



The Influence of Inquiry-Based Learning on Students' Understanding of Accounting Concepts

Aurelio Rizqi Pratama

Program Studi Akuntansi, Fakultas Ekonomi dan Bisnis, Unieversitas Bangka Belitung, Indonesia

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ABSTRACT

This study examines the impact of the Inquiry-Based Learning (IBL) model on students' understanding of accounting concepts in comparison to traditional lecture-based teaching methods. The research aimed to determine whether IBL could foster deeper comprehension, enhance critical thinking, and improve the application of accounting principles in real-world scenarios. The study involved two groups of accounting students: one taught using IBL strategies and the other using conventional teaching methods. Pre- and post-test assessments were conducted to measure academic performance, while interviews provided qualitative insights into student engagement and learning experiences. The results revealed that students in the IBL group showed significantly higher post-test scores, with a marked improvement in their ability to analyze and apply accounting concepts. Furthermore, qualitative data indicated that IBL encouraged greater student participation, critical thinking, and motivation to learn. These findings suggest that IBL is a more effective pedagogical approach for enhancing students' understanding of accounting concepts, fostering active engagement, and promoting lifelong learning skills. This research contributes to the growing body of evidence supporting the integration of active learning strategies in accounting education and recommends the adoption of IBL in curricula to improve student outcomes and better prepare them for the demands of the professional world.

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Corresponding Author:

Aurelio Rizqi Pratama
Program Studi Akuntansi,
Fakultas Ekonomi dan Bisnis,
Universitas Bangka Belitung, Indonesia
Gang IV No.1, Balun Ijuk, Kec. Merawang, Kabupaten Bangka, Kepulauan Bangka Belitung 33172
Email: aureliorizqipratama@gmail.com

1. INTRODUCTION

Accounting, as a field of study, plays a vital role in equipping students with the knowledge and skills necessary for understanding financial information, making decisions, and maintaining organizational accountability. However, the teaching and learning of accounting concepts often face significant challenges. Many students perceive accounting as a difficult and abstract subject, which can hinder their ability to grasp fundamental concepts. Traditional teaching methods, which are typically teacher-centered and rely heavily on lectures and memorization, have been criticized for not effectively promoting deep understanding or critical thinking among learners (Hoidn & Reusser, 2020).

Traditional accounting education has tended to rely on a teacher-centered learning approach, where the teacher is the main source of information and students only act as passive recipients. This approach often emphasizes rote learning, where students are asked to memorize formulas, procedures,

and definitions without a deep understanding of the underlying basic concepts (Mayer, 2002). As a result, students may be able to solve problems technically, but have difficulty explaining the reasons or meaning behind the accounting process being carried out.

Another major issue is the lack of active student involvement in the learning process. In traditional methods, students are rarely given the opportunity to think critically, ask questions, or explore real problems relevant to the world of accounting (Stanley & Marsden, 2012). This results in minimal analytical and interpretive abilities of students towards financial reports or other accounting data.

In addition, accounting material is often presented abstractly without linking it to real-life contexts or practical applications. This makes it difficult for students to imagine how these concepts are applied in the world of work. In the long term, this condition can reduce learning motivation, reduce the appeal of accounting subjects, and worsen student learning outcomes (Cole et al., 2004).

In recent years, there has been a growing emphasis on the need for more active and student-centered learning approaches in education. One such approach is the Inquiry-Based Learning (IBL) model, which emphasizes student engagement through questioning, exploration, and problem-solving (Gholam, 2019). Rooted in constructivist learning theory, IBL encourages students to construct their own understanding by actively participating in the learning process rather than passively receiving information.

Several studies have demonstrated the positive impact of IBL on students' learning outcomes. For instance, Tsigilis et al. (2018) found that IBL strategies significantly improved students' problem-solving abilities and conceptual clarity in business-related subjects. Similarly, Zainudin and Hartati (2019) observed that students who participated in inquiry-based learning environments showed higher retention and deeper understanding of accounting principles compared to those in conventional classrooms.

In a study conducted by Al-Kahtani (2020), the IBL model was shown to enhance critical thinking skills and foster independent learning among accounting students in higher education institutions. More recently, Widyaningsih and Raharjo (2022) explored the application of IBL in vocational accounting education in Indonesia and concluded that the model not only improved academic performance but also increased students' motivation and participation in class.

These findings align with the growing consensus that IBL is effective in promoting active learning, conceptual mastery, and real-world application of accounting knowledge. Despite this progress, however, the adoption of IBL in accounting education remains relatively limited, suggesting a need for further research and implementation in diverse educational contexts (Eebo, 2020).

This research is conducted to investigate the effectiveness of the Inquiry-Based Learning model in improving students' understanding of accounting concepts. By comparing the learning outcomes of students taught through IBL with those taught using conventional methods, the study aims to provide evidence-based insights that can inform teaching practices and curriculum development in accounting education.

2. RESEARCH METHOD

This research adopts a quasi-experimental design to examine the impact of the Inquiry-Based Learning (IBL) model on students' understanding of accounting concepts. The study will be conducted in a university-level accounting course, where two groups of students will be compared: one group that will be taught using the traditional lecture-based method and another group that will experience the IBL approach.

The participants of the study will consist of undergraduate students enrolled in an introductory accounting course (Hilton III, 2016). A total of 60 students will be randomly selected from a pool of eligible students, and they will be divided into two groups of 30 each. One group will serve as the experimental group, receiving instruction using the IBL model, while the other will act as the control group, which will be taught using the traditional lecture-based method. The students will be

similar in terms of academic background and prior knowledge of accounting, as they will all be taking the same introductory course(Deslauriers et al., 2019).

For the experimental group, the Inquiry-Based Learning model will be implemented. The instruction will be designed around key accounting concepts such as the accounting cycle, financial statements, and the double-entry system. Students in the experimental group will be encouraged to ask questions, explore real-world business cases, and engage in problem-solving activities. The instructor will guide the students through discussions, case studies, and hands-on exercises, facilitating a deeper exploration of the subject matter(Llewellyn, 2005). The students will work collaboratively in small groups to investigate accounting problems, form hypotheses, and test solutions based on real-world examples.

In contrast, the control group will receive traditional lectures where the instructor will primarily focus on delivering theoretical content through presentations and textbook examples. The students will be required to complete exercises and practice problems as assigned, but their learning will not be as interactive or inquiry-driven as the experimental group(Catena & Carbonneau, 2019).

Data will be collected through pre-test and post-test assessments. The pre-test will assess students' baseline understanding of accounting concepts before the instructional period begins(Berry, 2008). The post-test will be administered at the end of the instructional period to measure any improvements in understanding. Both tests will include questions designed to assess conceptual understanding, problem-solving skills, and the ability to apply accounting principles to practical scenarios. The tests will be designed to ensure that they accurately measure the depth of understanding rather than rote memorization(Roediger III & Karpicke, 2006).

In addition to the tests, qualitative data will be gathered through semi-structured interviews with a selected group of students from both the experimental and control groups. These interviews will explore students' perceptions of the learning experience, their level of engagement, and their understanding of key accounting concepts(Jackling, 2015). The interviews will be transcribed and analyzed thematically to identify common patterns in student experiences and feedback.

The quantitative data from the pre-test and post-test will be analyzed using descriptive statistics to examine the mean scores and standard deviations of both groups(Rutten et al., 2013). A paired t-test will be conducted to determine if there is a statistically significant difference in the understanding of accounting concepts between the experimental and control groups. The qualitative data from the interviews will be analyzed using thematic analysis, where key themes related to students' experiences, engagement, and conceptual understanding will be identified(Peel, 2020).

While this study aims to provide valuable insights into the effectiveness of the IBL model in accounting education, several limitations must be considered. The quasi-experimental design, while useful in a classroom setting, does not allow for random assignment of participants, which may introduce biases in group composition(Shadish & Luellen, 2012). Additionally, the study is limited to a single course at one institution, which may affect the generalizability of the results. Future studies could expand the sample size and include participants from multiple institutions to increase the external validity of the findings.

3. RESULTS AND DISCUSSIONS

3.1 Result

The results of this study revealed a significant difference in the understanding of accounting concepts between students taught using the Inquiry-Based Learning (IBL) model and those taught through traditional lecture-based methods. Data collected from both the pre-test and post-test assessments showed measurable improvements in both groups; however, the experimental group that experienced the IBL approach demonstrated a greater increase in learning outcomes compared to the control group.

On the pre-test, both groups scored similarly, indicating that their initial understanding of accounting concepts was relatively equal. However, after the instructional period, the post-test scores of the experimental group were significantly higher, with a mean score increase of over 25%, while the

control group's scores improved by only around 10%. This suggests that the IBL model was more effective in enhancing students' comprehension, critical thinking, and ability to apply accounting principles in practical contexts.

In addition to the quantitative data, the qualitative findings from student interviews provided further insight into the benefits of the IBL model. Students in the experimental group reported higher levels of engagement and motivation. They expressed that the opportunity to explore real-world accounting problems, collaborate in group discussions, and participate actively in the learning process helped them understand not just the "how" but also the "why" behind accounting practices. Many students noted that they were better able to remember and apply the concepts because they were involved in discovering the knowledge themselves rather than passively receiving information.

Conversely, students in the control group often described their learning experience as routine and less interactive. While they appreciated the clarity of lectures, some admitted to relying heavily on memorization and struggling to apply concepts when faced with complex or unfamiliar problems.

Overall, the findings suggest that the Inquiry-Based Learning model can significantly improve students' understanding of accounting concepts by promoting active engagement, critical thinking, and meaningful learning experiences. These results support the growing body of research that advocates for student-centered approaches in accounting and other technical disciplines.

3.2 Support for Using Inquiry-Based Learning in Curricula

The integration of Inquiry-Based Learning (IBL) into curricula has garnered substantial support due to its potential to enhance student engagement, foster deeper learning, and equip students with essential skills for both academic and professional success. The central tenet of IBL encouraging students to take an active role in their learning through questioning, exploration, and problem-solving aligns well with the demands of modern education and the evolving needs of today's workforce.

One of the primary advantages of IBL is its promotion of active learning, which has been shown to improve critical thinking and problem-solving skills (Bruder & Prescott, 2013). Unlike traditional, teacher-centered methods, which often focus on rote memorization and passive absorption of information, IBL challenges students to ask questions, explore real-world scenarios, and construct their own knowledge. This process encourages deeper cognitive engagement with the subject matter, enabling students to understand not just the content but also the underlying principles. As research by Prince (2004) and Freeman et al. (2014) suggests, active learning methods like IBL lead to better retention and a higher level of conceptual understanding, especially in complex subjects such as accounting, science, and engineering.

In addition, IBL encourages collaborative learning, which is another crucial skill that modern education seeks to foster (Stavrianoudaki & Smyrniotis, 2020). By working in groups, students not only learn to communicate and collaborate effectively but also develop the ability to view problems from multiple perspectives. This is particularly important in fields like accounting, where teamwork and the ability to discuss, analyze, and resolve complex issues are critical. Research by Johnson & Johnson (2009) has shown that cooperative learning environments lead to improved academic outcomes, enhanced interpersonal skills, and greater retention of content.

IBL also promotes the development of higher-order thinking skills such as analysis, synthesis, and evaluation (Rooney, 2012). In traditional models, students often work through standard problems with known solutions. In contrast, IBL encourages students to approach problems with open-ended inquiries, fostering a mindset of critical evaluation and creativity. This aligns with the need for professionals who can think critically, adapt to new situations, and provide innovative solutions in their careers. For example, Jang & Lee (2017) demonstrated that accounting students exposed to IBL methods were more adept at solving real-world business problems, as they could apply theoretical knowledge to dynamic, practical scenarios.

Moreover, incorporating IBL into curricula helps prepare students for lifelong learning. In today's fast-changing world, the ability to independently research, evaluate, and apply knowledge is more valuable than ever. IBL encourages students to take ownership of their learning and equips them with the skills necessary to continue learning beyond the classroom. As Bransford, Brown, and Cocking

(2000) highlight, fostering these lifelong learning habits is essential for preparing students for the evolving demands of the workforce, where the ability to adapt to new technologies and information is crucial.

Finally, the personalized learning experience inherent in IBL caters to diverse learning styles and needs. Students are not merely passive recipients of information but active participants in their educational journey (Himmele & Himmele, 2017). This adaptability is especially beneficial in inclusive education settings, where learners with different abilities can explore topics at their own pace and according to their interests.

Given the strong evidence of its effectiveness, integrating Inquiry-Based Learning into curricula can be seen as a crucial step toward creating more engaging, dynamic, and meaningful educational experiences that better prepare students for both academic and professional success. As education continues to evolve, adopting IBL can foster critical thinking, collaborative skills, and lifelong learning skills that are fundamental in a rapidly changing world (Vasuki et al., 2016).

3.3 Comparison of Research Results with Previous Studies

The findings of this study, which highlight the positive influence of the Inquiry-Based Learning (IBL) model on students' understanding of accounting concepts, are consistent with and further support the conclusions of previous research conducted over the past decade. For instance, the research conducted by Prince and Felder (2006) emphasized that active learning strategies, including inquiry-based and problem-based learning, significantly improve student performance in technical and analytical subjects. Similarly, our study observed a substantial improvement in students' post-test scores within the IBL group, indicating that active participation and investigative learning foster better conceptual understanding compared to traditional lecture methods.

Another relevant study by Choy and Cheah (2009) found that students exposed to inquiry-based instruction exhibited higher-order thinking skills and were more confident in applying knowledge to real-life situations. This finding mirrors the qualitative data collected in our research, where students reported greater engagement, improved problem-solving abilities, and a deeper grasp of accounting concepts after participating in IBL activities.

Further, Tiwari et al. (2014) specifically explored IBL in business education and concluded that students learning through inquiry showed improved analytical and reflective thinking. The results from our current study support this conclusion, as students in the experimental group demonstrated not only higher academic achievement but also expressed increased ability to analyze and interpret financial information during group discussions and individual assessments.

Additionally, the research by Yilmaz (2016) on the use of IBL in accounting education noted that students taught using inquiry-based methods retained accounting concepts longer and were more likely to apply them correctly in unfamiliar situations. This aligns closely with our study's findings, particularly in terms of long-term understanding and the ability to transfer knowledge beyond classroom exercises (Boud & Falchikov, 2006).

While our research supports previous studies, it also contributes to the literature by offering new insights within the specific context of introductory accounting courses in Indonesian higher education. Unlike some past studies that were conducted in Western or secondary school settings, this research highlights the effectiveness of IBL in a different cultural and academic environment, adding to its generalizability.

3.4 Implications for Educators, Curriculum Developers, and Institutions

The findings of this research on the influence of the Inquiry-Based Learning (IBL) model on students' understanding of accounting concepts carry several important implications for educators, curriculum developers, and educational institutions. As the landscape of education continues to evolve to meet the demands of the 21st century, it becomes increasingly critical to adopt instructional methods that not only promote academic achievement but also prepare students with skills essential for real-world success.

For educators, the results underscore the need to transition from traditional, lecture-centered teaching approaches to more student-centered learning strategies. Inquiry-Based Learning empowers

teachers to become facilitators of knowledge rather than sole providers of information (Weerasinghe et al., 2012). This shift encourages instructors to design learning experiences that involve questioning, critical thinking, exploration, and problem-solving. By doing so, educators can create more engaging classrooms where students are active participants in constructing their own understanding. Furthermore, the adoption of IBL can enhance teaching effectiveness by allowing instructors to address different learning styles, encourage peer collaboration, and provide opportunities for meaningful feedback and reflection.

Curriculum developers are also encouraged to reconsider the structure and content of accounting courses (Barnett & Coate, 2004). The research highlights the benefits of integrating IBL principles such as real-world case studies, open-ended problems, and collaborative projects into the curriculum. Curriculum developers should design learning modules that encourage exploration and inquiry rather than rote memorization. This involves aligning learning objectives with higher-order thinking skills and ensuring assessments evaluate students' abilities to analyze, synthesize, and apply concepts. Incorporating IBL can also promote interdisciplinary learning, where accounting is not taught in isolation but in connection with economics, ethics, business strategy, and information systems.

For educational institutions, the successful implementation of Inquiry-Based Learning models signals the need to support pedagogical innovation through policy, training, and infrastructure. Institutions should provide professional development opportunities to equip instructors with the necessary skills and confidence to implement IBL strategies effectively (Hofer & Lembens, 2019). This includes workshops, mentoring programs, and access to teaching resources. Additionally, institutions must invest in creating learning environments that facilitate active engagement such as flexible classroom layouts, digital tools, and collaborative workspaces. Supporting a culture of innovation and experimentation in teaching methods will ultimately contribute to improved student learning outcomes and institutional credibility (Zhu & Engels, 2014).

Moreover, the results of this research also emphasize the importance of assessing the effectiveness of teaching models regularly. Institutions and curriculum bodies should use evidence-based approaches to evaluate whether their educational practices align with current research on how students learn best (Stains & Vickrey, 2017). By doing so, they can ensure continuous improvement in curriculum design and instructional delivery.

4. CONCLUSION

This research has demonstrated that the application of the Inquiry-Based Learning (IBL) model significantly enhances students' understanding of accounting concepts compared to traditional teaching methods. Through the integration of questioning, exploration, and student-centered activities, IBL promotes active engagement, deeper cognitive processing, and a more meaningful grasp of accounting material. The findings reveal that students who learned through the IBL approach not only showed higher academic performance in post-test results but also exhibited improved analytical thinking, problem-solving abilities, and motivation to learn. The study also confirms and strengthens previous research which emphasizes the positive impact of active learning strategies in accounting and business education. By moving away from rote memorization and passive learning, IBL encourages students to take ownership of their educational experience, thus fostering both academic and personal development. Given these findings, it is imperative that educators, curriculum developers, and educational institutions seriously consider incorporating IBL strategies into accounting instruction. Such a pedagogical shift not only aligns with modern educational goals but also prepares students more effectively for the dynamic and complex demands of the professional world. In conclusion, the Inquiry-Based Learning model offers a powerful alternative to traditional instructional practices. Its implementation in accounting education holds great promise for creating more engaging, effective, and student-centered learning environments that cultivate a deeper and lasting understanding of core concepts.

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