Redefining Accounting Pedagogy: Evaluating Propertyquest's Impact on MFRS 140 Learning in Higher Education

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ABSTRACT

This study investigates the use of gamification and video-based learning as a novel pedagogical strategy for improving university students' knowledge of MFRS 140: Investment Property. The research uses the PropertyQuest game app in conjunction with video tutorials to provide a multimodal learning experience aimed at addressing the difficulties of accounting principles. A survey was performed to gather students' perspectives on the blended learning technique. The results show that combining gamification with video material dramatically increased students' understanding of MFRS 140, with video lessons explaining complicated themes and the game reinforcing knowledge through an interactive application. Students reported a clear preference for the multimedia method, citing its ability to make learning more interesting and meaningful. The study emphasizes the importance of perceived meaningfulness in keeping students engaged and obtaining higher learning results. Based on the findings, future research should investigate the impact of personalized video content, as well as the long-term effects of multimedia learning tools across other financial reporting standards and accounting subjects, to support diverse learning styles in higher education.

Keywords: Gamification; Video-based Learning; Accounting Education; MFRS140; Higher Education Pedagogy

INTRODUCTION

MFRS 140: Investment Property is an important accounting standard that controls the handling of property kept for rental income or capital appreciation. It does not include properties utilized for manufacturing, administrative purposes, or those held for sale in the regular course of business. The Financial Reporting 4 curriculum requires students to grasp topics such as definition, recognition, measurement, transfer, disclosure, and disposal. Despite its importance, MFRS 140 remains conceptually difficult due to its numerous application-specific requirements. Students frequently fail to understand both the academic and practical components of the standard.

The difficulty of MFRS 140 has serious academic implications for undergraduate accounting students. Financial Reporting 4 is a requirement for more advanced courses, such as Financial Reporting 5, and failure may result in a delay in graduation or course repeat. Traditional teaching approaches (lectures, slide presentations, and textbook exercises) have been ineffective in addressing these learning problems. Such techniques frequently lack the interaction and context required to make difficult accounting concepts understandable. As a result, pupils may feel disinterested and inadequately prepared for tests.

To overcome these ongoing issues, new pedagogical techniques are required to make accounting education more interesting and successful. Gamification and video-based learning are gaining popularity as strategies for increasing student engagement and information retention in higher education. These approaches provide interactive and multimodal learning experiences that traditional methods lack. Educators may give academic background as well as practical application in an accessible style by combining gamification and videos. This integration reflects current students' learning preferences and encourages active engagement.

In response to this requirement, the PropertyQuest gaming app was created to help students better comprehend MFRS 140. This program mixes interactive games and educational videos, providing a dual-modal approach to learning. Gamified challenges allow students to participate with real-world settings and problem-solving activities, while video lectures explain complicated ideas step by step. This multimodal technique helps students connect theory and practice in a more meaningful way. The strategy is intended to promote deeper knowledge and long-term retention.

An internal analysis of student performance highlights the urgency for pedagogical innovation in Financial Reporting 4. During the February–August 2023 semester, the failure rate was 51%, compared to 31% in the October 2022–January 2023 semester. These consistently high failure rates underscore the shortcomings of traditional teaching methods in addressing the complexities of MFRS 140. Students often express frustration and disengagement when confronted with dense, abstract content delivered through conventional lectures. Clearly, a shift toward more engaging and interactive learning methods is warranted.

Table 1: Failure Rate in Financial Reporting 4

Semester	Number of Students	Failure Rate (%)
February – August 2023	82	51%
October 2022 – January 2023	48	31%

The PropertyQuest app is a potential start towards rethinking accounting teaching for MFRS 140 in higher education. By combining gamification with video-based learning, the tool provides a more interesting and adaptable learning experience that meets the demands of modern learners. It also encourages self-paced learning, allowing students to review difficult concepts as required. Furthermore, the interactive features promote meaningful interaction, which is essential for keeping students interested. This study assesses the efficacy of this novel strategy and its ability to alter accounting education.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The changing tastes of modern learners have prompted educators to reevaluate established educational practices in higher education. Previous cohorts of students frequently adopted lecture-based forms and faculty-centered learning (Johnson & Romanello, 2005). In contrast, millennial and Generation Z learners favor collaborative, technology-enhanced, and immersive learning approaches (Alexander & Sysko, 2013). These pupils desire interaction, immediacy, and compelling learning settings, which traditional techniques frequently lack (Gupta & Goyal, 2022). As a result, a more dynamic and responsive teaching style is required to fulfill their expectations and improve academic achievements.

Gamification has come to prominence as a possible answer to education's growing demands. Gamification is defined as the use of game-design features in non-game environments (Deterding et al., 2011) with the goal of improving motivation, engagement, and learning outcomes. Gamification was initially popular in industries such as marketing, health, and innovation, but it is now rapidly being used in classrooms (Koivisto & Hamari, 2019). When used with pedagogical aim, it provides a learner-centered experience that fosters greater cognitive and emotional engagement. This is especially important in content-heavy areas such as accountancy.

Davis (1989) established the Technology Acceptance Model (TAM), which provides an effective framework for studying how students interact with instructional technology. According to TAM, consumers are more inclined to accept technology if they believe it is beneficial and easy to use. These views are also influenced by intrinsic motivators including enjoyment, relevance, and control (Sun & Zhang, 2006; Laumer et al., 2012).

Gamification, by combining fun with autonomy, can improve perceived usefulness and simplicity of use. These motivating dynamics make it a useful tool for overcoming learning challenges in complicated courses such as MFRS 140.

Game-based learning is also linked to psychological motivation theories like Self-Determination Theory, which emphasizes the importance of competence, autonomy, and relatedness (Rigby & Ryan, 2011). Studies suggest that gamification has variable but typically favorable effects on educational achievements (Dicheva et al., 2015; Groening & Binnewies, 2019). Gamification, when combined with curricular goals and relevant learning environments, has the potential to boost attention, satisfaction, and performance. Gupta and Goyal (2022) emphasize the importance of "meaningfulness"—learners are more engaged when the game features are directly related to the subject matter. This notion supports the development of excellent gamified instructional technologies.

Gamification uses methods such as points, badges, leaderboards, and point redemption to encourage involvement. Points and badges provide feedback and acknowledgment of success (Zichermann & Cunningham, 2011; Koivisto & Hamari, 2019). Leaderboards provide competitive incentive through social comparison (Jia et al., 2017), whereas point redemption systems promote ongoing involvement with concrete benefits (Zhang et al., 2023). When included in an organized learning route, these features have the potential to turn passive learners into active participants. However, gamification is most effective when combined with other tactics that aid comprehension.

Video-based learning is one technique for increasing cognitive engagement using visual and aural inputs. Based on Dual Coding Theory (Paivio, 1986) and Cognitive Load Theory (Sweller, 1988), video content helps learners absorb complicated information more efficiently. Instructional films promote self-paced learning, reinforce knowledge, and prevent cognitive overload (Chen et al., 2019). When incorporated into a gamified environment, movies give clarity and theoretical foundation that reinforces applied learning. This multimodal combination covers the motivational and cognitive aspects of effective instruction.

Gamification and video-based learning combine to create a blended learning environment that is tailored to today's learners' tastes and requirements. The PropertyQuest Game App for Enhanced Learning has an integrated approach to addressing the conceptual and application issues of MFRS 140: Investment Property. The software promotes meaningful engagement and academic achievement by mixing motivated gaming elements and instructional videos. This method is consistent with the Unified Theory of Acceptance and Use of Technology (UTAUT), which emphasizes performance and effort expectations as key drivers of user adoption. As a pedagogical innovation, it has considerable potential to improve learning outcomes in accounting education.

Gamification must be built with educational goal rather than as a purely entertaining layer in order to significantly improve student learning. According to research, learning results increase when gamified settings are designed to meet students' essential psychological requirements (Sailer et al., 2017). Self-Determination Theory (Deci & Ryan, 2008) identifies autonomy, competence, and relatedness as three primary motivators of human activity. These demands must be met in educational settings so that students stay intrinsically motivated and intellectually engaged. As a result, effective gamification should stimulate these psychological motivations to promote long-term academic effort and achievement.

The PropertyQuest Game App for Enhanced Learning includes crucial game components such as points, badges, leaderboards, and point redemption to help students stay motivated and learn the topic. Points are concrete signs of success, rewarding students for completing learning exercises connected to the MFRS 140 material. Badges represent milestones and serve as confidence boosters, representing knowledge of essential accounting principles. Leaderboards encourage healthy competition and social engagement by publicly showcasing students' accomplishments in comparison to peers. Point redemption incentivizes involvement by tying effort to significant academic benefits, in line with expectation theory (Mathibe, 2008).

Video-based learning is included into this gamified framework to encourage cognitive engagement and learner autonomy. Under MFRS 140, instructional films explain complicated concepts including recognition, the fair

value vs cost model, and asset transfers. These films are either incorporated directly into the game or unlocked by job completion, allowing for self-paced exploration and topic reinforcement. According to Mayer and Moreno's (2003) cognitive theory of multimedia learning, mixing images and narrative improves understanding while decreasing cognitive overload. This combination guarantees that students not only connect emotionally through gamification but also get a better knowledge via dual coding.

This integrated method promotes a more holistic and effective learning process by engaging learners in both motivational and cognitive activities. The interactive cycle of watching a video, implementing the concept in a gamified exercise, and obtaining feedback promotes knowledge retention and transfer. Accounting ideas may be abstract and complicated, therefore multimodal learning is especially useful for technical standards such as MFRS 140. Furthermore, this technique is consistent with the digital learning preferences of Millennials and Generation Z, who seek autonomy, immediate feedback, and immersive settings. The combination of gamification and video-based learning therefore constitutes a comprehensive method for generating deeper and more long-term learning results.

Using this theoretical and pedagogical base, the following hypothesis is proposed:

H1: Gamification, designed to fulfill psychological demands (autonomy, competence, and relatedness) and reinforced by video-based learning, improves learning results in the context of MFRS 140 Investment Property.

This hypothesis is based on past research, which found that successful learning aids must engage students emotionally, socially, and intellectually in order to encourage long-term knowledge and application. By combining gaming dynamics with instructional material and psychological incentive, the suggested intervention aims to make learning technical accounting standards more engaging and meaningful. If proven, this technique may provide a scalable platform for incorporating gamified video-based tools into accounting instruction. Finally, it reflects a transition from passive knowledge consumption to active, student-centered learning.

METHODOLOGY

This study used a mixed-methods approach to data collecting, integrating quantitative and qualitative methodologies. Accounting undergraduates completed an online survey to assess their preparedness and preferences for digital learning tools, especially game-based and video-based learning. The survey contained closed-ended questions to collect numerical information about students' device accessibility, learning preferences, and experience with digital technologies. Open-ended questions were also added to encourage students to provide more extensive replies about their experiences and thoughts about different learning approaches. This combination of quantitative and qualitative data provided a thorough knowledge of the elements that influence students' preparedness to use a gamified learning platform.

To determine the usefulness of the PropertyQuest Game App in improving learning outcomes, the study examined students' engagement, motivation, and comprehension of MFRS 140 Investment Property. A pre-test and post-test technique was used, with students' understanding of accounting standards evaluated before and after interacting with the gaming app. This enabled the researchers to assess any improvements in students' comprehension and recall of important concepts such as fair value vs cost model measurement and investment property categorization. The results of these tests were examined to see if the gaming app had a statistically significant effect on learning outcomes. Along with the exams, user engagement data from the app was collected to have a better understanding of how students interacted with the platform and its features.

This study's sample comprised of accounting undergraduates from a university, offering a focused but relevant population for research. The survey was disseminated to a sample of 200 Diploma Accounting students at Universiti Teknologi MARA (UiTM) Perak Branch Tapah Campus, guaranteeing enough data for analysis while keeping the scope and resources manageable. Participants were chosen based on their participation in accounting-related courses, particularly those that included issues connected to MFRS 140 Investment Property. To address ethical concerns, all participants provided informed consent, and their replies were kept anonymous and confidential. The mixed-methods approach resulted in a large dataset, combining objective

survey results with subjective student insights to assess the potential of gamification and video-based learning in accounting education.

RESULTS

An online survey was distributed to accounting undergraduates to assess their willingness to move from traditional pedagogical methods to more dynamic, technology-enhanced learning approaches. The major purpose was to examine students' access to digital resources and preferred learning techniques, particularly for the complicated topic of MFRS 140 Investment Property. The poll asked students about their familiarity with gamification, usage of video-based learning materials, and comfort with self-paced digital platforms. It also attempted to discover any constraints individuals encountered, such as restricted internet connection or a lack of technical abilities, which might have an influence on the success of the suggested intervention. The survey results provided a framework for developing a gamified learning solution suited to students' technology readiness and educational needs.

Device Accessibility and Compatibility

Table 1 shows that 86% of accounting students utilize mobile devices for gamified learning, with laptops coming in second place. This high degree of device accessibility is essential for the implementation of digital learning tools like The PropertyQuest Game App for Enhanced Learning, which combines gamification with video-based learning. The app's architecture guarantees that it works flawlessly on both desktop and mobile devices, giving students freedom and convenience regardless of their technology preference. As a result, the target student population has a strong understanding of the technology infrastructure necessary to enable the usage of this gamified, video-enhanced learning tool.

Table 1. Preferred Learning Devices for Gamification

Most commonly used devices by students for gamification	Frequency
Dekstop	2.8%
Mobile	86%
Laptop	8.4%
None	2.8%

Preferred Learning Tools

Table 2 shows an examination of students' preferences for different learning instruments, which provides important insights into their learning patterns. 39% of respondents chose game-based learning (GBL), 32% video-based information, and 29% digital flashcards. These data indicate a definite movement toward interactive and multimedia-based learning approaches that encourage active engagement. Both game-based learning and educational films are known for their ability to turn abstract accounting principles into entertaining, real-time learning experiences that provide quick feedback and develop deeper knowledge. In contrast to traditional textbook-based learning, these strategies provide students a dynamic environment in which to conceptualize, apply, and recall difficult accounting subject more successfully.

Table 2: Analysis of students'preference of learning tools

Learning Method	Percentage of Students
Game-Based Learning (GBL)	39%
Video-Based Content	32%
Digital Flashcards	29%

Application of Gamification and Video Learning in MFRS 140

The desire for gamification and video material is especially relevant in the context of MFRS 140, which covers complicated themes including initial recognition, fair value vs. cost model measurement, and property category transfers. Students claimed that game-based simulations helped them understand abstract concepts by giving

engaging and realistic settings, whereas films provided step-by-step explanations of complex details. These dual learning methodologies are well-suited to students' cognitive demands, particularly for memorizing comprehensive accounting rules. By integrating these aspects, the PropertyQuest Game App for Enhanced Learning provides a full learning experience that reinforces essential ideas with both theoretical training and hands-on practice. The capacity to picture real-world applications of theoretical ideas improves retention and knowledge, according to student comments.

Reinforcing Psychological Needs through Gamification

The preference for game-based learning is also consistent with previous gamification research, which highlights the significance of meeting psychological requirements such as competence, autonomy, and relatedness (Deci & Ryan, 2008). Students said that aspects like points, badges, leaderboards, and redeemable prizes encouraged them to actively interact with the content. These traits were viewed as essential for instilling a sense of success and advancement, which promoted ongoing engagement in the learning process. Furthermore, the use of social components such as leaderboards fostered a feeling of friendly rivalry, cementing students' connections with their classmates and improving their overall learning experience. This implies that the PropertyQuest Game App enhances both cognitive learning and the intrinsic motivation required for long-term academic commitment.

Integration of Gamification and Video-Based Learning

The combined desire for gamification and video-based learning lends credence to the assumption that a hybrid pedagogical paradigm, such as that provided by the PropertyQuest Game App for Enhanced Learning, is ideal for current accounting students. The app adapts to varied learning styles by combining game-based simulations with video instructions, ensuring that users have a comprehensive and interesting educational experience. It reinforces concepts through practical, interactive tasks, and the films assist students learn complex topics by offering clear, structured explanations. This dual-modality strategy improves cognitive and emotional engagement, which leads to better learning results. Gamification and video-based learning methods are integrated to accommodate student preferences while also efficiently supporting knowledge of complicated courses such as MFRS 140 Investment Property.

DISCUSSION AND CONCLUSION

The creation and implementation of the "Integrating Video-Based Learning with the Challenge of MFRS 140: PropertyQuest Game App for Enhanced Learning" marks a significant step forward in the pedagogical tools available for teaching complicated accounting standards. One of the primary obstacles in accounting education, particularly with regard to MFRS 140 Investment Property, is its abstract and technical character. When students are only taught conventional lectures or textbooks, they frequently struggle with topics like as categorization, initial recognition, subsequent assessment (using the cost or fair value model), transfers across property categories, and disclosure requirements. These issues are especially difficult to understand when students depend solely on static textbook examples, which do not always relate theory to practical application. The PropertyQuest Game App provides an interactive, real-world simulation of investment property accounting, making it a viable option in this regard.

According to the poll results, 71% of students preferred game-based or video-based learning methods, indicating a major shift in learning preferences. Previous research has found that Millennials and Generation Z students prefer digital and interactive learning methods to traditional lecture-based training (Gupta & Goyal, 2022; Koivisto & Hamari, 2019). This choice implies that current pupils, who are often digital natives, find it difficult to engage with passive, traditional teaching methods. Data also supports the premise that accounting education, particularly on technical topics like as MFRS 140, must develop to suit the expectations and engagement patterns of today's students. Interactive and technology-integrated learning tools are no longer a choice; they are becoming required to satisfy the expectations of the modern classroom.

The PropertyQuest Game App provides a hands-on, immersive learning experience that replicates real-world scenarios in investment property accounting. This sort of interactive learning, in which students must actively

engage by making judgments about classification, measurement, and disclosure, improves the entire learning experience. Gamified aspects such as points, badges, leaderboards, and redeemable incentives engage students while also addressing psychological demands such as autonomy, competence, and relatedness (Sailer et al., 2017). These characteristics are essential for cultivating intrinsic motivation, which has been linked to deeper learning and increased engagement. The capacity to make judgments in the setting of a game allows students to combine theoretical knowledge with practical applications, resulting in a better understanding of complicated accounting rules.

Furthermore, the app's visual and interactive features enable students to connect with abstract accounting ideas in a more real manner. For example, as students explore the game and identify property assets, they go beyond remembering textbook descriptions to make real-world accounting decisions. This experience serves to contextualize theoretical concepts like fair value and cost models, helping students to comprehend them in practice as well as theory. The app's interactive features, including the ability to explore numerous property scenarios, allow students to test their knowledge in a dynamic, feedback-driven environment. This increased degree of participation encourages both comprehension and memory of complicated concepts, which is frequently difficult to achieve in traditional learning forms.

The addition of video-based learning enhances the educational experience given by the app. Video lessons, integrated explainers, and visual feedback round out the gamified features by providing clear, simple explanations of complicated accounting principles. This dual-channel technique, which uses both visual and aural data, is consistent with cognitive load theory, which states that processing information through multiple channels improves learning (Mayer & Moreno, 2003). The introduction of video-based information adds an extra layer of support, ensuring that students not only actively interact with the subject, but also receive reinforcement through clear, multimodal explanations. This comprehensive method enables students to comprehend complicated accounting principles, resulting in a deeper knowledge and better recall.

On top of that, the utilization of video-based learning meets students' diverse cognitive preferences, catering to those who learn best through aural or visual methods. This method, along with the gamified features, accommodates modern students' different learning styles, assuring engagement on numerous levels. The connected videos provide an organized path for students to follow, teaching the key principles they must master before applying them to the game's problems. This organized learning experience prepares students to participate in the game, where they may use what they have learned in a practical, decision-making setting. This hybrid instructional method, which combines theory and application, enhances the possibility that students will grasp complicated topics such as MFRS 140.

In addition to cognitive engagement, the game's aspects address students' psychosocial demands. Points, badges, leaderboards, and redeemable awards provide extrinsic motivation in addition to the intrinsic joy that students obtain from understanding accounting topics. These characteristics meet the psychological demands for autonomy, competence, and relatedness, which are required to create a good and inspiring learning environment (Deci & Ryan, 2008). By allowing students to track their progress, compete in a healthy manner, and receive incentives for their efforts, the app not only keeps kids involved but also creates a feeling of accomplishment and growth. This approach is consistent with research showing that motivation and engagement are strongly connected to academic performance, particularly in difficult disciplines such as accounting.

The outcomes of this study indicate that the combination of gamification and video-based learning has tremendous promise for improving the learning experience in accounting education. Students' overwhelming preference for game-based and video-based learning reflects the growing need for educational tools that are both interesting and effective. Tools enable students to connect with complicated concepts in meaningful ways, making abstract topics more accessible and understandable. By introducing gamification and video learning into the curriculum, educators may give students with an enhanced learning experience that not only improves understanding but also generates increased motivation and engagement. provides unique insights on how accounting instructors might use current technology to improve student performance and change the way difficult accounting standards such as MFRS 140 are taught.

Finally, the "Challenge of MFRS 140: PropertyQuest Game App" symbolizes a significant shift in accounting education. This program successfully combines two extremely effective educational methodologies, gamification and video-based learning, into a single platform that caters to current students' learning preferences and technical skills. The software provides an immersive and engaging learning experience that overcomes typical obstacles in teaching complicated standards such as MFRS 140 and increases students' ability to apply accounting principles in real-world scenarios. The incorporation of these technologies also boosts student enthusiasm and engagement, both of which are essential for long-term information retention and application. When used more broadly, this software has the potential to improve accounting education by providing a more entertaining and effective method to teaching complicated subjects such as MFRS 140 Investment Property.

The consequences of this study go transcend the PropertyQuest Game App, providing useful insights into how instructional technology might be used effectively in accounting education. The rising preference for digital tools that combine interactive, visual, and aural learning experiences highlights the need for curriculum writers and instructors to include more technology-driven solutions into their teaching processes. As educational institutions keep on adjusting to the digital era, it will be critical to investigate new potential for combining gamification, multimedia material, and other digital technologies to improve student engagement and learning results. The success of the PropertyQuest Game App demonstrates the potential for blended learning techniques to meet the obstacles of teaching technical and abstract subjects, making learning more accessible and effective for students.

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