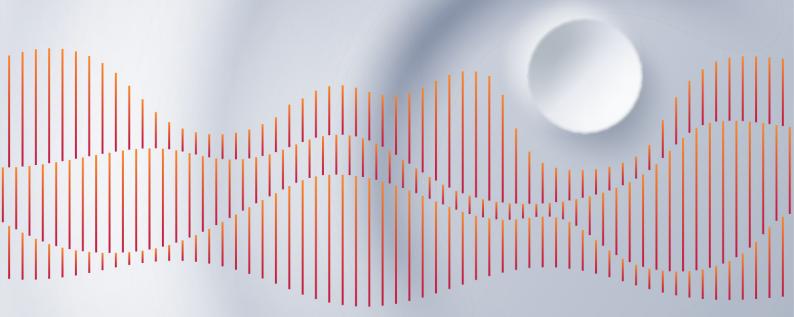


# **E-PROCEEDINGS**



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Cover Design : Asrol Hasan Layout : Nurina Anis Mohd Zamri

eISBN: 978-967-2948-51-3

Published by: Universiti Teknologi MARA Cawangan Kedah,

08400 Merbok,

Kedah, Malaysia.



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#### **PREFACE**

iTAC or International Teaching Aid Competition 2023 was a venue for academicians, researchers, industries, junior and young inventors to showcase their innovative ideas not only in the teaching and learning sphere but also in other numerous disciplines of study. This competition was organised by the Special Interest Group, Public Interest Centre of Excellence (SIG PICE) UiTM Kedah Branch, Malaysia. Its main aim was to promote the production of innovative ideas among academicians, students and also the public at large.

In accordance with the theme "Reconnoitering Innovative Ideas in Post-normal Times", the development of novel ideas from the perspectives of interdisciplinary innovations is more compelling today, especially in the post-covid 19 times. Post-pandemic initiatives are the most relevant in the current world to adapt to new ways of doing things and all these surely require networking and collaboration. Rising to the occasion, iTAC 2023 has managed to attract more than 267 participations for all categories. The staggering number of submissions has proven the relevance of this competition to the academic world and beyond in urging the culture of innovating ideas.

iTAC 2023 committee would like to thank all creative participants for showcasing their innovative ideas with us. As expected in any competition, there will be those who win and those who lose. Congratulations to all the award recipients (Diamond, Gold, Silver and Bronze) for their winning entries. Those who did not make the cut this year can always improve and join us again later.

It is hoped that iTAC 2023 has been a worthy platform for all participating innovators who have shown ingenious efforts in their products and ideas. This compilation of extended abstracts published as iTAC 2023 E-Proceedings contains insights into what current researchers, both experienced and novice, find important and relevant in the post-normal times.

Best regards,

iTAC 2023 Committee Special Interest Group, Public Interest Centre of Excellence (SIG PICE) UiTM Kedah Branch Malaysia



# MONEY PATROL: LEARNING FINANCIAL LITERACY THROUGH GAMES

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#### **ABSTRACT**

In Malaysia, awareness of financial literacy among children and youth is at a very low level. This is proven based on a survey conducted by the Malaysian Securities Commission (SC), Malaysian youth are generally unable to manage their finances well. Not only that, a study conducted by the Organization for Economic Cooperation and Development (OECD) and Bank Negara Malaysia (BNM) in 2019 found that one in three Malaysians thought they had a low level of financial knowledge. Financial literacy needs to be nurtured from an early age to help youth form the right attitude in managing their own money. Money Patrol is a multi-player financial budgeting themed board game that was innovated to a digital platform where the game application can be found on the AppStore and Playstore. This game has an educational concept because it is specifically designed to increase players' understanding of the importance of skills



and knowledge in financial management. The objective of innovation is to further increase the awareness of financial literacy among its users through the "play while learning" concept. This game encourages users' interest in financial literacy while providing an engaging learning opportunity. Interesting text, audio and animation content, making it a fun game for players to play while increasing their understanding of a subject area. People can install this game app for free on their device and play with their family and friends. Money Patrol aims to attract people of all ages from 9 years old and up to play while learning about how to manage finances. In line with SULAM's objectives, this game can help the community by raising awareness about the value of financial literacy.

**Keywords:** financial, literacy, budgeting, gamification, educational, edutainment.

# **BACKGROUND**

Awareness of the importance of financial literacy is still at a very unsatisfactory level in Malaysia. This was proven when a study conducted by the Malaysian Securities Commission (SC) found that Malaysian youth in general cannot manage their finances well. Financial literacy is very important in the life of every individual because it greatly affects the way a person manages finances in their daily life. There is also a study conducted by the Organization for Economic Cooperation and Development (OECD) and Bank Negara Malaysia (BNM) in 2019, which found that one in three Malaysians thought they had a low level of financial knowledge. From here a small conclusion can be made where Malaysians are less exposed to knowledge related to finance since their early age. Moreover, in going through this era of modernization, the role of knowledge and technology that is developing so rapidly needs to be in line. Financial literacy must be cultivated from an early age to help each individual form the right attitude in managing their own finances. Not only that, if Malaysians do not have a good awareness of financial literacy, they will not be able to manage their finances well and at the same time it will have an impact on the country's bankruptcy data where it will increase every year and have a negative impact on the economic situation country.

For this reason, this new initiative that we will create is to attract consumers of all ages to financial literacy. Money Patrol is a board game that has been innovated onto a digital platform. As we know, the method of learning using board games in Malaysia has been used for quite some time now. It is no wonder that in the 21st century, playing is considered as one of the methods of approach in the education because learning through playing can develop imagination, social-emotional competence, etc. (Alharbi, 2020). Play is one of the most important ways for children to acquire important knowledge and skills (UNICEF Publications, 2018). Now, everything can be found at the tip of the finger. Even in school now, students use gadgets to learn. So, this Money Patrol game was created digitally instead of a physical board game because the current generation is more inclined to use gadgets for everything. It is also for easy access and can be played wherever you are with friends and family whether far or near because it is a multiplayer game.



Money Patrol is a financial budgeting themed game, with this game application users can learn the basics of financial planning which is budgeting in their expenses. As we already know, budgeting is a very important thing in financial management. The function of this game application is where it can make sure users know the amount of expenses in their life such as managing their money for utilities, food and travel. Apart from that, of course this game is created to attract users to gain knowledge while playing. Money Patrol game application is not only focused on children and teenagers but it can also be played by adults because of the educational concept that can encourage critical thinking skills while playing this game.

### PROBLEM STATEMENT

Malaysians face a low level of financial management knowledge. The awareness of the importance of financial literacy does not seem to reach them. If this problem is not solved quickly, it will have a worse impact in the future. Failure to manage money can cause overspending and it can lead to debt. If the debt becomes a burden, it will cause various problems that can affect individuals mental and physical health. Not only that, it will also affect the current state of the country's economy.

#### **OBJECTIVES**

The main objective of this Money Patrol game application is to further increase the awareness of financial literacy among its users through the "play while learning" concept because it is a digital game that can help effective learning methods for various ages in managing their finances.

# **NOVELTY**

People can easily obtain and play this board game for free. While the games are still being played, it also contains advertisements. That is one of the ways that these online board games increase their revenue. Children's money management lessons are being taught using inspiration and innovation from different board games. The players might be able to accomplish their goals and win the game as a result. In addition, this board games can easily be played everywhere as our board games is a digital board game. It is easier as nowadays everyone has a phone. So, it is very convenient for players to play the games anywhere and anytime.

### **COMMERCIALIZATION POTENTIALS**



Money Patrol aims to attract people of all ages from 9 years old and above to play while learning about how to manage finances. This is to give them awareness on how to manage their money wisely without overspending.

# **BENEFIT TO COMMUNITY**

It might raise financial literacy awareness among younger players who are not yet exposed to this common information. In addition, even though they are minors, it is teaching them expertise about financial budgeting. This is due to the fact that it is crucial for them to understand how to handle their finances. Furthermore, it will also give players awareness at the early age so in the future they will have more knowledge on budgeting. This will indirectly improve their quality of life as they have the consciousness regarding budgeting.

#### FEEDBACK FROM COMMUNITY

To know whether our product gives a benefit to society we have conduct feedback from community to prove that our digital games is giving awareness and good knowledge to people especially to a younger generation.

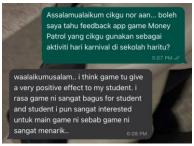
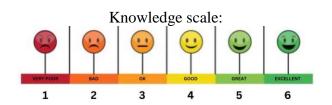


Figure 1.0 Testimonials from the Users

Based on the testimonial received from one of SK Nyalas teachers namely Madam Nor Aan, she has used Money Patrol game application as one of the activities on School Carnival Day at SK Nyalas to expose the importance of financial literacy to students at that school. Madam Nor Aan said that this game application has a positive effect on students to learn the concept of financial budgeting. Not only that, students also enjoy playing this game. Gamification method used in education can have a significant impact on the education line if used properly. Based on this testimony as well we can know that the students consistently focus on the objectives of the game and there are further questions that the students ask the teacher as a sign that they are interested in knowing about this financial management.

**Table 1.0** Feedback from Community.





Cotogowy	Satisfaction	Knowledge about financial literacy	
Category		Before	After
Parents 1	Satisfied	3	6
Parents 2	Not Satisfied	4	6
High School Student 1	Satisfied	4	5
High School Student 2	Satisfied	3	6
Primary School Student 1	Satisfied	1	5
Primary School Student 2	Satisfied	2	6
Public	Not Satisfied	2	5

Based on table 1.0 feedback from community there are several people feeling satisfied with the digital board games Money Patrol and some who are not which are parents 2 and public. This is because parents 2 think that it is difficult for their children to play. Then, for the public they said that this digital board games not too relevant and interesting for children to gain their in calculating. Thus, for the rest who are satisfied with Money Patrol board games feeling that this board games interesting and can gain their children knowledge in personal financial planning.

### **CONCLUSION AND REFLECTION**

To conclude, we have conducted a study on the practical use of digital board games known as Money Patrol in increasing saving knowledge and understanding among players. Hopefully by introducing Money Petrol can give knowledge to others, especially among primary school students. It will set off the innovation in the context of reserve education implement the concept of learning and playing. Money Patrol is not just a digital board games, but there is an element of science about saving and keeping money. The goal of developing digital board games should be achieved to ensure that children can understand and apply in their daily lives. New innovations introduced in the field of savings such as Money Patrol, can be a model and a special guide to practice saving their own pocket money wisely and effectively. So, hopefully by launching this game it will give more understanding to players especially to the younger generation on how important budgeting in our life.



### **ACKNOWLEDGEMENTS**

First of all, praise and thanks to Allah SWT because with His abundant grace throughout this project that we were able to complete the task successfully. We have been given this assignment since the beginning of the semester that we have to do in grouping. We would like to thank everyone who has gave us endless supports.

We are very grateful for successfully completing the assignment of Personal Financial Planning (FIN533) in the time given by the lecturer. We would also like to express our infinite gratitude to our beloved lecturer and advisor, Madam Nor Aizan and Prof. Madya Dr. Halimahton Borhan for providing us invaluable guidance, comments and suggestions throughout the course of this project.

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e ISBN 978-967-2948-51-3

