.org/10.29322/IJSRP.10.07.2020.p103103

Sam, L., Agyapong, D., Tahir, A. A., & Sam, J. K. (2021). Preservice teachers' motivations for the accounting teaching profession: FIT-Choice findings from selected public universities in Ghana. *Journal of Education and Practice, 12*(6), 54–60. https://doi.org/10.7176/JEP/12-6-06

Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. Jossey-Bass.

Schraw, G., & Dennison, R. S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology, 19*(4), 460–475. https://doi.org/10.1006/ceps.1994.1033

Seidel, S. B., & Tanner, K. D. (2013). "What if students revolt?"—Considering student resistance: Origins, options, and opportunities for investigation. *CBE—Life Sciences Education, 12*(4), 586–595. https://doi.org/10.1187/cbe-13-09-0190

Seow, P. S., Pan, G., & Tay, J. S. W. (2014). Revisiting the determinants of students' performance in an undergraduate accountancy degree programme in Singapore. *Global Perspectives on Accounting Education, 11*, 1–23. https://papers.ssrn.com

Setiyawati, E., Mahanal, S., Yuliati, L., & Subayani, N. W. (2024). Literature review of nature of science and explicit-reflective instruction: A strategy design in scientific literacy. *Studies in Learning and Teaching, 5*(2), 428–443. https://doi.org/10.46627/silet.v5i2.469

Shaffee, N. S., Ahmad, E. M., Idris, S. I. Z. S., Ismail, R. F., & Ghani, E. K. (2019). Factors influencing accounting students' under-performance: A case study in a Malaysian public university. *International Journal of Education and Practice, 7*(1), 41–53. https://doi.org/10.18488/journal.61.2019.71.41.53

Shaffie, N., Zin, R. M., & Ismail, S. (2020). Accounting students' preferences towards learning strategies in Universiti Malaysia Terengganu. *Universiti Malaysia Terengganu Journal of Undergraduate Research, 2*(4), 75–88. https://doi.org/10.46754/umtjur.v2i4.182

Shin, S., Lee, I., Kim, J., Oh, E., & Hong, E. (2023). Effectiveness of a critical reflection competency program for clinical nurse educators: A pilot study. *BMC Nursing, 22*(1), 69. https://doi.org/10.1186/s12912-023-01236-6

Simamora, R. M., & Pasaribu, D. (2023). Education should embrace all potential: Students' reflective essays on the meaning of Merdeka Belajar. *Studies in Learning and Teaching, 4*(1), 68–87. https://doi.org/10.46627/silet

Simamora, R. M., Probosini, A. R., & Sarjiwo, S. (2024). Learning to be a teacher: Prospective teachers' experiences and perceptions in microteaching course. *Studies in Learning and Teaching, 5*(3), 688–719. https://doi.org/10.46627/silet.v5i3.509

Slade, M. L., Burnham, T. J., Catalana, S. M., & Waters, T. (2019). The impact of reflective practice on teacher candidates' learning. *International Journal for the Scholarship of Teaching and Learning, 13*(2), Article 15. https://doi.org/10.20429/ijsotl.2019.130215

Sölpük, N. (2017). The effect of attitude on student achievement. In *The factors effecting student achievement: Meta-analysis of empirical studies* (pp. 57–73). Springer. https://doi.org/10.1007/978-3-319-56083-0_4

Spiteri, D. (2025). The hall of mirrors: Reflecting on pre-service teachers' reflections. *Teachers and Teaching, 31*(1), 52–69. https://doi.org/10.1080/13540602.2024.2320147

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research*. Sage Publications.

Sung, C. C. M. (2025). Students' reflections on their learning in a digital research project: The case of an integrated skills approach to project-based learning in higher education. *Reflective Practice*, 1–15. https://doi.org/10.1080/14623943.2025.2504223

Tabassum, F., Bibi, A., & Mazhar, U. (2024). Reflective practices: A comparative analysis of gender-based differences and barriers at higher secondary school level. *Academy of Education and Social Sciences Review, 4*(3), 312–320. https://doi.org/10.48112/aessr.v4i3.818

Talaei Khoei, T., Ould Slimane, H., & Kaabouch, N. (2023). Deep learning: Systematic review, models, challenges, and research directions. *Neural Computing and Applications, 35*(31), 23103–23124. https://doi.org/10.1007/s00521-023-08957-4

Tlale-Mkhize, M., & Liebenberg, J. (2024). Reflective practice to foster critical thinking among students. *MyRes*, 7. https://doi.org/10.26803/MyRes.2024.21

Tsingos, C., Bosnic-Anticevich, S., & Smith, L. (2015). Learning styles and approaches: Can reflective strategies encourage deep learning? *Currents in Pharmacy Teaching and Learning, 7*(4), 492–504. https://doi.org/10.1016/j.cptl.2015.04.006

Turner, M., & Baskerville, R. F. (2011). The experience of deep learning by accounting students. *SSRN Electronic Journal, 22*(6), 582–604. https://doi.org/10.2139/ssrn.1912131

van Breda, A. D., & Agherdien, N. (2012). Promoting deep learning through personal reflective e-journaling: A case study. *Social Work/Maatskaplike Werk, 48*(2). https://doi.org/10.15270/48-2-93

van der Loo, J., Krahmer, E., & van Amelsvoort, M. (2019). Reflection in learning to write an academic text: How does reflection affect observational learning and learning-by-doing in a research synthesis task? *Frontiers in Education, 4*, Article 19. https://doi.org/10.3389/feduc.2019.00019

van Zyl, A., Dampier, G., & Ngwenya, N. (2020). Effective institutional intervention where it makes the biggest difference to student success: The University of Johannesburg (UJ) integrated student success initiative (ISSI). *Journal of Student Affairs in Africa, 8*(2), 59–71. https://doi.org/10.24085/jsaa.v8i2.4448

Veine, S., Anderson, M. K., Andersen, N. H., Espenes, T. C., Soyland, T. B., Wallin, P., & Reams, J. (2020). Reflection as a core student learning activity in higher education: Insights from nearly two decades of academic development. *International Journal for Academic Development, 25*(2), 147–161. https://doi.org/10.1080/1360144X.2019.1659797

Velasco, R. M. (2021). Student-related factors of academic performance: A case of non-accounting students in accounting module. *The Research Probe, 1*(1), 18–44. https://doi.org/10.53378/346500

Weaver, J. C., Bertelsen, C. D., & Othman, K. (2022). Reflection impacts preservice teachers' instruction and planning. *Journal of Empowering Teaching Excellence, 3*. https://doi.org/10.26077/b2e1-0829

Whalen, K., & Paez, A. (2021). Student perceptions of reflection and the acquisition of higher-order thinking skills in a university sustainability course. *Journal of Geography in Higher Education, 45*(1), 108–127. https://doi.org/10.1080/03098265.2020.1804843

Wicaksana, Y. D., Widoretno, S., & Dwiastuti, S. (2020). The use of critical thinking aspects on module to enhance students' academic achievement. *International Journal of Instruction, 13*(2), 303–314. https://doi.org/10.29333/iji.2020.13221a

Williams, G. W., & Nel, B. P. (2023). Teachers' professional development shaped through self-reflection using video-stimulated recall. *African Journal of Teacher Education and Development, 2*(1), Article 8. https://doi.org/10.4102/ajoted.v2i1.21

Winberg, C., Garraway, J., & Engel-Hills, P. (2023). A reflection on critical reflection in professional education research. *Critical Studies in Teaching and Learning (CriSTaL), 11*(SI1), 100–118. https://doi.org/10.14426/cristal.v11iSI.626

Wolcott, S. K., & Sargent, M. J. (2021). Critical thinking in accounting education: Status and call to action. *Journal of Accounting Education, 56*, 100731. https://doi.org/10.1016/j.jaccedu.2021.100731

Yin, R. K. (2014). *Case study research: Design and methods*. Sage Publications.

Zhai, N., Huang, Y., Ma, X., & Chen, J. (2023). Can reflective interventions improve students' academic achievement? A meta-analysis. *Thinking Skills and Creativity, 49*, 101373. https://doi.org/10.1016/j.tsc.2023.101373

Author (s):

* Favourite Mhlongo (Corresponding Author)
Department of Commerce Education, School of Education,
University of KwaZulu-Natal,
121 Marianhill Road, Pinetown, 3610, South Africa
Email: mhlongof1@ukzn.ac.za