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AN EMPIRICAL EVALUATION OF GAMIFIED AUTHENTIC ASSESSMENT IN UNDERGRADUATE INSURANCE AND INVESTMENT PLANNING COURSES

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Abstract: *Promoting robust financial literacy among university students is essential for personal economic resilience and sustainable socio-economic development. This study evaluates undergraduate students' perceptions, experiential engagement and perceived learning outcomes following participation in "Financial Quest," a gamified learning activity designed as an authentic assessment strategy. Grounded in Experiential Learning and Self-Determination theories, a mixed-methods design evaluated post-intervention survey responses from 118 undergraduate business students. The survey instrument utilised a validated 34-item Likert scale across five constructs alongside three open-ended qualitative questions. Quantitative findings demonstrate an overwhelmingly positive reception, with 92.4% agree with the activity's pedagogical effectiveness. The intervention yields an identical average rating (M= 4.67 out of 5.00) across both experienced and non-experienced student cohorts. Teamwork & Collaboration emerged as the highest-rated construct (M=4.70, SD= 0.69), reinforced by individual items emphasizing interactive dynamics (M= 4.73) and enjoyable learning (M= 4.73). Thematic analysis of qualitative data confirmed that active peer bonding, collaborative problem-solving, and contextual application were primary pedagogical strengths, while identifying operational bottlenecks surrounding physical navigation, clue ambiguity, and station wait times. These findings indicate that gamified authentic assessment strengthens perceived application confidence and team communication in quantitative business courses while equipping educators with practical framework to teach complex quantitative topics.*

Keywords: *Authentic Assessment, Financial Literacy, Higher Education Pedagogy*

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Introduction

Financial literacy is universally acknowledged as a core competency for personal economic stability, social mobility and national economic development (Kicova, Michulek, Ponisciakova, & Fabus, 2025). Modern financial environment present individuals with complex financial choices across credit structures, investment instruments, risk management and retirement planning options (Yulianto, Pramono, Wijaya, & Nasrun, 2024). Within higher education business, economic and social science curriculum, insurance planning and investment management represent two essential pillars of financial stewardship among individuals (Seman, Ahmad, Abdul, & Malim, 2020). Insurance planning introduces higher education students to risk identification, risk pooling and cooperative risk-sharing mechanism such as takaful. Concurrently, investment planning addresses wealth accumulation, capital asset allocation and shariah financial instruments.

Despite the real-world significance of these topics, teaching them poses significant pedagogical challenges (Lampropoulos & Sidiropoulos, 2024). Traditional lecture-based instruction frequently relies on abstract theoretical models, mathematical formulations and regulatory frameworks. This passive approach can isolate students from practical application, leading to low engagement, and quick post-exam forgetting (Li, Ma, & Shi, 2023; Oroh, Ali, Pelenkahu, Usman, & Rorintulus, 2025). Gamification is introduced to offer a way past these instruction barriers by bringing game design mechanics into academic settings. Instead of sitting through passive lectures, students work through interactive quests, team challenges and feedback stations (Li et al., 2023; Yulianto et al., 2024). When implemented as an authentic assessment approach, gamification aligns evaluation directly with real-world application tasks.Gamified learning mechanics such as points, leaderboards and interactive team challenges consistently enhance student motivation, classroom participation and immediate interest across diverse educational setting (Li et al.,2023). Furthermore, authentic assessment literature confirms that students develop deeper cognitive mastery when evaluated through real-world, context-rich performance tasks rather than passive memorization (Oroh et al., 2025; Wiggins, 1990).

Gamification is widely used in school-level education, but structured evidence on its use as an authentic assessment in complex university finance courses remains sparse (Lampropoulos & Sidiropoulos, 2024; Yulianto et al., 2024). Furthermore, a persistent gap exists between undergraduate students' theoretical performance in examinations and their practical confidence in navigating real-world financial decisions (Kicova et al., 2025). In this regard, conventional teaching rarely supports long-term knowledge retention or enable students to apply theoretical models to practical financial planning scenarios (Oroh et al., 2025; Suleiman, 2024). Furthermore, while gamification is widely praised for boosting engagement, empirical questions remain regarding whether its efficacy varies based on prior student familiarity with gamified environments (Oliveira et al., 2023), how gamification fosters soft skills such as peer collaboration (López-Serrano, McGowan, Moreno-Ger, & Burgos, 2025), and what operational constraints emerge during physical or hybrid gamified activities. Without rigorous empirical investigation into these issues, universities risk implementing gamified activities as temporary novelties rather than evidence-based pedagogical instruments (Salinas-Navarro, Vilalta-Perdomo, Michel-Villarreal, & Montesinos, 2024).

Addressing these gaps requires moving beyond passive lectures and digital quiz apps. "Financial Quest" was developed as an experiential, checkpoint-based authentic assessment that transforms abstract actuarial formulas, Takaful structures, and portfolio diversification models into active decision-making challenges. By navigating simulated real-world scenarios in teams,

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students are evaluated not on note recall, but on their ability to negotiate, analyse, and apply financial principles under authentic operational conditions by addressing three research questions:

i To what extent does "Financial Quest" improve students' perceived understanding of insurance and investment concepts?
ii How do students evaluate gamified authentic assessment for long-term knowledge retention compared to traditional lectures?
iii In what ways does participating in a gamified quest build students perceived self-efficacy and confidence in applying financial concepts to real-life scenarios?

This study contributes to educational research, institutional policy, and broader socio-economic goals in several ways. First, it provides empirical evidence supporting gamification as an effective authentic assessment methodology for quantitative business subjects (Camacho-Zuñiga, Salas-Maxemín, Valle-Arce, Caratozzolo, & Chans, 2025; Yulianto et al., 2024). Second, it evaluates whether gamified activity offer equal learning benefits to students regardless of prior gamification experience (Oliveira et al., 2023). Finally, elevating financial literacy among higher education students directly supports human capital development, informed economic participation, ethical wealth preservation, and long-term economic stability (Seman et al., 2020).

Literature Review

Prior research has documented that authentic assessment improves educational outcomes by testing students on meaningful, real-world tasks rather than passive recall (Oroh et al., 2025; Wiggins, 1990). Integrating a gamified approach serves as a natural catalyst for authentic evaluation, embedding complex curricular goals within dynamic, scenario-based environments that mirror professional challenges (Camacho-Zuñiga et al., 2025). There is also a growing interest in game-based learning method as one of the alternatives to engage and motivate students during the learning process through structural game elements such as progressive quests, team-based problem-solving, and competitive milestones. Gamification transforms assessment into an interactive experience where students actively construct knowledge and negotiate solutions collaboratively (Oliveira et al., 2023). Consequently, merging gamified activity with authentic assessment frameworks not only boosts intrinsic student motivation but also provides higher education institutions with a scalable strategy to measure higher-order cognitive capabilities, practical application confidence, and vital collaborative soft skills (Lampropoulos & Sidiropoulos, 2024; Li et al., 2023). The basic idea is to uncover content progressively and focus on exercises while offering the theoretical means for them to be solved and offer points for correctly solving them.

In this study, the design and evaluation of "Financial Quest" are grounded in three complementary educational theories: Constructivist Learning Theory, Experiential Learning Theory, and Self-Determination Theory (Kolb, 1984; Ryan & Deci, 2000; Vygotsky, 1978).

Constructivist Learning Theory

Constructivism posits that learners do not passively absorb knowledge; rather, they actively build mental models by engaging with their environment, solving complex problems, and negotiating meaning through social interaction (Vygotsky, 1978). In “Financial Quest” activity, students face practical financial scenario such as structuring an insurance policy or adjusting a portfolio under market volatility that require analytical work and peer discussion (Yulianto et al., 2024).

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Experiential Learning Theory

Kolb (1984)'s Experiential Learning Theory defines learning as a process where knowledge is created through the transformation of experience across a four-stage cycle: Concrete Experience (active participation in checkpoint challenges during the quest), Reflective Observation (analysing performance, decision outcomes, and immediate feedback), Abstract Conceptualization (connecting game outcomes back to theoretical insurance and investment principles), and Active Experimentation (applying updated strategies to subsequent checkpoint challenges and real-life financial planning scenarios). In a nutshell, experiential learning emphasises the central role of experience in the learning process and the importance of adaptation and knowledge construction. "Financial Quest" operationalise Kolb's cycle, allowing students to actively participate in the challenges.

Self-Determination Theory

Developed by Ryan & Deci, (1985), this theory highlights three basic psychological needs essential for fostering intrinsic motivation: Autonomy (allowing students choice in problem-solving and team strategies), Competence (providing immediate feedback, progressive challenge scaling, and visible accomplishment markers), and Relatedness (structuring activities around team collaboration and peer interaction). When gamified activities satisfy these needs, student engagement shifts from external compliance to intrinsic motivation, driving deeper cognitive processing and better conceptual retention (Li et al., 2023; Oliveira et al., 2023).

Gamification in Higher Education Financial Studies

Gamification in tertiary business courses goes beyond simple points or badges; it uses structural game mechanics to achieve specific learning outcomes (Hamari, Koivisto, & Sarsa, 2014; Li et al., 2023; Oliveira et al., 2023). Recent empirical research demonstrates that business simulations boost student involvement, improve analytical thinking, and bridge the gap between abstract theory and real-world application (Kicova et al., 2025; Lampropoulos & Sidiropoulos, 2024; Subhash & Cudney, 2018). In financial education, gamification transforms complex numerical tasks into interactive simulations. As higher education increasingly transitions toward active learning paradigms, gamification bridges the gap between abstract academic theory and practical application across tertiary disciplines. This will ultimately drive higher student engagement, retention, and conceptual mastery in higher education (Lampropoulos & Sidiropoulos, 2024).

Pedagogy in Insurance, Investment, and Wealth Management

Teaching Insurance Planning involves building mastery in risk management techniques, risk pooling mechanisms, life and general policy evaluations, and cooperative risk models like Takaful (Seman et al., 2020). In addition, Investment Planning requires an understanding of compounding interest, inflation adjustments, risk-adjusted returns, asset allocation strategies, stock-bond valuations, and Shariah-compliant equity investments (Kicova et al., 2025). By integrating these areas into a single interactive exercise, students may observe the direct interplay between risk protection (insurance) and wealth accumulation (investment). Gamified simulations also enable students to understand financial plans, weigh protection costs against growth goals, and evaluate the financial impact of simulated economic shocks or insured losses within an ethical, social development framework.

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Soft Skills, Peer Collaboration, and Social Learning

While financial management relies heavily on quantitative methods, professional execution requires key soft skills, including communication, negotiation, ethical reasoning, and collaborative problem-solving. In this regard “Financial Quest” require students to articulate, negotiate and reach group consensus under time constraints and peer collaboration within specified time. Consequently, high-performing and low-performing students will work as a team where high-performing students reinforce their understanding through peer teaching, while struggling students benefit from collaborative learning.

Methodology

This study employed a survey design to evaluate student perceptions, pedagogical efficacy, and operational outcomes following the implementation of "Financial Quest". Quantitative data were collected through a post-activity survey that scored overall satisfaction, concept and peer teamwork. Qualitative data were gathered at the same time using open-ended survey items to capture students’ feedback and ideas for improvement.

Participants and Context

The study was conducted at a Malaysian public university within a specialized undergraduate degree program in business and economics. The target population comprised undergraduate students enrolled in a combined Insurance and Investment Planning course. A total of N=118 students completed the gamified activity and the subsequent evaluation survey (100% participation rate). The demographic breakdown comprised 86 female students (72.9%) and 32 male students (27.1%). Regarding prior exposure to gamified learning, 60 participants (50.8%) reported prior experience with gamified assessments, while 58 participants (49.2%) had never experienced gamification in higher education.

Financial Quest Pedagogical Intervention

"Financial Quest" was designed as an experiential, checkpoint-based authentic assessment activity integrating theoretical concepts from Insurance Planning and Investment Planning. Organised into teams of 4–5 members, students navigated a series of physical checkpoints across the campus.

The quest used a ten-checkpoint structure as follows:

1. *Checkpoint 1: Insurance and Takaful Asset Protection*
2. *Checkpoint 2: Insurance Policy Structure*
3. *Checkpoint 3: Insurance and Takaful Claims*
4. *Checkpoint 4: Financial Literacy*
5. *Checkpoint 5: Investment Concept Matching*
6. *Checkpoint 6: Investment Concepts*
7. *Checkpoint 7: Financial Priorities and Wealth Hierarchy*
8. *Checkpoint 8: Team Coordination*
9. *Checkpoint 9: Financial Product Selection*
10. *Checkpoint 10: Insurance, Takaful, Investment and Financial Goals*

At each station, teams presented real-world scenarios testing specific concepts. Teams earned points based on calculation accuracy, analytical depth, completion speed, and collaborative dynamics. Immediate feedback was provided at each checkpoint before teams received clues to unlock their next destination.

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Survey Instrument

The post-activity online survey contained three sections:

- *Demographics:* Gender and previous exposure to academic gamification.
- *Quantitative Constructs:* 5-point Likert items (1 = Strongly Disagree to 5 = Strongly Agree) covering overall effectiveness, concept recall, retention perceptions, application confidence classroom dynamics, and collaboration. Items were adapted from established frameworks measuring gamified learning engagement (Hamari et al., 2014; Subhash & Cudney, 2018) and authentic assessment efficacy (Wiggins, 1990), tailored specifically to quantitative finance education. The items formed five theoretical constructs:
  - *Construct 1:* Motivation and Engagement (5 items)
  - *Construct 2:* Understanding and Cognitive Skills (4 items)
  - *Construct 3:* Teamwork and Collaboration (4 items)
  - *Construct 4:* Learning Experience and Impact Perception (7 items)
  - *Construct 5:* Overall Effectiveness and Project Value (14 items)
- *Qualitative Items:* Open-ended questions:
  - Item 35: "What did you like most about the Financial Quest activity?"
  - Item 36: "What challenges did you face during the activity?"
  - Item 37: "How can the Financial Quest gamification be improved in future semesters?"

Instrument Validation and Pre-Testing

Content and face validity were established through an expert review panel comprising three senior academic professors specializing in finance pedagogy, educational psychology, and measurement. The experts assessed item clarity, language appropriateness, and alignment with course learning outcomes. The instrument underwent a pilot test with 20 undergraduate business students from a prior semester who were not part of the final study. Minor typographical and syntactical adjustments were made based on pilot feedback.

Reliability and Construct Validity

Construct reliability was assessed using Cronbach's alpha (α). All five constructs demonstrated high internal consistency as presented in Table 1.

Table 1: Construct Reliability

Construct	Cronbach's alpha
Motivation and Engagement	0.959
Understanding and Cognitive Skills	0.952
Teamwork and Collaboration	0.966
Learning Experience and Impact Perceptions	0.977
Overall Effectiveness and Project Value	0.989

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Qualitative Data Analysis

Qualitative data from the three open-ended questions were analysed using Braun and Clarke's (2006) six-phase thematic analysis framework: familiarization, initial code generation, theme searching, theme reviewing, theme defining, and reporting. Raw open-ended responses in both English and Malay were reviewed and open-coded independently by two researchers (the first author and a co-author). Minor coding divergences were resolved through negotiated consensus with a third author. Recurring thematic patterns were tabulated into frequency counts and paired with representative, verbatim student quotes.

Results

Results show that 81.4% of participants (N = 96) strongly agreed and 11.0% (N = 13) agreed that the activity was effective, giving a combined positive rating of 92.4% (N = 109). Students also supported keeping the activity in future semesters, returning a mean score of M = 4.68 out of 5.00. Survey items were grouped into thematic categories to evaluate core constructs as listed in Table 2.

Table 2: Descriptive Analysis of Core Constructs

Construct	Mean Score	Standard Deviation
Motivation and Engagement	4.65	0.75
Understanding and Cognitive Skills	4.67	0.72
Teamwork and Collaboration	4.70	0.69
Learning Experience and Impact	4.66	0.75
Overall Effectiveness and Project Value	4.67	0.73

Table 2 shows that there is an exceptional overall effectiveness across all statements with mean score of 4.67 out of 5.00. Students noted that "Financial Quest" created an interactive classroom environment and it made learning enjoyable. There is overwhelming support for making the gamification project a valuable component of the course and continuing it in future semesters. 'Teamwork and collaboration' were the highest -scoring overall constructs. Students also noted that group structures improved communication and peer knowledge sharing. A detailed results on 'Motivation and Engagement' questions revealed that students agree that "Financial Quest" increased their interest in insurance and investment topics (*M= 4.68*). In addition, rewards and point system also encouraged better performance (*M=4.65*). A detailed analysis on understanding and cognitive skills shows that this assessment improved students' problem-solving skills (*M=4.70*) while most students agree that "Financial Quest" made learning more fun and enjoyable (*M=4.73*).

Qualitative responses are also important in explaining the quantitative results. Thematic analysis of the qualitative responses across the 118 participants revealed three core thematic dimensions: Activity Strengths, Operational Challenges, and Recommendations for Future Iterations. For example, students loved the interactive, hands-on nature of the games (e.g., guessing games, acting, pyramid cups, and physical challenges like playing with flour and water balloons). Many highlighted the collaborative aspect, working with peers to solve problems, and the overall bonding experience it created. In other words, they appreciate applying financial concepts in a fun, fast-paced, and non-traditional environment. However, students also reported challenges faced such as balancing the physical rush with answering difficult calculation or theory questions under pressure which was challenging.

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Discussion

The problem statement highlights a persistent gap in higher education business and finance courses where students often pass theoretical written exams yet lack practical confidence when navigating real-world financial decisions. The findings from this study demonstrate that gamification directly addresses this divide. Authentic assessment principles require students to apply knowledge within real-world tasks and by embedding these tasks into checkpoint quests, "Financial Quest" converted formulas and theories into dynamic decision-making tools. These results support recent work by Camacho-Zuñiga et al., (2025) and López-Serrano et al., (2025), confirming that authentic, scenario-based assessments strengthen higher-order cognitive competencies and build self-efficacy in practical problem-solving. Findings from this study also show that students perceived "Financial Quest" as significantly more effective for long-term knowledge retention than traditional lecture.

The 92.4% positive feedback fits Experiential Learning Theory (Kolb, 1984) and recent empirical studies on gamified learning curves (Lampropoulos & Sidiropoulos, 2024; Li et al., 2023). When learning is restricted to passive listening and memorization, conceptual understanding degrades quickly after formal testing. In contrast, "Financial Quest" engaged students across Kolb's four-stage learning cycle: executing checkpoint challenges (Concrete Experience), reviewing feedback (Reflective Observation), connecting task to insurance and investment topics (Abstract Conceptualization), and adjusting strategies at subsequent checkpoints (Active Experimentation). As noted by Suleiman, (2024) completing this cycle within a gamified framework confirms that active problem-solving during initial learning speeds up concept recall. Furthermore, students rated "Financial Quest" higher for long-term retention than standard lecture formats ($M = 4.58$). Besides that, building confidence to apply finance concepts in real situations is a central goal of authentic assessment ($M = 4.55$). Real-world financial choices demand both technical precision and negotiation capabilities and the Collaboration & Soft Skills domain achieved the study's highest theme score ($M = 4.69$), proving that team setups supported task execution.

In professional financial settings, technical execution depends on teamwork, negotiation, and communication. By structuring the authentic assessment around small-group problem-solving, "Financial Quest" activated social learning dynamics (Bandura, 1985). Qualitative students' feedback frequently cited terms like "Bonding" and "Teamwork". Students actively debated risk preferences, articulated financial strategies, and supported peers who struggled with mathematical calculations. These findings echo research by López-Serrano et al., (2025), proving that team-based gamified assessments transform quantitative learning from an isolated, anxiety-inducing task into an interactive, peer-supported process.

Conclusion

"Financial Quest" demonstrates that gamified authentic assessment can bridge the persistent gap between classroom finance theory and practical application in higher education. Converting technical insurance and investment formulas into hands-on group challenges improves student engagement, concept recall, retention perceptions, and teamwork skills. Inexperienced students gained just as much value as those familiar with gamification, showing that clear task design matters far more than prior gaming exposure. While physical execution created minor bottlenecks around clue clarity, the strong student's response proves that experiential methods work. Addressing these logistical issues will help educators turn gamified tasks from one-off course events into reliable, scalable assessment tools for higher education business and finance courses. As universities work to build practical financial literacy, structured gamified authentic

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assessments offer an effective approach to build analytical capability, application confidence and collaboration skills in future business professionals. Several limitations should be noted. First, the evaluation relied on self-reported post-intervention perceptions and experiential reflections rather than pre- and post-intervention standardised objective performance exams. Future research should employ quasi-experimental longitudinal designs that couple perception surveys with objective pre-test/post-test knowledge assessments. Second, the study was conducted within a single cohort in one university department. Future cross-institutional comparative studies across diverse business disciplines and demographic cohorts are warranted to evaluate the institutional scalability and adaptability of gamified authentic assessment models.

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References

Bandura, A. (1985). *Prentice-Hall series in social learning theory. Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Camacho-Zuñiga, C., Salas-Maxemín, S., Valle-Arce, A. P., Caratozzolo, P., & Chans, G. M. (2025). Toward a continuous learning educational model: insights from the experience of a Mexican private university. *Frontiers in Education*, *10*. https://doi.org/10.3389/feduc.2025.1485034

Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work? - A literature review of empirical studies on gamification. *Proceedings of the Annual Hawaii International Conference on System Sciences*, 3025–3034. https://doi.org/10.1109/HICSS.2014.377

Kicova, E., Michulek, J., Ponisciakova, O., & Fabus, J. (2025). When Financial Awareness Meets Reality: Financial Literacy and Gen Z's Entrepreneurship Interest. *International Journal of Financial Studies*, *13*(3). https://doi.org/10.3390/ijfs13030171

Kolb, D. (1984). *Experiential learning: experience as the source of learning and development*.

Lampropoulos, G., & Sidiropoulos, A. (2024). Impact of Gamification on Students' Learning Outcomes and Academic Performance: A Longitudinal Study Comparing Online, Traditional, and Gamified Learning. *Education Sciences*, *14*(4). https://doi.org/10.3390/educsci14040367

Li, M., Ma, S., & Shi, Y. (2023). Examining the effectiveness of gamification as a tool promoting teaching and learning in educational settings: a meta-analysis. In *Frontiers in Psychology* (Vol. 14). Frontiers Media SA. https://doi.org/10.3389/fpsyg.2023.1253549

López-Serrano, A., McGowan, N., Moreno-Ger, P., & Burgos, D. (2025). Teaching soft skills in higher education through serious games: validation of the Compete! gamification. *Smart Learning Environments*, *12*(1). https://doi.org/10.1186/s40561-025-00401-5

Oliveira, W., Hamari, J., Shi, L., Toda, A. M., Rodrigues, L., Palomino, P. T., & Isotani, S. (2023). Tailored gamification in education: A literature review and future agenda. *Education and Information Technologies*, *28*(1), 373–406. https://doi.org/10.1007/s10639-022-11122-4

Oroh, E. Z., Ali, M. I., Pelenkahu, N., Usman, H., & Rorintulus, O. A. (2025). Authentic Assessment in Higher Education to Increase Critical Thinking and Develop Metacognitive

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Volume: 11 Issues: 87 Special Issue [October, 2026] pp 1291-1300
Journal of Islamic, Social, Economics and Development (JISED)
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Journal website: academicinspired.com/jised
DOI: 10.55573/JISED.118789

Awareness. *Studies in English Language and Education*, *12*(2), 827–844. https://doi.org/10.24815/siele.v12i2.45077

Ryan, R. M., & Deci, E. L. (1985). *Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being Self-Determination Theory*. Ryan.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*, *25*(1), 54–67. https://doi.org/10.1006/ceps.1999.1020

Salinas-Navarro, D. E., Vilalta-Perdomo, E., Michel-Villarreal, R., & Montesinos, L. (2024). Using Generative Artificial Intelligence Tools to Explain and Enhance Experiential Learning for Authentic Assessment. *Education Sciences*, *14*(1). https://doi.org/10.3390/educsci14010083

Seman, J. A., Ahmad, N., Abdul, N., & Malim, K. (2020). *Journal Of Critical Reviews Learning Takaful Through Gamification*.

Subhash, S., & Cudney, E. A. (2018). Gamified learning in higher education: A systematic review of the literature. *Computers in Human Behavior*, *87*, 192–206. https://doi.org/10.1016/j.chb.2018.05.028

Suleiman, D. (2024). An experiential learning approach to financial literacy education. In *Journal of Instructional Pedagogies* (Vol. 30). http://www.aabri.com/copyright.html

Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes.* Harvard University Press.

Wiggins, G. (1990). *The Case for Authentic Assessment. - Practical Assessment, Research & Evaluation* (Vol. 2, Number 2). http://PAREonline.net/getvn.asp?v=2&n=2.

Yulianto, A., Pramono, S. E., Wijaya, A. P., & Nasrun, N. (2024). Gamification in Enhancing Student Financial Knowledge, Engagement, and Enjoyment in Financial Education. *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran*, *10*(3), 965. https://doi.org/10.33394/jk.v10i3.12653

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