Enrichment: Journal of Management, 13 (5) (2023)

Published by: Instiute of Computer Science (IOCS)

Enrichment: Journal of Management

Journal homepage: www.enrichment.iocspublisher.org

Increasing learning interest in accounting students through the game simulation accounting cycle

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ARTICLE INFO

Article history:

Received Nov 02, 2023
Revised Dec 01, 2023
Accepted Dec 30, 2023

Keywords:

Accounting Cycle;
Game Simulation;
Learning Interest.

ABSTRACT

There is a shift in the characteristics of Universitas Terbuka students from students who are already working or of mature age to the millennial generation and Generation Z. Inevitably, this encourages study programs to innovate according to the times, including the use of game simulations to increase student interest in learning, especially accounting study program students who come from Generation Z. The purpose of this study is to analyze the increase in student learning interest through game simulation. The object of this research is students of accounting study programs with semester 2-7 criteria. To find out the results of students' interests and responses using observation methods, pre-test and post-test assessments, and questionnaires. This study shows that using the game simulation accounting cycle increases student interest in learning and understanding the basics of accounting. The implication of this research is that the study program is able to innovate through innovative products to increase students' learning interest.

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INTRODUCTION

Universitas Terbuka as a leading institution of higher education, has undergone significant changes in the characteristics of its students. Initially, the university was known as a place of learning for individuals who were already working or of mature age seeking opportunities to further their education. However, with the changing times, the characteristics of Open University students have evolved, with the emergence of the millennial and Generation Z generations now dominating the student population. Generation Z requires learning methods that are engaging and enjoyable (Sari & Oktavia, 2021; Wirawan, 2017). These changes have driven the university's study programs to continually innovate to align with the needs and preferences of today's students (Sagoro et al., 2022).

Higher education, particularly in the field of accounting, has experienced rapid developments in response to the increasingly complex demands of the times. In this digital era, accounting students are confronted with greater challenges in comprehending and applying complex accounting concepts in the ever-evolving business world (Hadi et al., 2022; Hasan, 2022; Mujiono, 2021). Therefore, enhancing students' interest in learning and their understanding of accounting courses has become crucial (Moran et al., 2018).

One of the approaches that is gaining increasing attention in enhancing student interest and understanding is the use of accounting cycle simulation games (Rapp et al., 2019). Simulation games provide an interactive and educational environment in which students can practice their accounting knowledge and skills in situations that closely resemble real-life scenarios (Akbar et al., 2023). In this context, accounting cycle simulation games have become an effective tool to engage student participation and motivate them to learn more intensively (Vlachopoulos & Makri, 2017).

The results of the study conducted by Sagoro et al. (2022) indicates that gamification can enhance students' interest, motivation, and engagement in learning while also facilitating their comprehension. In the research conducted by (Vlachopoulos & Makri (2017) it was concluded that the use of games and/or simulations has a positive impact on achieving learning objectives. They identified three learning outcomes that manifest when games are integrated into the learning process: cognitive, behavioral, and affective aspects. The learning process using gamification has been widely adopted in various fields, as indicated by (Bozkurt & Durak, 2018).

As a distance learning institution, Universitas Terbuka (UT) faces several challenges in conducting accounting laboratory courses. Some of the key challenges that UT encounters in this regard include: (a). Limited Physical Facility Access (Jarillo et al., 2019; Jili et al., 2021; Klemm et al., 2020): UT faces challenges in providing the necessary physical laboratory facilities for accounting practices to students scattered across various geographical locations. (b). Limited Direct Interaction (Linnes et al., 2022): The lack of direct interaction between instructors and students in a laboratory environment can hinder the understanding of accounting concepts that are ideally learned through hands-on experience. (c). Constraints on Equipment and Practical Materials (Aljedaani et al., 2021): Distance learning institutions like UT may encounter challenges in providing the necessary equipment and practical materials to students who are not on campus. (d). Assessment and Supervision: Effectively assessing and supervising students' accounting practices in a remote environment can be challenging. (e). Field Practice Limitations: For accounting courses that involve field practice, UT may struggle to provide adequate field practice opportunities for students who are not located near the campus. (f). Evaluation of Practical Skills: Measuring and evaluating students' practical skills in laboratory accounting courses presents challenges in a distance learning environment.

UT needs to innovate in the development of effective teaching methods to address the challenges mentioned above in delivering accounting laboratory courses in a distance learning environment. One of the innovations that can be provided to students in the learning process is through game simulation (Franco & DeLuca, 2019; Kutzin, 2019). The Accounting Program of the Faculty of Economics and Business at Universitas Terbuka has developed an Accounting Cycle simulation game and has conducted pilot testing with several students. Therefore, the aim of this research is to explore how the use of accounting cycle simulation games can significantly contribute to enhancing students' learning interest in the accounting department. We will discuss the background of the importance of students' learning interest in accounting courses, explain the concept of accounting cycle simulation games, and present recent research findings that demonstrate the positive impact of using this simulation game.

Universitas Terbuka is experiencing a demographic shift in its student population, moving from mature, working individuals to those from the millennial and Generation Z cohorts. This transition underscores the need for innovative teaching methods in accounting education to cater to the evolving learning preferences and characteristics of these younger generations. Conventional

distance learning models face challenges, including limited physical facilities and resources, which are essential for the practical application of subjects like accounting. The research indicates that game simulations, particularly the Accounting Cycle simulation game, are effective in increasing student interest and understanding in accounting, suggesting that such innovative approaches can help overcome the limitations of traditional distance learning environments.

Moreover, the study contributes to the theoretical discourse on gamification in education, demonstrating the positive effects of game-based learning on student engagement, motivation, and educational outcomes. Interactive tools like simulation games can be instrumental in facilitating the learning process, especially for complex subjects such as accounting. In practice, the findings of this research have significant implications for educators, students, and policymakers in the higher education sector. The implementation of accounting cycle simulation games can lead to enhanced educational effectiveness and foster a sustained interest in learning. By recognizing the potential of simulation games, higher education institutions can develop more effective strategies to assist students in understanding and applying accounting concepts, ultimately preparing them for a competitive job market. This research aims to delve into the impact of employing such simulation games to bolster students' learning interest in accounting.

RESEARCH METHOD

This research employs a descriptive quantitative approach using a pretest-posttest control group design. The independent variable in this study is the game simulation accounting cycle, while the dependent variable is students' learning interest. The focus of this research is on accounting program students in semesters 2-7. The research utilizes various methods, including observation, pre-test and post-test assessments, as well as questionnaires to measure students' learning interest and their responses to the use of simulation games in learning. (a). Observation: This research involves observing the behaviour and activities of students during the learning process using simulation games. These observations can provide insights into how students interact with the material and engage in learning. (b). Pre-Test and Post-Test Assessment: This method involves measuring the level of initial knowledge and understanding (pre-test) and assessing progress after the learning (post-test). Comparing the results of the pre-test and post-test can provide an overview of the extent to which students' understanding has improved after using the simulation game. (c). Questionnaire: This research also utilizes questionnaires distributed to students. The questionnaire may contain questions related to their learning interest in subjects taught through simulation games, as well as their responses to the use of technology in learning.

Analysis Technique

The effectiveness of using game simulation accounting cycle to enhance the learning interest of undergraduate accounting students (S1) was assessed through the independent samples t-test. The independent samples t-test method was employed to compare the means of pre-test and post-test results (Gerald, 2018; Creswell, 2012). This test provides information on whether there is a statistically significant difference between one group (pre-test) and another group (post-test). This testing approach is suitable for this research because its objective is to evaluate the effectiveness of using accounting cycle simulation games on students' learning interest by comparing the results of the pre-test and post-test after the application's usage. The independent samples t-test assumes that if the significance value < α 0.05, then the alternative hypothesis can be accepted, indicating a significant difference in the learning interest of undergraduate accounting students who have used the game simulation accounting cycle.

Overall, this research combines various research methods to measure students' learning interest and responses to the use of game simulation in the context of accounting education. With

this multi-method approach, the research aims to provide a comprehensive understanding of the impact of using game simulation technology in enhancing student learning.

RESULTS AND DISCUSSIONS

This research involved 38 accounting program students who met the criteria of having taken laboratory accounting courses (from semester 2 to 7). In this study, students were subjected to a pre-test using a questionnaire to measure their interest in accounting coursework. Subsequently, they were given the opportunity to use an accounting cycle simulation game application. After using the application, students were then provided with a post-test questionnaire to assess their perception of changes in their learning interest following the use of the application. Further testing was conducted to ascertain whether there was a significant difference in learning interest between the experimental group and the control group. This testing was carried out through an independent samples t-test. The results of the t-test are presented in Table 1 below.

Table 1. The Results of Independent Samples t-Test

	Pre-test	Pos-test
Mean	28,63157895	31,13157895
Variance	12,99573257	11,73897582
Observations	38	38
Pearson Correlation	-0,256362411	
Hypothesized Mean Difference	0	
Df	37	
t Stat	-2,764892059	
P(T<=t) one-tail	0,00441375	
t Critical one-tail	1,68709362	
P(T<=t) two-tail	0,0088275	
t Critical two-tail	2,026192463	

Source: Data processed (2023)

The results of the independent samples t-test analysis indicate a significance value of 0.0088, which is smaller than the predetermined significance level of 0.05. This suggests a significant difference in the learning interest of accounting program students before and after using the accounting cycle simulation game. The significant impact of using game simulation in accounting education has been revealed in several previous studies. For instance, Sagoro (2016) asserted that implementing gamification-based learning methods can enhance the financial reporting skills of non-accounting students. Furthermore, the positive influence of gamification on learning has been observed in various studies, including research conducted by Huang et al. (2019), Jamaluddin et al. (2017), Rodrigues et al. (2018), Rosli (2019), and Zhao (2019).

The results of this study demonstrate that the use of game simulation in education is capable of enhancing students' motivation and interest in learning. This has a positive impact on the perceived quality of education by students, as observed by Rodrigues et al. (2018). Furthermore, the utilization of gamification also leads to an improvement in students' learning experiences, as noted by Zhao (2019), which, in turn, can enhance students' critical thinking skills, in accordance with the findings of Rosli et al. (2019).

In addition to enhancing motivation and learning experiences, gamification has also been proven to increase students' productivity in the learning process. Several studies, such as those conducted by Huang et al. (2019), and Jamaluddin et al. (2017), have shown that the use of gamification can improve students' overall learning outcomes. Interestingly, this improvement in learning outcomes is particularly evident in larger groups, as observed by Ahmad et al. (2020).

Therefore, it can be concluded that the use of gamification in accounting education has had a significant positive impact on various aspects, including motivation, interest, learning experiences, critical thinking skills, productivity, and student learning outcomes. These findings are consistent

with previous research and emphasize the importance of considering the integration of gamification in accounting education.

The respondents feel that "Accounting Cycle Simulation" has a positive impact on their understanding and interest in accounting. Therefore, this additional data indicates that the use of "Accounting Cycle Simulation" has been successful in enhancing the respondents' interest and understanding of accounting. The positive response from the respondents can be used as an indicator of the effectiveness of this simulation in the context of accounting education.

CONCLUSION

The primary aim of the study was to assess the impact of the Accounting Cycle simulation game on increasing students' interest in learning accounting. The study provided evidence that students who participated in gamification-based learning exhibited a significant increase in learning interest compared to those who underwent traditional learning methods. This reinforces the notion that simulation games can effectively boost students' engagement, motivation, and learning process in accounting. These findings offer substantive contributions to higher education institutions in the realms of curriculum development and instructional strategies.

Further examination of the study's outcomes reveals critical implications for accounting education programs. The enhanced learning interest and foundational understanding of accounting, facilitated by the Accounting Cycle simulation game, prompt academic programs to innovate and tailor educational products to meet the needs of the new generation of students. This research, thus, provides deeper insights into the influential role of simulation games in fostering learning interest during a transformative era in education.

However, this study is not without limitations. Its scope was confined to students from the Accounting Study Program at the Faculty of Economics and Business, Open University, which could restrict the generalizability of the findings. Future research is encouraged to broaden the scope to include a variety of courses and a more diverse student population, to validate the study's conclusions.

In essence, this study offers empirical support for the efficacy of game simulations in enhancing the interest of accounting students in their studies, over traditional teaching methods. These insights are invaluable for the advancement of curriculum and pedagogical innovations in higher education. The study acts as a guide for educators, students, and policy makers, underlining the importance of integrating gamification and technology within educational frameworks to improve learning outcomes.

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