# Enhancing Engagement in Accounting Education: Strategies and Challenges of Implementing Problem-Solving Techniques for Secondary School Teachers

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## ABSTRACT

This article examines the integration of problem-solving strategies and innovative pedagogical approaches in accounting education at the secondary school level. Drawing on contemporary literature, the discussion highlights how methods such as Problem-Based Learning (PBL), gamification, and blended learning enhance student engagement, motivation, and the ability to apply theoretical concepts to practical financial scenarios. The article also emphasizes the importance of cultivating critical thinking, collaborative skills, and metacognitive awareness, which are essential for navigating the complexities of modern financial environments. Challenges such as resistance to change, limited resources, and the expectation–performance gap are analyzed, alongside the transformative impact of the Covid-19 pandemic on teaching and learning practices. Finally, the article outlines future directions for curriculum innovation, stressing the need for technology integration, interdisciplinary perspectives, and flexibility to prepare students for an increasingly globalized and digitalized economy. Overall, the study underscores the necessity of aligning accounting education with 21st-century competencies to ensure that learners are not only academically successful but also future-ready.

**Keywords:** Accounting Education, Problem-Solving Strategies, Innovative Pedagogy, Critical Thinking, Curriculum Innovation

## BACKGROUND OF THE STUDY

In the contemporary educational panorama, the importance of techniques for resolving problems in accounting education cannot be overrated. Accounting plays a vital role in the functioning of both personal and corporate financial management, and it is therefore essential for secondary school teachers to equip students with the necessary skills to engage meaningfully with accounting principles (Ezeagba, 2014). Beyond the ability to handle numbers, accounting education shapes learners' capacity to analyze information, make informed decisions, and apply theoretical frameworks to practical financial contexts. In a world where economies are increasingly knowledge-based and interconnected, the mastery of problem-solving in accounting education becomes not just a pedagogical choice, but a necessity for preparing students to meet future challenges.

The ability to solve problems is widely recognized as a distinctive mark of competent financial professionals. These skills, however, should not be cultivated only at the university level; they must be nurtured from an early stage of learning. Integrating problem-solving techniques into the accounting curriculum at secondary school allows students to acquire analytical skills, decision-making abilities, and the capability to apply theoretical concepts to real-world scenarios. Such skills also align with the broader objectives of education in the 21st century, where critical thinking and active learning are prioritized. As students engage with problem-solving tasks, they are more likely to retain knowledge, internalize accounting principles, and develop the confidence to apply what they have learned beyond the classroom. At the same time, the adoption of innovative strategies that integrate practical applications of accounting bridges the gap between abstract theory

and lived experience. Approaches such as simulations, case studies, and collaborative projects create opportunities for students to see the relevance of accounting in everyday life. When learners can link classroom knowledge with tangible problems, their sense of motivation and enthusiasm increases significantly. For example, a simulation exercise where students prepare a budget for a small business not only teaches them technical skills but also fosters a sense of ownership and practical application. These experiential learning strategies bring immediacy and relevance to the subject, making accounting not just a school requirement but a meaningful skill set that students recognize as useful for their personal and future professional lives.

Nevertheless, the incorporation of problem-solving strategies in accounting education is not without its challenges. A persistent obstacle lies in the traditional emphasis on rote memorization and standardized assessments. These approaches, though long-established, often fail to capture a student's ability to think critically or solve practical problems. A rigid educational paradigm may suffocate creativity and restrict students' opportunities to engage deeply with the subject matter. To counteract this, secondary school teachers must embrace pedagogical flexibility by adopting varied instructional strategies that prioritize active problem-solving over passive knowledge acquisition. Another important factor to consider is the professional readiness of teachers themselves. Implementing innovative strategies effectively requires educators to undergo professional development and training. Many secondary school teachers may feel constrained by limited exposure to such approaches or by institutional expectations that focus narrowly on examination outcomes. Training programs focused on problem-solving techniques can provide teachers with the confidence and tools necessary to foster student engagement. Professional learning communities can also support this transition by allowing educators to share strategies, exchange challenges, and collaboratively refine practices.

Ultimately, the growing importance of accounting in today's global economy underscores the urgency of integrating innovative teaching methods that emphasize both student engagement and problem-solving skills. While the path towards this pedagogical transformation is complex, the rewards are substantial: students not only learn accounting more effectively but also develop the competencies required to navigate real-world financial challenges. As secondary school teachers embrace these changes, they prepare their students not merely for examinations, but for the realities of future careers and responsible participation in financial decision-making. Thus, the integration of problem-solving in accounting education stands as a crucial step toward aligning classroom practices with the demands of the modern world.

**The Significant of Problem-Solving in Accounting Education**

The important of problem-solving skills in accounting education lies in the very nature of the discipline itself. Accounting, by definition, involves the systematic process of identifying, measuring, and communicating financial information in order to support decision-making. It is not a subject that exists in isolation, but one that is applied in diverse real-world contexts ranging from household budgeting to multinational corporations' financial reporting. As such, the teaching and learning of accounting cannot be limited to memorization of rules, formulas, or definitions. Instead, it must prioritize the development of analytical and problem-solving abilities that enable students to interpret financial information and use it to resolve complex issues effectively (Ezeagba, 2014). The ability to solve problems has long been identified as a distinguishing feature of successful financial professionals. In practice, accountants are frequently confronted with ambiguous situations where they must make decisions based on incomplete information, balance competing priorities, or evaluate risks under conditions of uncertainty. By exposing students to problem-solving tasks early in their education, teachers help them build resilience and confidence in facing these types of challenges. For example, secondary students who practice analyzing simplified versions of financial statements are better prepared to engage with more advanced accounting concepts later on. This incremental process of developing problem-solving skills ensures that learners view accounting not merely as mechanical number-crunching, but as a discipline that equips them with tools to make informed financial judgments.

Integrating problem-solving into accounting lessons also aligns with broader educational objectives, particularly the cultivation of higher-order thinking skills. Bloom's taxonomy, widely referenced in educational theory, emphasizes the progression from lower levels of cognitive engagement such as remembering and understanding—towards higher levels, including analysis, evaluation, and creation. When students are required to analyze case studies, evaluate alternative financial strategies, or design solutions for

simulated business scenarios, they move beyond rote memorization into deeper levels of learning. Such experiences not only strengthen their grasp of accounting principles but also foster transferable skills applicable to a wide range of academic and professional contexts. Another dimension of importance is student engagement. Numerous studies have demonstrated that learners are more motivated when they see relevance in what they study. Accounting, unfortunately, is often perceived by students as abstract, rigid, or overly technical. Without meaningful application, students may become disengaged, viewing the subject as a series of tedious exercises rather than as a dynamic discipline with real-life implications. By integrating problem-solving, teachers can counteract these negative perceptions. For instance, when a classroom activity involves preparing a budget for a school event or managing the accounts of a hypothetical community project, students are able to connect classroom knowledge with tangible experiences. These connections make the learning process more enjoyable and meaningful, thereby enhancing both motivation and long-term retention of knowledge.

Problem-solving also plays a vital role in preparing students for the rapidly evolving demands of the modern economy. Today's accountants are expected not only to record transactions but also to act as advisors, analysts, and decision-support specialists. They must interpret large volumes of data, apply ethical reasoning, and communicate complex information to stakeholders in ways that are clear and actionable. Secondary school education lays the foundation for these competencies. By embedding problem-solving into early accounting education, teachers contribute to shaping future professionals who are not only technically competent but also capable of navigating uncertainty, collaborating effectively, and providing insights in complex business environments. Furthermore, the cultivation of problem-solving skills contributes to the personal development of students. Beyond professional preparation, the ability to resolve financial challenges is essential for everyday life. Secondary school students, many of whom will soon manage personal income, expenses, or even small entrepreneurial ventures, benefit from early exposure to financial problem-solving. Whether it is creating a personal savings plan, evaluating options for purchasing a computer, or comparing the costs and benefits of a loan, these tasks require the application of accounting knowledge to practical decisions. By engaging in such exercises, students acquire financial literacy and independence, both of which are critical for responsible citizenship in today's society.

In conclusion, problem-solving is central to accounting education because it transforms the subject from a static set of procedures into a living discipline with practical relevance. It enhances students' cognitive development, increases motivation and engagement, prepares them for professional and personal financial decision-making, and equips them with transferable skills valued in the 21st century. For these reasons, secondary school teachers must ensure that their pedagogy does not stop at teaching rules and formulas but instead emphasizes real-world application, analytical reasoning, and problem resolution. As Ezeagba (2014) notes, fostering problem-solving abilities in accounting education is not an optional enhancement but a fundamental requirement for developing learners who can thrive in a dynamic and complex financial environment.

## METHODOLOGY

This study employs a qualitative, conceptual review methodology to explore the integration of problem-solving strategies and innovative pedagogical approaches in accounting education at the secondary school level. Given that the purpose of the article is to draw together theoretical perspectives, contemporary research findings, and emerging instructional practices, a conceptual review is the most suitable approach. This method allows for the synthesis of diverse educational perspectives without the requirement of primary data collection, instead relying on existing scholarship to develop a coherent and analytically grounded discussion. The methodological direction of this study is interpretive in nature, acknowledging the role of the researcher in selecting, evaluating, and constructing meaning from the literature. Through this approach, the chapter provides a rigorous foundation for understanding how pedagogical models such as Problem-Based Learning (PBL), gamification, and blended learning contribute to the development of critical thinking, collaboration, motivation, and metacognitive awareness among secondary school accounting students.

The literature reviewed in this study was sourced primarily through electronic academic databases, including Scopus, Web of Science, ERIC, Google Scholar, and ResearchGate. The search strategy was structured to

ensure that only relevant and credible literature was included. Keywords such as "accounting education," "problem-based learning," "gamification in teaching," "blended learning," "21st-century skills," and "secondary school accounting pedagogy" were used to identify sources aligned with the aims of the study. The search focused on literature published between 2013 and 2024 to ensure the discussion is grounded in current educational developments, especially those shaped by the rapid shift to digital learning environments during and after the Covid-19 pandemic. However, older foundational works were included when necessary to frame pedagogical theories and to establish analytical continuity between past and current educational practices. Materials that focused exclusively on tertiary-level accounting without implications for school-level teaching were excluded to maintain alignment with the study's core focus.

The process of literature selection was followed by thematic analysis. Each source was read carefully to identify recurring issues, patterns of pedagogical application, and emerging trends in the teaching and learning of accounting. Initial coding involved listing concepts relating to instructional strategies, learner engagement, teacher practice, and curriculum expectations. These codes were subsequently refined into a set of thematic clusters that guided the analysis: the use of PBL to promote contextual and inquiry-based learning; gamification as a strategy for enhancing motivation and engagement; blended learning as a means of enabling flexible and technology-supported instruction; the development of critical thinking, collaboration, and metacognitive regulation in accounting learning; and challenges surrounding implementation, including resource constraints, teacher resistance, and lack of pedagogical training. The thematic synthesis allowed for the identification of interconnections between these areas, highlighting how innovative pedagogies can be leveraged to align accounting education with broader 21st-century competency goals.

To ensure rigor and trustworthiness, several measures were adopted throughout the analytical process. The selection of peer-reviewed and academically credible sources contributes to the reliability and authority of the discussion. Transparency was maintained by outlining the selection criteria, search timeframe, and analysis procedures, enabling the study to be replicable and verifiable. Furthermore, the research maintains analytical coherence by situating findings within established educational theories and current curriculum expectations, allowing insights to be transferable to similar educational contexts, particularly within systems undergoing digital transformation and pedagogical reform. Although the study does not include empirical fieldwork, its conceptual rigor lies in the careful interpretation and integration of existing scholarship, enabling it to offer grounded recommendations and theoretically informed implications for practice. Overall, the methodology adopted in this research enables a comprehensive and critical understanding of how problem-solving approaches and innovative pedagogical strategies can be meaningfully implemented in secondary school accounting education. By synthesizing contemporary literature, this chapter establishes a solid foundation for the subsequent discussion of findings, offering insights that are relevant to educators, curriculum designers, and policymakers seeking to align accounting education with the competencies and challenges of the 21st-century learning landscape.

## FINDINGS

The findings of this conceptual study reveal that the integration of problem-solving strategies and innovative pedagogical approaches in secondary school accounting education leads to significant improvements in student engagement, cognitive skill development, and application of theoretical knowledge to real-world financial contexts. The literature consistently demonstrates that approaches such as Problem-Based Learning (PBL), gamification, and blended learning shift the learning environment from passive absorption of content toward active participation and meaningful inquiry. These approaches address the limitations of teacher-centered instruction by positioning students as agents in constructing financial understanding rather than recipients of pre-determined procedures.

A central finding is that Problem-Based Learning (PBL) supports the development of higher-order thinking skills among accounting learners. Studies in the past decade report that PBL encourages students to approach accounting tasks as problem-solving processes rather than memorization exercises. For instance, classroom observations in multiple secondary school contexts show that students engaged in PBL activities demonstrated improved interpretation of source documents, stronger justification of financial decisions, and increased accuracy in applying accounting concepts to novel scenarios. One documented classroom vignette describes

students working in groups to analyse a simulated small business transaction set, where they collaboratively determined accounts affected and reflected them in a ledger. The discussion required students to articulate reasoning, negotiate interpretations, and justify decisions. This process cultivated metacognitive awareness, as students learned to reflect on the strategies, they used to solve the accounting problem, rather than merely producing correct answers.

The second major finding highlights the role of gamification in promoting motivation, participation, and sustained engagement. Research indicates that gamified accounting lessons such as scoring systems, challenge-based tasks, competitive quizzes, and simulated business role-play help reduce student anxiety toward complex numerical tasks. In one documented implementation, students participated in a classroom "Accounting Firm Challenge" where each group operated as a simulated firm earning points for accuracy, teamwork, and task completion speed. Teachers reported increased student willingness to participate, fewer complaints of task difficulty, and more voluntary after-class discussion about financial concepts. The literature suggests that gamification is particularly effective for students who typically show low confidence in mathematics-dependent subjects, reinforcing the affective dimension of accounting learning.

The third key finding concerns blended learning, particularly following the Covid-19 pandemic. The sudden shift to digital platforms accelerated the integration of online tools such as Google Classroom, Quizizz, Padlet, and Microsoft Teams into accounting instruction. Post-pandemic studies show that when digital resources are systematically integrated—not merely added on students benefit from increased flexibility, self-paced revision, and opportunities for collaborative interaction outside of classroom hours. One common pattern in the literature is the use of video-based worked examples that allow students to pause, rewind, and review accounting procedures such as double-entry postings or financial statement preparation. Surveys conducted in Malaysian and regional school contexts show that more than half of students report a preference for blended learning because it allows them to learn "at their own speed," particularly when dealing with complex accounting adjustments. The findings therefore indicate that blended learning supports differentiated learning pathways and contributes to inclusive classroom participation.

However, the findings also reveal several persistent challenges. Teacher resistance to change remains a critical issue, especially among educators accustomed to exam-oriented instructional models. Many teachers express concerns that innovative pedagogies require additional time for planning, classroom management, and assessment, without clear guidance from curriculum authorities. Additionally, resource limitations, such as inconsistent internet access, insufficient computing devices, and lack of professional development training, restrict the sustainability of blended and gamified instructional models. Furthermore, a recurring concern in the literature is the expectation–performance gap, whereby students can complete procedural tasks but struggle to explain why they apply specific accounting treatments. This gap underscores the ongoing need for instructional models that emphasize reasoning and conceptual mastery rather than procedural compliance.

In summary, the findings demonstrate that innovative pedagogical approaches hold transformative potential for secondary school accounting education. They enhance not only students' understanding of financial concepts but also develop critical thinking, collaboration, and metacognitive skills necessary for the complexities of modern financial environments. However, successful implementation requires systemic support, teacher training, adequate resources, and a shift in assessment culture toward valuing reasoning and reflective practice.

**Innovative Teaching Strategies**

The adoption of innovative teaching strategies in accounting education has become indispensable in addressing the limitations of traditional instructional methods. Conventional teaching often emphasizes memorization of accounting rules, preparation of ledger entries, or standardized tests. While these methods provide structure, they frequently fail to develop students' ability to think critically or apply knowledge to real-world contexts. To bridge this gap, educators are encouraged to integrate strategies such as Problem-Based Learning (PBL), gamification, and blended learning, each of which emphasizes student engagement, collaboration, and the application of theoretical concepts to authentic situations. These approaches represent a paradigm shift in pedagogy, moving from teacher-centered instruction to learner-centered environments where students take active responsibility for their learning.

**Problem-Based Learning (PBL)**

Problem-Based Learning (PBL) is a learner-centered pedagogical approach that presents students with authentic and complex problems, requiring them to identify solutions through investigation, collaboration, and application of knowledge. In the context of accounting education, PBL situates students in scenarios that closely mirror professional practice. Instead of passively listening to lectures, students take ownership of their learning, analyzing information, asking questions, and testing possible solutions (Moncada & Moncada, 2014).

The effectiveness of PBL lies in its capacity to cultivate both technical and soft skills. For instance, when presented with a case study of a small business experiencing declining profitability, students must analyze financial statements, interpret ratios, and consider operational factors. Beyond the technical analysis, they also develop teamwork, communication, and decision-making skills through collaborative discussions and group work. These skills are highly valued not only in academic settings but also in professional environments, where accountants are expected to provide insights, defend their reasoning, and work effectively within teams.

Moreover, PBL improves student motivation by demonstrating the relevance of accounting principles to real-world challenges. When learners can see how classroom knowledge connects to practical issues—such as budgeting, cash flow management, or financial forecasting—they develop a sense of purpose and intrinsic interest in the subject. This aligns with the broader educational objective of preparing students to understand how accounting functions within the larger business environment.

Despite its advantages, implementing PBL presents challenges. Teachers must design case studies that are realistic, engaging, and aligned with learning objectives. This process can be resource-intensive and time-consuming. Additionally, some educators may hesitate to relinquish control in the classroom, fearing that open-ended tasks could result in disorder or lack of focus. Nevertheless, research indicates that when effectively facilitated, PBL enhances both cognitive development and student engagement, making it a powerful tool for accounting education (Moncada & Moncada, 2014).

**Gamification**

The successful implementation of gamification in accounting education illustrates the potential of game-based elements to enhance engagement and motivation. Gamification involves the integration of features such as points, badges, leader boards, and immediate feedback into learning activities. By transforming traditional accounting exercises into interactive and competitive tasks, teachers can create a stimulating environment that resonates with students' natural inclination for challenge and achievement (Rahman et al., 2021). In practice, gamification can take various forms. For example, students might participate in competitions to prepare accurate balance sheets within a limited timeframe, earning points for correctness and speed. Others may engage in simulation games where they manage the finances of a virtual company, making decisions about budgeting, investment, and financial reporting. These activities not only make learning enjoyable but also foster the application of accounting concepts in dynamic and practical settings.

Gamification also encourages collaborative learning, as students often work in teams to achieve shared goals. This promotes communication, problem-solving, and peer-to-peer teaching, while the competitive aspect motivates individuals to master complex concepts. Importantly, gamification bridges the gap between theory and practice by situating accounting principles within scenarios that mimic professional challenges. For example, role-playing a business audit through a gamified simulation forces student to critically evaluate data, consider ethical dilemmas, and produce justified conclusions. While gamification has demonstrated success, it is not without limitations. Designing meaningful game-based tasks requires significant preparation, creativity, and alignment with curriculum standards. Teachers must ensure that the competitive elements do not overshadow learning objectives. Furthermore, not all students respond positively to competition; some may feel anxious or demotivated. Therefore, careful balance and inclusivity are essential to maximize the benefits of gamification in accounting education (Rahman et al., 2021).

**Blended Learning**

Blended learning combines traditional face-to-face instruction with digital platforms, creating a hybrid educational model that addresses diverse learning styles and preferences. This approach has gained

prominence in accounting education as a means of promoting flexibility, interactivity, and engagement (Kottara et al., 2025). Through blended learning, students gain access to both in-class discussions and online resources, allowing them to learn at their own pace while also benefiting from collaborative activities.

A key feature of blended learning is the integration of Learning Management Systems (LMS), which enable teachers to distribute materials, facilitate discussions, and assess student performance. These platforms often include interactive tools such as quizzes, discussion boards, and video conferencing, all of which stimulate critical thinking and problem-solving (Daugherty & Funke, 2022). Beyond theoretical learning, blended environments also expose students to industry-standard accounting software and simulation tools, thereby bridging academic content with professional practice. Blended learning fosters collaboration through digital tools such as Google Workspace or Microsoft Teams, which allow students to work together on projects regardless of physical location. By sharing documents, providing peer feedback, and co-constructing solutions, students develop teamwork and communication skills alongside technical knowledge. Teachers, in turn, shift from being transmitters of information to facilitators who guide students in navigating digital resources and applying theory to practical scenarios.

However, challenges persist. Disparities in access to reliable devices and internet connections can limit participation for some students, raising issues of equity. Additionally, not all educators are confident in using digital tools effectively, which highlights the need for professional development in technology integration. Traditional assessment methods may also fall short in capturing learning outcomes in blended contexts, necessitating alternative approaches such as project-based assessments or reflective portfolios. Despite these obstacles, blended learning remains a powerful tool for enriching accounting education and preparing students for a digitalized professional world (Kottara et al., 2025).

## DISCUSSION

The findings of this study demonstrate that the integration of problem-solving strategies and innovative pedagogical approaches specifically Problem-Based Learning (PBL), gamification, and blended learning can significantly enhance the teaching and learning of accounting in secondary school contexts. These findings align with earlier research showing that traditional teacher-centered instructional approaches, characterized by memorization and procedural emphasis, often fail to develop students' conceptual understanding and critical thinking skills (Ezeagba, 2014). The persistence of lecture-dominated instruction, as observed in both developed and developing educational systems, reinforces passive learning and limits students' ability to apply accounting concepts in novel financial scenarios (Berková & Králová, 2015). Thus, a key implication of this study is that the shift toward active and student-centered pedagogies is not simply a matter of enhancing student engagement, but is fundamental to improving disciplinary understanding and cognitive development in accounting education.

The finding that PBL strengthens students' analytical reasoning and metacognitive awareness is supported by a growing body of literature emphasizing experiential and inquiry-based learning in accounting. Butler et al. (2019) argue that students develop deeper understanding when they are required to "do, reflect, think, and apply," rather than merely reproduce standard procedures. Similarly, Saputra et al. (2019) demonstrate that the combination of PBL with collaborative learning models effectively fosters critical thinking and cooperative problem-solving. This suggests that accounting education benefits from learning environments where students are expected to articulate their reasoning, critique others' interpretations, and justify financial treatment decisions. In this regard, PBL does not simply enhance technical competency; it cultivates the cognitive flexibility required for financial decision-making in authentic contexts.

Gamification, as highlighted in the findings, contributes positively to student motivation, especially in learning environments where students may perceive accounting as difficult or intimidating. Moncada and Moncada (2014) assert that gamified instructional activities increase emotional engagement and persistence in challenging tasks, which is particularly important for students who lack confidence in numerically oriented subjects. Unlike traditional competitive classroom activities, gamification when thoughtfully implemented can foster collaborative problem-solving and peer-supported learning. However, the success of gamification depends on alignment with instructional goals; superficial game mechanics that reward speed over accuracy

may undermine conceptual understanding. Thus, educators must balance motivational design with pedagogical integrity.

The positive impact of blended learning identified in the findings is consistent with post-pandemic global trends in accounting education. Digital learning platforms provided students with opportunities to review content, revisit worked examples, and self-pace their learning (Tetteh et al., 2023). Sangster et al. (2020) note that the Covid-19 pandemic accelerated the integration of digital pedagogies, pushing educators to adopt virtual learning solutions that may have otherwise taken far longer to gain acceptance. However, the shift also exposed gaps in teacher readiness and infrastructural capacity. These constraints are particularly visible in contexts where technology funding is uneven or professional development for digital pedagogy is limited (Mohammed et al., 2020). Therefore, while blended learning contributes to more flexible and accessible accounting education, its sustainability requires systemic support, professional training, and curriculum-level planning. Another critical point emerging from the findings is the expectation–performance gap in accounting education. Students may successfully complete accounting tasks but struggle to justify their reasoning, explain conceptual relationships, or transfer knowledge to unfamiliar problems. Howcroft (2017) and Bui and Porter (2014) emphasize that this gap reflects a deeper misalignment between school-based accounting instruction and the competencies required in real-world accounting practice. Employers increasingly seek graduates who possess not only technical accounting skills but also communication, collaboration, and analytical reasoning abilities (Rebele & Pierre, 2019; Lawson et al., 2014). The integration of problem-solving-based pedagogies, therefore, responds to an urgent need to prepare students not only for examinations but also for participation in dynamic, technology-driven economic environments (Tsiligiris & Bowyer, 2021).

Overall, the discussion underscores that innovative pedagogies transform accounting education when supported by coherent instructional design, teacher competence, and institutional backing. The effectiveness of PBL, gamification, and blended learning is not inherent in the methods themselves, but in how educators contextualize these approaches within purposeful learning objectives. The findings highlight that meaningful pedagogical change requires sustained professional development, curriculum alignment, access to technological resources, and a shift in assessment culture toward valuing conceptual understanding and reflective thinking. Only through this systemic reorientation can accounting education align with 21st-century learning competencies and adequately prepare students for the evolving demands of the global economy.

**Developing Critical Thinking and Collaborative Skills**

The integration of critical thinking into accounting education is indispensable for cultivating a comprehensive understanding of financial principles and preparing students to address real-world financial scenarios effectively. Accounting is not solely about recording transactions or applying formulas; it is a discipline that requires judgment, analysis, and evaluation. To achieve this, secondary school teachers must go beyond conventional teaching approaches and implement methods that actively promote critical inquiry and collaboration among students. Such practices encourage learners to move from lower-order thinking skills such as remembering and understanding to higher-order skills, including analysis, evaluation, and creation, which are crucial in both academic and professional contexts (Saputra et al., 2019).

Collaborative learning serves as one of the most effective strategies for fostering critical thinking in accounting education. By engaging in group activities, students are exposed to diverse perspectives, which challenges them to refine their reasoning and develop stronger arguments. According to Saputra et al. (2019), collaborative learning enables students to exchange ideas, question one another's assumptions, and collectively construct knowledge. For instance, when students work in teams to analyze financial statements, they must articulate their interpretations, justify their decisions, and reconcile differing viewpoints. This process strengthens not only their technical understanding but also their communication and interpersonal skills, both of which are highly valued in professional accounting practice. The benefits of collaboration extend beyond knowledge acquisition. Working in groups requires students to navigate social dynamics, assign roles, and negotiate responsibilities skills that mirror the collaborative demands of workplace environments. When students jointly evaluate budget scenarios or participate in simulated audits, they learn to manage conflicts, respect alternative perspectives, and contribute constructively to shared goals. These experiences prepare students for professional roles where teamwork and problem-solving are integral to success.

In addition to collaborative approaches, experiential learning practices significantly contribute to the development of critical thinking skills. Experiential learning, as defined by Kolb (1984), emphasizes learning through experience and reflection. In accounting education, this can take the form of simulations, role-playing, or hands-on projects that mimic real-world challenges. For example, students who participate in simulated audits must critically evaluate data, detect inconsistencies, and make decisions based on ethical considerations. Similarly, tasks such as creating business plans or managing mock company accounts require learners to integrate theoretical concepts with practical problem-solving, thereby deepening their understanding of accounting principles. The role of reflection in experiential learning cannot be overstated. After engaging in simulations or group projects, students should be encouraged to reflect on the strategies they used, the challenges they encountered, and the lessons learned. Such reflective practices enable learners to evaluate their decision-making processes and identify areas for improvement. This cycle of action and reflection fosters metacognitive awareness, equipping students with the capacity to adapt and refine their approaches to future problem-solving tasks.

Despite its numerous benefits, the integration of collaborative and experiential learning in accounting education is not without challenges. Teachers must carefully manage classroom dynamics to ensure that all students participate meaningfully. Some learners may dominate discussions, while others may hesitate to contribute, requiring teachers to facilitate inclusivity and balance. In addition, curriculum time constraints can limit opportunities for extensive collaborative projects or simulations. Teachers often face the dilemma of covering required content while also providing space for deeper, more interactive learning experiences. Another issue lies in the varying levels of preparedness among students. Learners enter secondary school with different backgrounds and prior knowledge of accounting, which can affect their ability to engage in higher-order thinking tasks. Some students may struggle with the independence required in collaborative or experiential learning, while others may lack the confidence to share their ideas. To address this, teachers can adopt scaffolding techniques—starting with simpler tasks and gradually increasing complexity—to build student competence and confidence over time.

In summary, developing critical thinking and collaborative skills is central to transforming accounting education into a discipline that prepares students for both academic success and professional practice. By incorporating collaborative learning and experiential methods, teachers foster deeper understanding, improve communication, and build the analytical skills necessary for real-world application. While challenges such as time constraints, classroom dynamics, and student readiness must be addressed, the benefits of cultivating critical and collaborative capacities far outweigh the obstacles. Ultimately, these approaches empower students to move beyond memorization and to become active, reflective learners capable of solving complex accounting problems in both their personal and professional lives (Saputra et al., 2019).

**Challenges in Implementation**

The implementation of problem-solving techniques in accounting education, while widely recognized as beneficial, is accompanied by a number of challenges that secondary school educators must navigate. These challenges arise from structural, institutional, and pedagogical factors that may limit the extent to which innovative approaches can be fully integrated into the classroom. Understanding these barriers is essential, as it allows stakeholders to develop strategies that not only promote the adoption of problem-solving methods but also ensure their sustainability in the long term. One of the most significant challenges is resistance to change among educators and educational institutions. Many teachers have been trained and socialized within traditional pedagogical frameworks that prioritize rote memorization, repetitive practice, and standardized examinations. These methods, while limited in terms of cultivating higher-order thinking skills, provide a sense of structure and predictability. As a result, teachers may feel hesitant to adopt new approaches that appear disruptive or misaligned with long-standing educational practices. Research indicates that this inertia often stems from fear of losing classroom control, the perceived complexity of managing open-ended tasks, and concerns about whether innovative methods align with examination requirements (Berková & Králová, 2015). Such resistance, whether conscious or unconscious, can significantly slow the pace of pedagogical reform.

Another critical challenge is the lack of resources to support the effective integration of problem-solving strategies. Many secondary school accounting programs operate under tight budgets, which limit access to

updated teaching materials, real-world case studies, and technological tools. Without sufficient resources, teachers may struggle to design engaging and realistic problem-solving exercises. For example, simulations or gamified activities often require software or digital platforms, which may be unavailable in resource-constrained schools. Similarly, opportunities for collaboration with businesses or community organizations which could provide authentic case studies—are often limited by logistical and financial barriers. This lack of external engagement restricts students' ability to experience accounting in contexts that mirror professional practice (Berková & Králová, 2015).

A further barrier is the limited professional development opportunities available to teachers. The field of accounting, like many professional disciplines, evolves rapidly in response to changes in technology, regulation, and global business practices. Teachers must therefore continually update their knowledge and skills to remain effective. However, many educators lack access to training programs that focus on innovative teaching strategies, digital tools, or problem-based pedagogy. Without such professional development, teachers may feel unprepared or overwhelmed by the prospect of modifying their teaching methods. This lack of confidence reinforces resistance to change and perpetuates reliance on traditional methods (Berková & Králová, 2015). The time constraints imposed by standardized curricula and examinations also pose significant challenges. Teachers often feel pressured to cover a wide range of content within limited instructional time, leaving little room for exploratory or open-ended problem-solving activities. While traditional approaches allow for quick transmission of information, problem-solving exercises require extended periods for analysis, discussion, and reflection. As a result, teachers may avoid or minimize problem-solving activities in favor of methods that enable them to "get through" the curriculum. This creates a tension between depth of learning and breadth of content coverage, with the latter often taking precedence.

Additionally, there is the issue of student readiness and expectations**.** Many students enter secondary school with preconceived notions of accounting as a subject that involves formulas, rules, and structured procedures. When confronted with problem-solving tasks that require independent thinking, creativity, or collaboration, some students may feel uncomfortable or resistant. This resistance may manifest as reluctance to participate, reliance on peers to complete tasks, or frustration when confronted with ambiguity. Teachers must therefore devote additional effort to scaffolding student learning, gradually increasing the complexity of tasks and providing encouragement to build resilience. Taken together, these challenges present a complex landscape for educators striving to improve accounting education through problem-solving techniques. Overcoming them requires systemic support at multiple levels. Schools and educational policymakers must provide resources, revise curricula to allow greater flexibility, and create professional development opportunities for teachers. Educators themselves must cultivate a willingness to experiment, reflect on their practice, and share experiences within professional learning communities. Finally, students must be guided to appreciate the value of problem-solving as a skill that extends beyond academic achievement into real-world application.

In conclusion, the barriers to implementing problem-solving in accounting education ranging from resistance to change and lack of resources to professional development gaps and time constraints are substantial but not insurmountable. Addressing these obstacles requires a holistic approach that combines institutional support, teacher training, and student preparation. By acknowledging and actively addressing these challenges, stakeholders can create a more adaptable and resilient educational culture, ensuring that the benefits of problem-solving strategies are fully realized in accounting education (Berková & Králová, 2015).

**Bridging the Expectation–Performance Gap**

One of the central concerns in accounting education is the persistent expectation performance gap, which highlights the disparity between what educators and employers expect students to achieve and the actual competencies that graduates acquire during their studies. This gap has profound implications for both teaching effectiveness and student learning outcomes, as it reveals misalignments between classroom practices and the realities of professional accounting environments (Bui & Porter, 2014). Addressing this gap is particularly important at the secondary school level, where foundational skills and attitudes towards accounting are first established.

Educators often expect students to develop competencies in critical thinking, problem-solving, and application of theoretical knowledge**.** However, teaching practices frequently emphasize memorization and standardized

testing. As a result, students may graduate with a solid theoretical understanding of accounting principles but struggle to apply this knowledge to real-world financial scenarios. For instance, a student who has mastered the preparation of journal entries may be unable to analyze a company's financial position or propose solutions for cash flow problems. This disconnect not only undermines students' confidence but also diminishes their readiness to engage with the complex demands of the accounting profession (Bui & Porter, 2014). Howcroft (2017) further emphasizes that students themselves bring preconceived notions about accounting into their educational experiences. Many learners perceive accounting as a rigid and rule-based subject, often shaped by prior exposure or societal perceptions. When confronted with problem-solving tasks that demand creativity and critical reasoning, students may experience a lack of intrinsic motivation or disengagement. This lack of motivation compounds the expectation–performance gap, as students may resist activities that deviate from their expectations of traditional, formula-driven instruction. Consequently, they fail to appreciate accounting as a dynamic field that requires adaptability and judgment.

Bridging this gap requires a pedagogical shift towards more active and applied learning methods. The use of case studies, simulations, and collaborative projects provides students with opportunities to apply accounting principles in realistic contexts. For example, when students analyze the financial health of a simulated company, they must not only demonstrate technical skills but also interpret data, evaluate alternative solutions, and make recommendations. Such activities align closely with the expectations of employers, who increasingly value problem-solving, adaptability, and communication alongside technical proficiency.

Moreover, problem-solving approaches can directly address the misalignment between theoretical understanding and practical application. Darkness and Porter (2014) note that students are more likely to develop relevant competencies when engaged in problem-solving activities that require both analytical and creative reasoning. For instance, preparing financial forecasts for a hypothetical start-up exposes students to uncertainties and decision-making challenges that mirror real-world practice. These exercises not only strengthen conceptual understanding but also cultivate transferable skills that enhance students' employability. Despite these benefits, efforts to bridge the expectation–performance gap encounter challenges. Many educators require professional development to effectively integrate problem-solving strategies into their teaching methodologies. Traditional lecture-based approaches remain deeply ingrained, and shifting towards interactive, student-centered practices demands both pedagogical knowledge and confidence. Howcroft (2017) found that many teachers struggle with the transition to problem-based environments, citing difficulties in managing classroom dynamics and resistance to deviating from familiar methods.

Resource limitations also exacerbate the gap. Schools may lack access to up-to-date technology, authentic case materials, or institutional support for innovative practices. Without these resources, teachers may find it difficult to design learning experiences that reflect the realities of accounting practice. For example, simulations that mimic business environments often require digital tools or collaboration with external organizations, both of which may be unavailable in under-resourced schools. Addressing the expectation–performance gap therefore requires a comprehensive approach that extends beyond individual classrooms. Policymakers, school administrators, and curriculum designers must collaborate to provide the necessary resources, training, and flexibility. At the same time, teachers must be encouraged to gradually integrate problem-solving activities, starting with simpler exercises before progressing to more complex tasks. Students, too, must be guided to shift their perceptions of accounting, recognizing it as an evolving discipline that extends beyond formulas to real-world decision-making.

In summary, the expectation–performance gap in accounting education highlights a critical disconnect between what is taught and what is needed. Students are often equipped with theoretical knowledge but lack the ability to apply this knowledge in practice. Closing this gap demands systemic support, professional development for teachers, and the integration of problem-solving methodologies that align classroom learning with real-world expectations. By bridging this divide, secondary school educators can ensure that their students are not only academically successful but also prepared to thrive in the professional and personal financial landscapes that await them (Howcroft, 2017; Bui & Porter, 2014).

**Metacognitive Strategies in Accounting Education**

Metacognition, often described as "thinking about one's own thinking," plays a pivotal role in enhancing the effectiveness of problem-solving in accounting education. In the context of secondary school learning,

metacognitive strategies enable students not only to acquire knowledge but also to regulate, monitor, and evaluate their cognitive processes during problem-solving activities. These strategies are particularly valuable in accounting, where learners must navigate complex information, make judgments under conditions of uncertainty, and apply principles to practical scenarios (O'Dwyer & Childs, 2014). One of the key aspects of metacognitive strategies is self-regulation**.** Students who engage in self-regulated learning set goals, plan their approaches, and monitor their progress while working through accounting tasks. For example, when preparing a set of financial statements, a metacognitively aware student might first outline the steps involved, anticipate potential difficulties (such as reconciling discrepancies), and evaluate the accuracy of their final product. This reflective approach not only increases efficiency but also enhances the depth of understanding, as learners are more likely to identify errors, recognize gaps in knowledge, and adjust their strategies accordingly (O'Dwyer & Childs, 2014).

Metacognitive strategies also foster critical reflection on problem-solving processes. Rather than focusing solely on outcomes such as whether an answer is correct students are encouraged to analyze how they arrived at their conclusions. This process of reflection can reveal strengths and weaknesses in their reasoning. For instance, a student might realize that they rely too heavily on rote memorization of formulas without fully grasping the underlying concepts. Such awareness empowers learners to adopt alternative strategies, such as visualizing accounting cycles or engaging in collaborative discussions, thereby improving their overall competence.

Incorporating metacognitive instruction into accounting education requires teachers to explicitly model reflective practices. Teachers can, for instance, demonstrate how they approach a problem by verbalizing their thought processes—identifying assumptions, considering alternatives, and weighing potential outcomes. This practice, often referred to as "thinking aloud," provides students with a framework for internalizing metacognitive habits. Over time, students begin to apply these strategies independently, developing greater autonomy and confidence in their problem-solving abilities.

Metacognitive strategies also complement collaborative and experiential learning approaches. When students engage in group projects, reflection becomes an integral part of evaluating group dynamics and collective decision-making. Learners may reflect not only on their own contributions but also on how effectively the group collaborated, communicated, and resolved conflicts. Such reflections can strengthen teamwork and enhance the quality of collaborative outputs. In experiential learning contexts, reflection after simulations or case studies allows students to critically assess the strategies they employed, the obstacles they faced, and the lessons they can carry forward into future tasks. Another benefit of metacognitive strategies lies in their capacity to enhance student motivation and resilience**.** Problem-solving in accounting often involves trial and error, where mistakes are part of the learning process. Without metacognitive awareness, students may perceive errors as failures, leading to frustration or disengagement. However, when learners are taught to view mistakes as opportunities for growth, they are more likely to persist through challenges. By reflecting on why an error occurred and how it might be avoided in the future, students develop resilience and a growth-oriented mindset. This shift in perspective fosters a positive learning environment where persistence is valued over perfection. Despite their benefits, integrating metacognitive strategies into classroom practice presents challenges. Some students may initially resist reflective tasks, perceiving them as unnecessary or time-consuming compared to direct instruction. Teachers, too, may find it difficult to allocate time for reflection amidst the pressure to cover extensive curricula. Additionally, assessing metacognitive development can be complex, as it involves evaluating internal processes that are not always visible in students' written work. To overcome these barriers, educators can incorporate structured reflective activities, such as journals, checklists, or guided questions, which provide students with concrete opportunities to articulate and assess their thinking.

In conclusion, metacognitive strategies significantly enhance the problem-solving capacity of accounting students by promoting self-regulation, critical reflection, and resilience. These strategies empower learners to take ownership of their learning, adapt to challenges, and continuously refine their approaches. For secondary school teachers, fostering metacognitive skills requires deliberate modeling, explicit instruction, and the integration of reflective activities into everyday teaching practices. While challenges exist, the long-term benefits of cultivating metacognitive awareness are substantial, equipping students with the cognitive tools necessary to excel not only in accounting but also in lifelong learning (O'Dwyer & Childs, 2014).

**Impact of the Covid-19 Pandemic**

The Covid-19 pandemic brought unprecedented disruption to educational systems worldwide, and accounting education was no exception. The sudden shift from traditional classroom teaching to online and remote learning environments created both challenges and opportunities for educators and students alike. For secondary school accounting teachers, the pandemic underscored the urgent need for flexibility, adaptability, and innovation in pedagogical practices (Alabdulkarim, 2021). One of the most immediate impacts was the rapid transition to digital platforms**.** Teachers who were accustomed to face-to-face instruction had to pivot almost overnight to online teaching, often with little prior training or preparation. This shift exposed significant disparities in digital literacy among educators, as well as inequities in access to technology among students. In many cases, schools lacked the infrastructure to support seamless online learning, leading to inconsistencies in the quality of instruction. For accounting education, which relies heavily on step-by-step demonstrations and collaborative problem-solving, the lack of physical interaction created additional barriers to effective teaching and learning (Alabdulkarim, 2021).

The pandemic also highlighted the issue of student engagement in virtual environments. In traditional classrooms, teachers can observe body language, gauge student understanding in real-time, and adjust their teaching accordingly. Online platforms, however, limited such interactions, making it more difficult to sustain students' attention and motivation. Accounting, often perceived as abstract and technical, became even more challenging for students who struggled to follow lessons without direct support. Teachers had to experiment with new methods, such as interactive quizzes, breakout room discussions, and digital case studies, to maintain engagement and replicate the collaborative aspects of in-person learning. On the other hand, the pandemic accelerated the adoption of blended and technology-enhanced learning models that may continue to shape accounting education in the future. Teachers were compelled to explore tools such as Learning Management Systems (LMS), video conferencing platforms, and digital accounting software. While initially driven by necessity, these innovations revealed the potential of technology to enhance learning flexibility. Students gained greater access to recorded lectures, digital resources, and self-paced exercises, enabling them to review material as needed. For many learners, this flexibility supported deeper understanding and allowed them to balance academic work with personal responsibilities.

The pandemic also fostered new opportunities for autonomous and self-regulated learning**.** With reduced teacher supervision in virtual settings, students had to take greater responsibility for managing their time, completing assignments, and monitoring their progress. This shift required learners to develop metacognitive skills, such as goal-setting and self-assessment, which are essential for problem-solving in accounting. However, not all students adapted equally well; some struggled with the discipline required for online learning, further exacerbating achievement gaps between motivated and less motivated learners. Another notable impact was the emphasis on collaboration through digital tools**.** Although face-to-face interaction was limited, students engaged in online group projects using platforms such as Google Workspace, Microsoft Teams, or Zoom. These experiences mirrored the realities of remote work in professional accounting, where teams frequently collaborate across geographical boundaries. Thus, while the lack of physical classroom interaction posed challenges, the use of digital collaboration tools provided students with valuable skills that are increasingly relevant in today's globalized and digitalized economy.

However, the pandemic also intensified concerns about equity and accessibility**.** Students from underprivileged backgrounds faced greater difficulties due to limited access to devices, reliable internet connections, or quiet study environments. These disparities often translated into unequal learning outcomes, with some students falling behind despite teachers' efforts to provide support. For secondary school educators, addressing these inequities required creative solutions, such as distributing printed materials, offering asynchronous options, and providing additional one-on-one support to disadvantaged learners.

Finally, the pandemic prompted a broader reflection on the purpose and future direction of education**.** In the context of accounting, it became clear that the discipline could not rely solely on rigid curricula and traditional methods. Instead, the crisis highlighted the importance of preparing students to adapt to uncertainty, think critically, and apply problem-solving skills in dynamic environments. Alabdulkarim (2021) argues that the lessons learned from the pandemic should inform long-term reforms, ensuring that education systems become more resilient, flexible, and responsive to change.

In conclusion, the Covid-19 pandemic profoundly impacted accounting education by disrupting traditional practices and accelerating the integration of digital technologies. While it posed significant challenges in terms of engagement, equity, and teacher preparedness, it also opened new opportunities for blended learning, self-regulation, and digital collaboration. For secondary school accounting education, the pandemic serves as both a cautionary tale and a catalyst for innovation, reminding educators that flexibility, creativity, and problem-solving must be at the heart of future pedagogical strategies (Alabdulkarim, 2021).

**Future Directions and Curriculum Innovation**

The ongoing evolution of the global economy and technological advancements necessitates a continuous rethinking of accounting education. To ensure its relevance, secondary school accounting curricula must move beyond the transmission of technical knowledge and focus on preparing students with competencies that are adaptable, future-oriented, and aligned with the realities of professional practice (Kottara et al., 2025). The future direction of accounting education therefore rests on a commitment to innovation, integration of technology, and pedagogical strategies that prioritize problem-solving, collaboration, and critical thinking.

One of the key priorities for future curriculum development is the integration of technology into the teaching and learning of accounting. Digitalization has transformed the accounting profession, with software tools, data analytics, and artificial intelligence becoming integral to daily practice. For students to be adequately prepared, curricula must incorporate exposure to these technologies at an early stage. Using digital accounting platforms, spreadsheet tools, and simulation software, students can practice real-world financial tasks while simultaneously building digital literacy. This not only enhances their problem-solving abilities but also prepares them for the digital workplace of the future (Kottara et al., 2025). Another important direction is the increased emphasis on interdisciplinary learning**.** Accounting does not exist in isolation; it intersects with economics, business management, law, and ethics. By embedding interdisciplinary perspectives into the curriculum, students can better understand the broader contexts in which financial decisions are made. For example, case studies that require students to evaluate the financial, legal, and ethical implications of business decisions encourage holistic problem-solving. Such an approach aligns with the expectations of employers, who value graduates that can integrate knowledge across domains and provide well-rounded insights.

The curriculum must also prioritize sustainability and ethical decision-making**.** As global concerns about environmental and social responsibility grow, accounting education must prepare students to engage with concepts such as sustainability reporting, corporate social responsibility, and ethical financial management. By incorporating problem-solving tasks that address these issues, students not only learn technical skills but also develop a sense of accountability as future financial decision-makers. This prepares them to contribute meaningfully to both organizational success and societal well-being. Furthermore, the future of accounting education lies in curriculum flexibility and personalization**.** Traditional one-size-fits-all approaches may no longer be sufficient for addressing diverse student needs and aspirations. Personalized learning pathways, facilitated by digital platforms, allow students to progress at their own pace, revisit challenging concepts, and explore areas of particular interest. Teachers, in turn, can use data analytics to track student progress and provide targeted support. Such flexibility fosters student agency, motivation, and deeper engagement with learning tasks.

Problem-solving must remain at the core of curriculum innovation. Future accounting curricula should embed problem-based assessments that require students to apply knowledge in complex scenarios. Instead of relying solely on examinations that test recall, assessment practices should include projects, portfolios, and simulations that evaluate students' ability to analyze, evaluate, and create solutions. This shift not only aligns with real-world professional demands but also closes the expectation–performance gap highlighted in earlier sections. Another direction for innovation is the strengthening of teacher professional development. As the curriculum evolves, teachers must be equipped with the skills and confidence to implement new strategies effectively. This requires ongoing training in both technological tools and pedagogical approaches such as blended learning, gamification, and problem-based methods. Professional learning communities can play a vital role, allowing educators to share experiences, exchange best practices, and collectively overcome challenges. Investment in teacher development ensures that innovative curricula are translated into effective classroom practice.

Globalization also necessitates that accounting education prepares students for a diverse and interconnected world. Future curricula should expose students to international financial reporting standards, cross-border business practices, and global perspectives on financial management. By simulating international case studies or engaging students in collaborative projects across borders, teachers can develop learners' cultural competence and global awareness. Such skills are invaluable in preparing students for participation in the global economy. Finally, future directions in accounting education must embrace resilience and adaptability. The Covid-19 pandemic has already demonstrated the fragility of traditional educational systems and the necessity of flexibility in times of crisis. Future curricula must therefore be designed to withstand disruptions, ensuring that students can continue learning through blended and digital means even under adverse conditions. Resilience also extends to preparing students to navigate uncertainty in the financial world, where rapid changes in technology, regulation, or global markets require adaptability and continuous learning.

In conclusion, the future of accounting education lies in curriculum innovation that integrates technology, fosters interdisciplinary perspectives, emphasizes ethics and sustainability, and prioritizes flexibility and personalization. Teachers must be empowered through professional development, while students must be equipped with the skills to solve complex problems in diverse and dynamic contexts. By embracing these directions, accounting education at the secondary school level can remain relevant, future-ready, and aligned with the demands of an evolving world (Kottara et al., 2025).

## CONCLUSION

The transformation of accounting education, particularly at the secondary school level, hinges upon the successful integration of problem-solving approaches, innovative pedagogies, and future-oriented curricular reforms. As discussed throughout this article, the development of problem-solving skills is not a supplementary aspect of learning but a fundamental requirement for preparing students to navigate both academic challenges and real-world financial complexities (Ezeagba, 2014). In this regard, accounting must be taught not simply as a technical discipline concerned with rules and procedures, but as a dynamic field that demands critical thinking, creativity, and adaptability. The exploration of innovative teaching strategies including Problem-Based Learning (PBL), gamification, and blended learning demonstrates the potential of these methods to bridge the gap between abstract theory and lived experience (Moncada & Moncada, 2014; Rahman et al., 2021; Kottara et al., 2025). These approaches shift the classroom from a teacher-centered environment to one that is learner-centered, empowering students to take responsibility for their own learning. PBL immerses learners in authentic, real-world problems that demand analysis, collaboration, and judgment. Gamification introduces elements of competition, motivation, and fun into accounting tasks, thereby increasing engagement and retention. Blended learning combines the strengths of digital platforms with face-to-face interactions, offering flexibility and access to resources that extend beyond the classroom walls.

Equally significant is the cultivation of critical thinking and collaborative skills, which equip students to evaluate, communicate, and solve problems in ways that mirror professional accounting practice (Saputra et al., 2019). Collaborative and experiential learning provide contexts for students to engage in deeper inquiry, reflect on their reasoning, and work effectively in groups. These skills extend beyond academic performance, preparing learners for the teamwork and decision-making required in professional environments. However, the path to reform is not without its challenges. Resistance to change, lack of resources, insufficient professional development, and time constraints all hinder the implementation of innovative methods (Berková & Králová, 2015). Similarly, the expectation–performance gap remains a pressing concern, as students often leave school with theoretical knowledge but insufficient ability to apply it in practice (Bui & Porter, 2014; Howcroft, 2017). Addressing these challenges requires systemic support from policymakers, administrators, and educational institutions, as well as ongoing commitment from teachers to experiment, adapt, and innovate. The role of metacognitive strategies further enriches this transformation by fostering students' self-awareness, reflection, and resilience (O'Dwyer & Childs, 2014). When learners are trained to monitor and evaluate their thinking, they develop autonomy and persistence in problem-solving tasks. This not only enhances their performance in accounting but also equips them with lifelong learning skills essential for personal and professional growth.

The Covid-19 pandemic highlighted both vulnerabilities and opportunities in education, forcing rapid adaptation to digital platforms and underscoring the need for resilience and flexibility (Alabdulkarim, 2021).

While the sudden shift to online learning posed challenges in engagement, equity, and teacher preparedness, it also accelerated the adoption of blended learning models and digital collaboration tools. These experiences offer valuable lessons for building more resilient and adaptable systems of accounting education in the future. Looking ahead, the future directions of accounting education point toward curriculum innovation that integrates technology, emphasizes ethics and sustainability, fosters interdisciplinary approaches, and embraces flexibility and personalization (Kottara et al., 2025). Such reforms will ensure that accounting education remains relevant in an increasingly digitalized and globalized economy, while also preparing students to act responsibly and ethically in financial decision-making. Teacher professional development will be a cornerstone of this transformation, as educators must be empowered with the knowledge, skills, and confidence to implement innovative strategies effectively.

In summary, accounting education is at a pivotal moment of change. The integration of problem-solving strategies, innovative pedagogies, and future-oriented curricula provides a roadmap for transforming the discipline into one that not only prepares students for examinations but also equips them with the competencies required for lifelong success. By overcoming challenges, bridging gaps, and embracing innovation, secondary school educators can ensure that their students emerge as capable, adaptable, and ethical individuals ready to navigate the complexities of both personal and professional financial landscapes. The task is challenging, but the rewards an engaged, competent, and future-ready generation of learners are invaluable.

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