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E-PROCEEDING

EXTENDED ABSTRACT

UiTM *di hatiku*

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E-PROCEEDING

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Welcome Message RECTOR, UITM KEDAH BRANCH

Assalamualaikum warahmatullahi wabarakatuh,

First and foremost, I would like to extend my deepest appreciation to the organising committee of i-SPIKE 2025 for their steadfast dedication and commitment in making this prestigious event a reality. My heartfelt congratulations to the committee for their tireless efforts in ensuring that i-SPIKE continues to grow as a meaningful and impactful platform for academics, researchers, students, and industry players worldwide.

The theme for this year, “Empowering Minds: Bridging Innovation, Knowledge and Education for a Sustainable Future,” is both timely and significant. It reflects our shared responsibility to not only embrace creativity and technological advancement, but also to ensure that innovation directly contributes to sustainable development, equitable education, and the well-being of future generations.

i-SPIKE 2025 provides a dynamic platform for showcasing innovations that address real-world challenges while opening new avenues for collaboration, engagement, and inclusivity. By bridging knowledge, innovation, and education, this symposium strengthens our collective capacity to design solutions that empower communities and inspire positive change.

I am truly impressed by the diversity and calibre of participants in this year’s event. The projects and ideas presented highlight the extraordinary creativity and determination of our innovators. I am confident that the insights and solutions shared here will pave the way for continuous advancement in teaching, learning, and innovation.

It is my sincere hope that you will find i-SPIKE 2025 an enriching experience, one that sparks new ideas, builds lasting collaborations, and strengthens our shared vision for a sustainable future. To all participants, I wish you every success, and to the winners, my warmest congratulations.

Once again, I thank the organising committee, partners, and contributors for their invaluable support. May i-SPIKE 2025 continue to inspire and empower minds for many years to come.

Professor Dr. Roshima Haji Said
Acting Rector
Universiti Teknologi MARA (UiTM) Kedah Branch

Welcome Message (i-SPIKE 2025 CHAIR)

It is my great pleasure to welcome you to the 4th International Exhibition & Symposium on Productivity, Innovation, Knowledge, and Education 2025 (i-SPIKE 2025). This year's theme, "Empowering Minds: Bridging Innovation, Knowledge, and Education for a Sustainable Future," reflects our collective commitment to advancing innovation and fostering meaningful collaboration across academia, industry, and communities.

i-SPIKE 2025 provides a platform for scholars, researchers, students, and practitioners from diverse fields to showcase their ideas, share knowledge, and inspire new solutions to global challenges. We extend our sincere appreciation to all participants and contributors whose efforts and dedication have made this symposium possible.

We hope that this e-proceedings serves not only as a record of the innovations presented but also as a valuable resource that continues to inspire long after the event.

Thank you.

Dr Junaida Ismail
Chair

4th International Exhibition & Symposium on Productivity, Innovation,
Knowledge, and Education 2025 (i-SPIKE 2025)

PREFACE

The 4th International Exhibition & Symposium on Productivity, Innovation, Knowledge, and Education (i-SPIKE 2025) marks yet another milestone in our ongoing commitment to fostering innovation, creativity, and collaboration across disciplines. Guided by this year's theme, "Empowering Minds: Bridging Innovation, Knowledge and Education for a Sustainable Future," the event provides a dynamic platform for students, educators, researchers, and professionals to share their ideas, showcase their innovations, and engage in meaningful knowledge exchange.

This year, we are pleased to report that i-SPIKE 2025 received approximately 50 initial submissions, with more than 35 projects successfully advancing to final presentation and exhibition. These projects reflect a rich diversity of innovation, ranging from educational technologies, digital applications, and gamified learning tools to sustainable materials, cultural heritage preservation, and community-focused solutions. Collectively, they embody the spirit of bridging innovation and education to address pressing societal and global challenges.

We sincerely thank all participants, reviewers, and committee members for their invaluable contributions in making i-SPIKE 2025 a success. It is our hope that this e-proceedings will not only serve as a record of the ideas and innovations presented, but also as an inspiration for future collaborations and advancements in the pursuit of sustainable knowledge and innovation.

Assoc. Prof. Dr. Azlyn Ahmad Zawawi
Editor-in-Chief, i-SPIKE 2025 Proceedings

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CATEGORY 2
SS (ACADEMIC)

ACC-TILE CHALLENGE 1.0: PERMAINAN INOVATIF UNTUK MAHIR DEBIT & KREDIT

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ABSTRACT

Understanding debit and credit is often the first hurdle for accounting students. Traditional lecture-based methods, which are heavily theory-oriented, frequently leave learners disengaged and struggling to apply these concepts in practice. To address this gap, this study presents ACC-TILE CHALLENGE, a tile-based board game designed to help students strengthen their mastery of debit and credit through a collaborative and playful approach. The game incorporates account names, account types, simple transactions, and accounting processes, each represented by colour-coded tiles. Evidence from Malaysia indicates that gamification strategies not only improve students' attitudes but also their academic outcomes, with studies highlighting the effectiveness of playful learning approaches in accounting courses. International research has similarly demonstrated that gamified environments, such as digital role-playing games, enhance engagement and reshape how students perceive accounting. Building on this, ACC-TILE CHALLENGE introduces a low-tech, cost-effective, and inclusive model that requires no gadgets or internet access, making it highly adaptable to diverse learning contexts. The game aligns with SDG 4 (Quality Education) by providing a more engaging and accessible learning tool, while its affordability contributes to SDG 10 (Reduced Inequalities). In the longer term, by equipping students with stronger foundational skills, the innovation also supports SDG 8 (Decent Work and Economic Growth). Overall, ACC-TILE CHALLENGE demonstrates how gamification can transform accounting education into a more meaningful and inclusive experience.

Keywords: gamification, accounting education, debit and credit, learning innovation, SDG

INTRODUCTION

Debit and credit form the backbone of accounting, yet students often find them confusing and tedious. Studies in Malaysia have reported that many learners struggle to grasp these fundamentals when taught solely through conventional lectures, which reduces motivation and weakens comprehension. Similar issues have been noted internationally, where accounting is frequently viewed as a difficult and uninspiring subject. In response, researchers have turned to gamification to reinvigorate accounting education, reporting that interactive learning tools tend to improve both performance and engagement.

Objectives

The objectives of this innovation are fourfold. First, it seeks to assist students in mastering the fundamentals of debit and credit through an interactive game-based approach. Second, it aims to strengthen students' retention of account classifications and the processes involved in recording transactions. Third, the project intends to encourage a classroom environment that is more collaborative, active, and enjoyable. Finally, the innovation provides educators with a practical and cost-effective alternative to traditional teaching methods.

Design of the Innovation

The game comprises four categories of tiles: Account Names (blue), Account Types (red), Simple Transactions (yellow), and Accounting Processes (green) with a Joker tile to substitute missing pieces. Players compete by forming valid sets of at least three tiles, replicating how debit and credit are applied in real accounting entries. The first player to use all their tiles wins the game.

To support practical classroom use, the game comes with a manual, a scoring guide, and clear instructions. Its physical, non-digital format ensures that it can be applied immediately in any classroom setting, including those with limited technological access.

Novelty and value added

The novelty of ACC-TILE CHALLENGE lies in its inclusive and accessible design, as it does not require internet access or digital devices, making it suitable for a wide range of learning contexts. While it was inspired by a popular board game format, the mechanics have been completely restructured to reflect accounting principles, ensuring both creativity and relevance. Furthermore, the game is cost-effective and easily scalable, making it applicable in schools, universities, and training centres alike. From an educator's perspective, the innovation is user-friendly and requires minimal preparation, allowing it to be seamlessly integrated into teaching practice.

Impact and benefits

The innovation has the potential to deliver impact across several groups. For students, it enhances understanding of debit and credit concepts through play, which leads to deeper and longer-lasting knowledge retention. For educators, it provides a practical and engaging tool that revitalizes the way foundational accounting is taught. Within the wider academic community, the game can be adapted for use in various institutions, including TVET programs, polytechnics, and community colleges. Beyond education, the game also carries potential for industry application, particularly as a tool for onboarding and training staff in finance-related roles.

CONCLUSION

ACC-TILE CHALLENGE blends fun and pedagogy, addressing a key barrier in accounting education. It supports SDG 4 (Quality Education) by making learning more effective, SDG 10 (Reduced Inequalities) by ensuring inclusivity, and SDG 8 (Decent Work and Economic Growth) by equipping students with market-relevant skills. Future directions include developing digital versions, creating instructor training modules, and extending the concept to advanced accounting courses.

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REFERENCES

- Abu Bakar, S. Z. (2024). The effectiveness of gamification learning in accounting courses with academic performance and student attitudes. *International Journal of Humanities Technology and Civilization*, 9(1), 82–88. Universiti Malaysia Pahang.
- Almuntsr, N. M., Muhamad, H., Ong, T. S., & Shah, S. M. (2024). Using gamification in accounting education: A systematic literature review (2017–2023). *International Journal of Academic Research in Business and Social Sciences*, 14(2), 1119–1128. <https://doi.org/10.6007/IJARBSS/v14-i2/20887>
- Omar, N., et al. (2025). The role of gamification elements in enhancing learning motivation: Insights from Malaysian accounting students. *International Journal of Research and Innovation in Social Science*, 9(6), 1634–1644.
- Xiong, Y., et al. (2025). Attracting students to accounting through gamified education: Boosting perceived learning with digital role-playing games. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.5094745>
- Chukwuani, V. N. (2024). Gamification in accounting education: Enhancing engagement and learning outcomes. *International Journal of Advanced Finance and Accounting*, 5(3), 1–10. <https://doi.org/10.5281/zenodo.14549203>

