

THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

Smart Money Kit: An Innovative Learning Tool for Kids

Dr. Mohamad Fazli Sabri

Lecturer (Deputy Dean), Department of Faculty of Human Ecology
University Putra Malaysia, Malaysia

Thinagaran Moga Dass

Graduate Student, Department of Faculty of Human Ecology
University Putra Malaysia, Malaysia

Nurhayatul Nira Ramli

Education Service Officer, Department of Faculty of Human Ecology
University Putra Malaysia, Malaysia

Abstract:

Smart Money Kit: Bright Kids Smart Money is an initiative to raise awareness among public, especially parents and educators on prudent money management among young children. This awareness is resulting of Central Bank of Malaysia's strategy to raise financial literacy in the country among Malaysians. It is a financial education tool targeting mainly young children ages from 6 to 12 years with the objective of educating them on the importance of money and money management in their lives. This financial education kit comes with 10 interactive activities arranged according to children's ages from the age of 6 to 12 years old. It comprises six basic units covering financial management education i.e. getting to know money, financial goals, needs vs. wants, saving, expenditure and budgeting. This kit has been in the market for the past three years and the researchers conducted an online survey among the parents, teachers, caretakers of the users to measure the impact of Smart Money Kit on their children. A total of 40 respondents have been participated in this online survey and the descriptive analysis has been performed to decode the data. The results shows that, majority of the parents, teachers and caretakers agree that Smart Money Kit has moulded their children becoming financially prudent and 90% of them seen huge difference in their children after being exposed to Smart Money Kit. Hence this kit has been proved to be an effective tool to educate children on financial management and skills, and financial literacy besides able to develop a better financial behaviour and attitude among the children.

Keywords: Smart money kit, financial literacy, financial education, gamification

1. Introduction

Issues concerning the financial management habits and behaviours of the working population, particularly of the young employed, have been hotly debated in the mass media and in Parliament. According to the 2016 statistics released by the Legal Affairs Division (Bahagian Hal Ehwal Undang-Undang, 2016), 19,588 Malaysians were declared bankruptcy, with 11,876 of them being those under 44. Added to this, the Consumer Research and Resource Centre (CRRC) found that 41 young employed are declared bankrupt each day due to failure to settle car loans and personal loans, and over-limit credit card spending. The 2016 Bank Negara Malaysia Report also revealed that Malaysian households utilise 48% (almost half) of their salaries to pay off debts and Malaysian's household debt-to-gross domestic product (GDP) ratio increased to 89.1% from 86.8%. In fact at 89.1%, Malaysia has one of the highest household debts in the region.

Imprudent financial management brings with it various negative economic and social effects such as increased divorce rates, spousal and child abuse, reduced workplace productivity, rising crime rates, and depression and other health problems. National Population and Family Development Board (2014) reported that one of the main factors for the rise in divorces was economic or financial problems within the family.

In this regard, financial education can be seen as the best strategy for helping individuals to manage their limited financial resources wisely, ultimately resulting in a decrease in the number of individuals being declared bankrupt. Previous research has shown that what is learnt when young affects knowledge, values, attitudes and practices in adulthood (Garman & Fargue, 2005; Holden, Kalish, Scheinholtz, Dietrich & Novak, 2009; Kim & Chatterjee, 2013).

Education, particularly in financial management, should begin at a young age, where the home and the school are seen as the environments closest to children that have the greatest influence in shaping their development and growth. Past research also reveals that parents, teachers and the school are the institutions that have the most significant impact in influencing children (Bandura, 1977; McNeal, 1987; Sabri, McDonald, Masud & Hira, 2011).

However, not many parents and teachers have the knowledge and skills to educate children in money management. Many parents feel that it is too early to expose young children to the subject. In the context of early

childhood education, parents, teachers and other adults need to utilise various approaches in teaching and learning appropriate to children's developmental level, needs, aptitudes, interests and backgrounds. Most childhood psychologists recommend play as the best and most effective method of teaching children.

To further answer the question, this researcher has developed Smart Money Kit: Bright Kids Smart Money as an alternative financial education tool for parents, teachers and other adults to assist in educating children in personal financial management.

2. Literature Review

2.1. Gamification

Gamification basically is the process of applying game elements in a subject that is not a game intended to make it more attractive and create a happy feeling for the players (Rahman, Ibrahim, Tengku Zainal Abidin, & Muhd Fauzi, 2017). This process involves enhancing services with motivational affordances resulting psychological outcomes by invoking gameful experiences and further behavioral outcomes (Hamari, Koivisto, & Sarsa, 2014). Applying the concept of gamification in education is a n innovative method in delivering knowledge and information replacing the conventional method of teaching and learning (Rahman et al., 2017). Gamification based education has the potential to develop self-quality such as able to solve the problem more systematic and organized, inculcate value of fortitude, and build creativity among students (McGonigal, 2011).

2.2. Edutainment

Edutainment is the when education meets entertainment where the children to enjoy what they learn with a combination of multiple media. It enable improved self-monitoring, problem recognition and problem solving, decision making, better short-term and long-term memory, and increased social skills such as collaboration, negotiation, and shared decision-making (Mitchell & Savill-Smith, 2004)

2.3. Effectiveness

Prior researcher like Road (2017) believes that games provide stimulation, variety, interest and motivation to learners. Besides providing amusement and cooperation, games help to promote positive attitudes towards learning and encourage active participation among players and consequently boost confidence and self-esteem. Study conducted by Owston, Wideman, Ronda and Brown (2009) proved that Students who learned by a game development shell had a better performance than those who did not play games. Similarly, Tsai, Yu and Hsiao (2012), found that the level of knowledge acquisition of students' is impacted by motivation, capability on learning, and the skill of playing game. Besides that, another study has been conducted in 2014 to test the impact of game-based learning on mathematical confidence and performance among low ability and high ability students. The result indicates that students in both categories attained significant improvements in their performance; however, the students with the digital game-based setting saw more improvement than their peers with the paper-based setting (Ku, Chen, Wu, Lao, & Chan, 2014). In the Malaysian context, Lester & Lee, (2012) have used a board game (SMARTies) in the English classroom for edutainment and assessment by using pre-test and posttest approach. During the pre-test, a majority of students could neither answer general knowledge questions nor spell words correctly as well as not able to identify and give examples of selected grammatical items. After being exposed to SMARTies board game for a minimum of two times, students were able to perform better. There was an increase of 46.00 % for general knowledge, 50.50 % for spelling and 47.98% for grammatical items. These evidences from previous studies prove that, game based learning can improvise students' knowledge and attitude towards learning.

2.4. Financial Education

Financial education is vital in order to improve consumer financial literacy, encouraging desirable financial behavior and enhancing financial capability (PACFC, 2013). Brown, Collins, Schmeiser, and Urban (2014) in their study discovered that young people who were in school after the implementation of a financial education requirement had higher relative credit scores and lower relative delinquency rates than those in control states. Similarly, Hilgert, Hogarth and Beverly (2003) documented a strong relationship between financial knowledge and the likelihood of engaging in recommended financial practices such as maintaining an emergency fund. There is a positive relationship between measures of financial knowledge and savings behavior and girls initially possess lower average financial literacy than boys (Road, 2017). In Malaysia, Sabri & MacDonald, (2010) conducted a study among college students and found that students with higher financial knowledge were more likely to engage in savings behavior, while those students with greater influence from socialization agents and late exposure in their childhood consumer experience were less likely to engage in savings behavior.

2.5. Smart Money Kit

Smart Money Kit is a financial education kit which comes with 10 numerous games and activities arranged according to the children's ages and developmental stages. The interactive activities are suitable for children aged 6 to 12 and can be carried out on their own, with friends or with the family at any time and also suitable for teaching and learning activities at home and at school. The kit comes with a guide book containing objectives, timing, requirements and instructions of each activity for easy guidance with illustrations on conducting the activities. Smart Money Kit comprises six basic units covering financial management education which are (1) getting to know money; (2) the purpose of money;

(3) needs vs wants; (4) savings; (5) expenditure and budget; and (6) the basic concepts of Islamic banking. The kit comprises 16 games or activities designed to meet the needs of children according to age and developmental stage. This educational product is in the form of education holistically, including physical, emotion, social and moral. The activities are arranged according to difficulty- from easy to difficult- so children are able to master each topic according to their ability and skill, with activities such as arranging cards to financial board games. The kit also includes on-going practice in saving money, e.g. "My Goals" and "My Pocket Money Diary" photo frames. With these, children will be able to identify their financial goals more clearly and specifically, and keep a record of their pocket money savings. It provides evaluation of knowledge gained and understanding levels in the form of pre and post assessment after each unit.

The Smart Money Kit is an effort to increase public awareness towards financial management and saving issues. The added bonuses of this product are, children get to learn while playing and the recreational nature of the activities arranged according to the child's stage of development. This kit is convenient for children to experiment on their own or with friends and family and suitable to be used at home or school for teaching and learning activities anytime. The activities are easily conducted, needing only minimal help from teachers or parents. Additionally, the games are appropriate for family recreation and classroom learning activities. Thus, Smart Money Kit: Bright Kids Smart Money is a comprehensive educational product. The kit can be used as research material in the areas of education, human development, economics and consumer studies. The added advantage of this product lies in the use of the methodology of learning while playing and the recreational nature of the activities arranged according to the child's stage of development. In terms of being time-saving, the activities can be carried out during the parents, teachers' and other users' leisure time. The games are interactive and fun, well-suited for children. They also sharpen children's financial management skills, helping to develop their abilities to become smart and prudent money managers.



Figure 1: Smart Money Kit: Bright Kids Smart Money

3. Methodology

Researchers have conducted an online survey to those who had experienced using Smart Money Kit. This online survey was administered to identify the feedback from the users on how they rate Smart Money Kit. The online survey consisted of two parts which is (A) User Profile which gather information on the relationship of respondents to the Smart Money Kit User, and age; and (B) User Evaluation which consist of 12 questions on evaluating the effectiveness and changes after using Smart Money Kit. The questions were developed by the researchers themselves based on the presumed impact and objective of the product itself. This survey adapts the online method where the questionnaire is being generated through Google Form and sent to the users of Smart Money Kit of Malaysia through social media (Facebook and Whatsapp) and email. A total 100 respondents have been targeted and approached but only 40 respondents have been participated in this survey. The survey took two weeks' time to get response from the respondents who are Malaysians only. The descriptive analysis has been performed to decode the data.

4. Results and Discussion

4.1. User Profile

The pie chart exhibits on the relationship of respondents to the kids who are using the Smart Money Kit. Almost half (42.5%) of them were mothers, followed by father (20%), teachers (17.5%), others (15%) and least by caretakers (5%). The range age of the parents, teachers and caretakers are in between 23 to 53 years old. Majority of them (46%) are in between 30 to 40 years old. Whereas, the user's age range are between 6 to 12 years old with higher percentage in 10 to 12 years old which 85 percent.

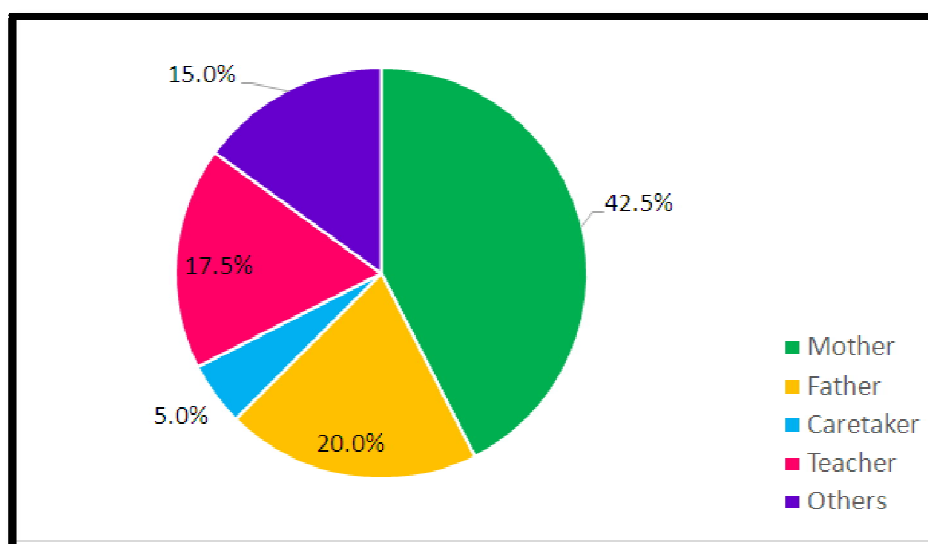


Figure 2: Relationship with Smart Money Kit Users

4.2. Effectiveness of Smart Money Kit

Based on the evaluation given by parents, teachers and caretakers, majority of them (92.4%) perceived that their children or users of Smart Money Kit have enhanced their saving practices and 87.5% agreed that they can spend efficiently and wisely. Saving behaviour should be inculcated from childhood as it is a form of basic money management activity where it teaches the children to manage, and control their expenses. Saving helps the children to set priority on their expenses and make them differentiate between needs and wants. Thus, it directly stimulates them to spend wisely of their allowance and plan their expenses through budget. Having established this understanding of money in childhood produces an adult who will be able to manage their household expenses and maintain a good credit history. Besides that, they also discovered that the children can identify their financial goals (85%) when using Smart Money Kit. Financial goals consist of short-term and long-term goals which requires different plans and strategies to achieve them. This teaches the kids to plan efficiently and let them understand the concept of waiting with patience till they achieve their goals. Not just that, 90% of the children able to differentiate between needs and wants as well as they can prepare their own spending plans. Through the gameplay, the children learns that money is a limited source and need to be spent wisely by recognising and distinguish between need and wants. Subsequently, the kids know to prioritize their expenses and spend within their mean. Apart from that, children were distinguishing able to compare price (85%) by their parents, teachers and caretakers. Comparing price of goods before buying is an important skill that need to be inculcated as it makes the kids to make some survey, compare and make purchasing decision without tolerating the quality of products with an affordable price. In addition, children are able to gain information before purchasing (85%) after had an experienced with Smart Money Kit. Furthermore, 87.5 percent of children will discuss with their parents before purchasing. It is necessary as a consumer to gather information before making purchase as it helps us to analyse the content, price, alternate options, offers, advantages, disadvantages and most importantly do we really need the product. Discussing with parents before parents can help the parents to keep an eye on their children expenses behaviour and advise them wisely if needed. This provides a good platform of communication between the parents and children on purchasing decision where the parents have the space to mould the kids as a responsible consumer. More than three quarter of them (90%) noticed that children are aware in regards of the money spends whereabouts. Keeping track on expenses is a method or technique in budgeting which literally control the way we are spending. When children know where their money goes, they also will know where their money shouldn't go, and this is directly related with distinguishing between need and wants. Above all, it can be seen that the gameplay has contributed in a subjective way to the children. Parents, teachers and caretakers have reported that the kids are becoming a sustainable consumer (82.5%) who exhibit behaviors that improve social and environmental performance as well as meet their needs. To put in simple words, the children are practicing environmental friendly products and adapts the concept of reduce, reuse and recycle in their daily routine. Furthermore, the children also have changed to a selfless individual helping others in needs (85%). Children understand money is not the only need in life and it should be shared with those in need.

Statement	SD	D	N	A	SA
	N (%)	N (%)	N (%)	N (%)	N (%)
In overall, Smart Money Kit helps my children / user in...					
...enhancing saving practices	-	-	3 (7.5)	17 (42.4)	20 (50.0)
...spending efficiently and wisely	-	-	5 (12.5)	20 (50.0)	15 (37.5)
...identifying financial goals	-	-	6 (15.0)	17 (42.5)	17 (42.5)
...differentiating between needs and wants	-	1 (2.5)	3 (7.5)	22 (55.0)	14 (35.0)
...preparing spending plans (budget)	-	-	4 (10.0)	24 (60.0)	12 (30.0)
...comparing price	-	1 (2.5)	5 (12.5)	20 (50.0)	14 (35.0)
...gaining information before purchasing	-	1 (2.5)	5 (12.5)	21 (52.5)	13 (32.5)
...discussing with parents before purchasing	-	1 (2.5)	4 (10.0)	24 (60.0)	11 (27.5)
...being aware of spending money whereabouts	-	-	4 (10.0)	26 (65.0)	10 (25.0)
...becoming a sustainable consumer	-	-	7 (17.5)	22 (55.0)	11 (27.5)
...becoming a selfless individual helping others in needs	1 (2.5)	-	5 (12.5)	25 (62.5)	9 (22.5)

Table 1: Effectiveness of Smart Money Kit towards Children

Notes: SD=Strongly Disagree; D=Disagree; N=Neutral; A=Agree; SA=Strongly Agree

4.3. Paradigm Shift In Children's Financial Management

In all, 95% of parents, teachers and caretakers viewed that children have a change in terms of financial knowledge, attitude and behavior. On the scale from 1 (no changes) to 10 (huge difference), how far do you see changes in terms of financial knowledge, attitude and behavior in your children / user after using Smart Money Kit? The scores then have been categorised into three categories which is as below

No	Category	Score
1	No Changes	1-3
2	Slight Difference	4-6
3	Huge Difference	7-10

Table 2: Scoring of Changes in Financial Knowledge, Attitude and Behavior

Majority of the parents, teachers and caretakers have stated that they could see huge difference among the children after being exposed to Smart Money Kit. The children tend to exhibit a positive financial knowledge, attitude and behaviour as the gameplay is based on six basic units of finance which are (1) getting to know money; (2) the purpose of money; (3) needs vs wants; (4) savings; (5) expenditure and budget; and (6) the basic concepts of Islamic banking. This is the fundamental principle of finance that could shape the children into a financially prudent adult. Meanwhile, 7.55% of them fall into experiencing slight changes and only 2.5% of them into no changes.

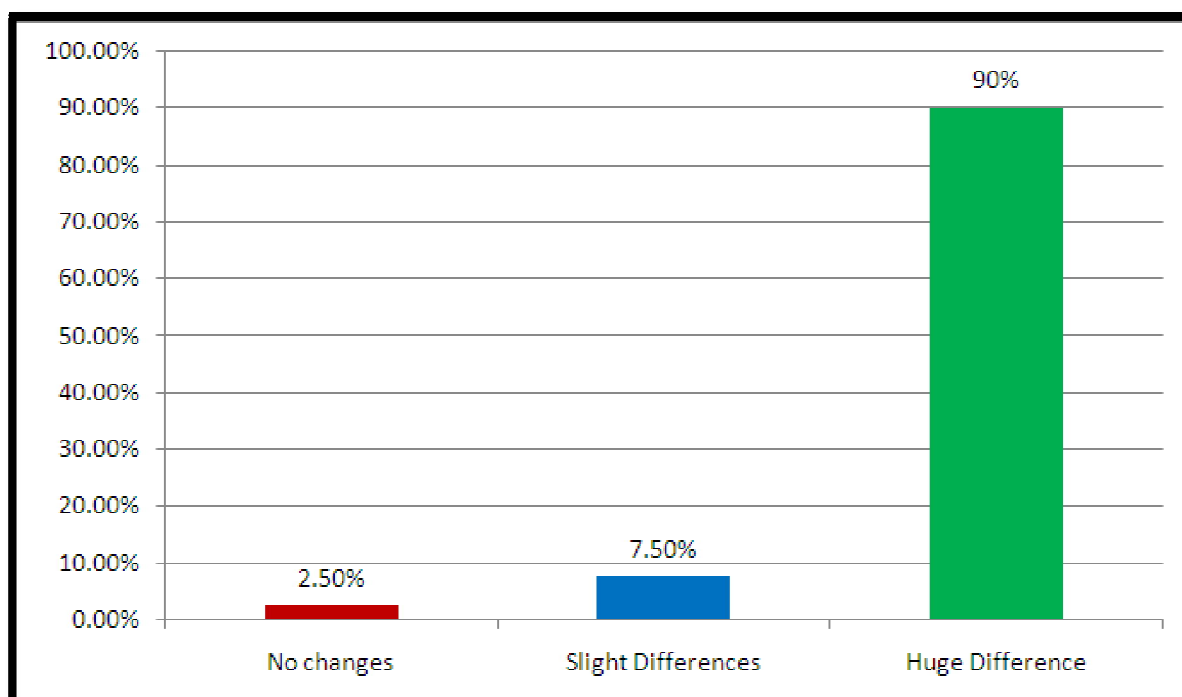


Figure 3: Changes in Children after Playing Smart Money Kit

5. Conclusion

The objective of behind the innovation of Smart Money Kit is as an alternative financial education tool for parents, teachers and other adults to assist in educating children in personal financial management. Smart Money Kit which is an interactive game kit comprises six basic units covering financial management education and suitable for children aged 6 to 12. This kit has successfully invading market for the past three years and has been benefiting the users. Thus, the researchers conducted an online survey among the parents, teaches, caretakers of the users to measure the impact of Smart Money Kit on their children. A total of 40 respondents has been participated in this survey and the descriptive analysis has been performed to decode the data. The results shows that, majority of the parents, teachers and caretakers agree that Smart Money Kit has mould their children becoming financially prudent and 90% of them seen huge difference in their children after being exposed to Smart Money Kid. This survey proved that Smart Money Kit is an effective tool to educate children on financial management and skills, and financial literacy besides able to develop a better financial behaviour and attitude among the children. The process of learning has been transformed from conventional learning to creative, innovative and interactive learning styles. In Malaysia, there are debates on introducing Financial Literacy as a subject in schools or incorporate this topic as part of a larger subject on living skills. This shows that the public are aware of the importance of financial education from early age as it could guide the children through their adulthood where the has to face the money market through savings, loans and investment in future. Hence, Smart Money Kit is the potential key to unlock the financial ignorance among the children to produce a financially prudent consumer in the future.

6. Acknowledgement

The researchers wish to extend our sincere appreciation to Putra Science Park, Research Management Centre, Universiti Putra Malaysia for funding this innovation project. Special thanks also go to those who have directly or indirectly assisted us throughout the process.

7. References

- i. Bahagian Hal Ehwal Undang-Undang (2016). Laporan Tahunan BHEUU 2016. Jabatan Perdana Menteri.
- ii. Bandura, A. (1977). *Social Learning Theory*. New York: General Learning Press.
- iii. Bank Negara Malaysia (2016). *Bank Negara Malaysia Annual Report 2016*.
- iv. Brown, A.M., Collins, J.M., Schmeiser, M.D. & Urban, C. (2014). *State Mandated Financial Education and the Credit Behavior of Young Adults*. Divisions of Research & Statistics and Monetary Affairs Federal Reserve Board, Finance and Economics Discussion Series, (2014- 68), Washington, DC.
- v. Garman, E. T., & Fogue, R. E. (2005). *Personal finance (Vol. 8)*. Houghton Mifflin Company.
- vi. 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.
- vii. Hilgert, M. A., Hogarth, J. M., & Beverly S.G. (2003) *Household financial management: The connection between knowledge and behavior*. *Federal Reserve Bulletin*, 89 (7), 309-322.
- viii. Holden, K., Kalish, C., Scheinholtz, L., Dietrich, D., & Novak, B. (2009). *Financial Literacy Programs Targeted on Pre-School Children: Development and Evaluation*. Credit Union National Association.
- ix. Ku, O., Chen, S. Y., Wu, D. H., Lao, A. C. C., & Chan, T. W. (2014). The effects of game-based learning on mathematical confidence and performance: High ability vs. low ability. *Educational Technology and Society*, 17(3), 65–78.

- x. Kim, J., & Chatterjee, S. (2013). Childhood Financial Socialization and Young Adults' Financial Management. *Journal of Financial Counseling and Planning*, 24(1), 61–79.
- xi. Lester, H., & Lee, J. (2012). SMARTies: Using a board game in the English classroom for edutainment and assessment. *Malaysian Journal Of ELT Research*, 8(1), 1–35.
- xii. McGonigal, J. (2011). *Reality is broken: Why Games Make Us Better and How They Change The World*. Johathan Cape, London.
- xiii. McNeal, J.V. (1987). *Children as consumers: insights and implications*. Lexington, MA: Lexington Books
- xiv. Mitchell, A., & Savill-Smith, C. (2004). *The use of computer and video games for learning: A review of the literature*. London, England: Learning and Skills Development Agency.
- xv. National Population and Family Development Board (2014). *Report on Key Findings Fifth Malaysian Population and Family Survey (MPFS-5)*.
- xvi. Owston, R., Wideman, H., Ronda, N. S., & Brown, C. (2009). Computer game development as a literacy activity. *Computers & Education*, 53(3), 977-989.
- xvii. PACFC. (2013). *Final Report: President's Advisory Council on Financial Capability*. Washington, DC: President's Advisory Council on Financial Capability.
- xviii. Rahman, A. A., Ibrahim, H. I., Tengku Zainal Abidin, T. M., & Muhd Fauzi, A. A. (2017). Gamification in Islamic Education Based on Global Zakat Game : Bijak Zakat. *International Journal Of Islamic Studies*, 0(July), 0–9.
- xix. Road, G. (2017). *The Effects of Financial Education : Evidence from Finnish Lower Secondary Schools, 9999(9999)*, 1–34.
- xx. Sabri, M. F., & MacDonald, M. (2010). Savings Behavior and Financial Problems among College Students: The Role of Financial Literacy in Malaysia. *Cross-cultural Communication*, 6(3), P103-110.
- xxi. Sabri, M.F., MacDonald, M., Hira, T.K., & Jariah, M. (2010). Childhood Consumer Experience and the Financial Literacy of College Students in Malaysia. *Family and Consumer Sciences Research Journal*, 38(4): 455-467.
- xxii. Tsai, F., Yu, K., & Hsiao, H. (2012). Exploring the factors influencing learning effectiveness in digital game- based learning. *Educational Technology & Society*, 15(3), 240–250.