

Islamic Counting Game: An Interactive Approach as a Teaching and Learning Aid Necessary in Holistic Education for Digital Society 5.0

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ABSTRACT: Accounting is one of the important knowledge of Islam. Many verses in the Quran and Hadith debate on accounting. It is a branch of social knowledge that records financial reports on all activities involving finance. Accounting reports are important for the benefits of the public as well as those who are involved in financial and accounting activities. Nonetheless, the calculation methods found in the Fundamental of Islamic Accounting course at UiTM are quite complicated with various concepts and formulas as practiced at various financial institutions. Therefore, this makes it difficult for students to understand and remember every available formula. Thus, students require new teaching and learning tools to facilitate their learning. Hence, teaching and learning aids are highlighted as one of the most recent transformations for computational learning in Islamic accounting. This innovative product is a teaching and learning tool for teaching and learning designed in the form of apps system in line with the needs of the education industry revolution 5.0. This innovative product contains a wide selection of training questions and formulas on the topic of calculating various types of zakat on the property (mal), insurance (takaful), charge (ar-rahnu) and various types of Islamic banking financing. The main objective of this paper was to evaluate the effectiveness of learning through the interactive application of Islamic counting games in the classroom. Literature search, documentation of observations, demographic and descriptive methods were also utilised through research surveys, observations and questionnaires on students. These methods were used to collect related data information. The findings reveal that the majority of the students did not know Islamic Counting Game. However, interestingly after the use of Islamic Counting Game in learning, most of them felt that Islamic Counting Game is very good and useful in their studies. Based on the findings, we can infer that the product is accepted and recognised by the students. Thus, it will benefit and impose significant impacts to the students and society as a whole.

Keywords: Accounting, Teaching and Learning Aid, Digital

1.0 Introduction

In Malaysia, the Islamic financial industry faces a shortage of nearly 56,000 qualified professionals to meet the growing needs in the sector. According to Amat Taap Manshor, the Chief Executive Officer for Finance Accreditation Agency, the shortage is critical in Islamic

capital market, takaful and finance, particularly in thriving market such as in Malaysia, Indonesia and West Asia. It is projected that the country will need approximately 40,000 Islamic finance professionals by 2020. The imbalance between the skills training and market need is viewed as the major factor contributing to the shortage (Sinar Harian, Nov 4, 2015). Education in Islamic accounting is the key to address this shortage. The role of higher institutions in Malaysia is important in producing trained professionals in the field leading to 15% to 18% of growth in Islamic accounting in the country. At Universiti Teknologi MARA (UiTM), a mandatory faculty course, Fundamental of Islamic Accounting (CTU231), must be taken by all students who are in the second semester of the 2nd year in the diploma programme of Faculty of Accountancy. The course focuses on explaining the history, concept and policy in Islamic financing concentrating on accounting methods, zakat accounting and accounting practices in the current Islamic financial institutions. In the course, it is expected that students of Islamic finance and accounting should be able to derive the rulings pertaining to financial and wealth management in compliance with the teachings of Islam. Nonetheless, students of Islamic accounting at UiTM face challenges in learning subjects related to the method of calculation in Islam in relation to their field of study. Observations by the lecturers suggested that students faced difficulties in understanding and remembering the computational formulas in Islamic accounting. This is among the main factors for students to score low in the calculation section. There are several different formulas and ways of calculations for specific topics such as zakat on business. Hence, students need to pay close attention and understand them clearly. Additionally, this subject requires reading and comprehension techniques as well as continuous practices in order to improve. Apart from that, there is no specific teaching aids designed to make students easily and quickly understand the materials. Therefore, lecturers need to increase efforts, diversify the teaching methods and improve teaching in the classroom. Jasmi [1] stated that teaching aid serves as a facilitator for lecturers to improve the effectiveness of student-centred learning. Hence, various forms of aid specific to the topic can enhance the understanding of the materials leading to better achievement of students. One creative approach is that lecturers can produce products in the form of scientific games such as Islamic counting games in a systematic and according to the proper rubrics as a teaching aid to attract the attention of students to practice and simultaneously provide better understanding in an easier way. Unfortunately, in a study by Mohd Yasin [2] the teaching materials of respondents were still inadequate, especially those involving the latest information and communication technologies (ICT). The authors believed that the use of teaching materials is a way to improve the achievement of students because without teaching aids, the teaching and learning process has lesser quality and reduced effectiveness as well as lower academic achievement. Therefore, all teachers need to implement the use of instructional materials in their teaching and learning process to produce outstanding students in various aspects. While there is a reform that has hit the world of education in Malaysia in terms of teaching quality, the suitability of teaching, incentives in teaching, and teachers' attitude toward the old teaching method are still being maintained. Teachers are still currently practicing traditional teaching methods which are characterized as teacher-centred teaching solely as lectures, memorization, question-and-answer session and discussion. Therefore, various efforts are needed to overcome the obstacles which prevent the teachers in using teaching resources in classrooms.

1.1 Objectives of the Study

The main objective of the study is to evaluate the effectiveness of learning through interactive application of Islamic counting game. The following specific objectives were set to achieve the main objective:

1. Identify the students' knowledge about Islamic Counting Game.

2. Evaluate the students' perceptions on learning through interactive application of Islamic Counting Game.

2.0 Literature Review

2.1 Aims of Islamic Counting Game Creation as a Teaching Aid

The main goal in producing the teaching instructional tool is to help students understand the method of calculation more efficiently. Another goal is to facilitate students in remembering the current formulas used in Islamic accounting. The difference in approach can enhance the understanding and achievement of students according to the topic they are learning. According to Ahmad Zanzali & Daud [3] the use of textbooks, blackboard and whiteboard alone are insufficient as teaching tools in the teaching and learning process. Teachers need to use technology in teaching and learning processes to increase students' interest in the subjects. Moreover, it can also be an interactive learning tool for students. The use of innovative equipment or materials such as computer, multimedia, software, flashcards, and textbooks in teaching and learning process can stimulate curiosity, evoke interest and increase focus in learning the subjects.

2.2 Concept and Application of Islamic Counting Game for Teaching Islamic Accounting

Islamic accounting is making waves as a rapidly-growing industry within global finance. Experts are seeing numerous ingenious initiatives and activities to engage clear understanding of Islamic finance products. Nevertheless, the subject requires comprehensive and extensive reading to understand its applications in the real world. Hence, Islamic counting game is created to facilitate understanding and to ease students' learning of the subject. Using the puzzle wheel-based learning, this product conceptualizes a new teaching and learning methodology focusing on the development of quick memorizing skills. The modus operandi of Islamic finance products, in terms of their structure, content and process, can be easily understood by learners using wheel technique. More importantly, they will become more knowledgeable in understanding and using the calculation method of accounting in Islam. This innovation draws upon diverse literatures on Islamic accounting knowledge and builds upon numerous issues raised by academics and practitioners in providing attractive platforms for mastering the Islamic accounting knowledge.

The concept of Islamic counting game as teaching aid focuses on four topics of calculation in Islamic accounting. The four main topics included in this scientific game are zakat of property, bank finance, ar-rahnu and takaful. The contents are related to the method and calculation formula for zakat involving business, savings, income, gold and silver, agriculture and stock. In addition, the methods and formula for Islamic financial instruments emphasize on the concept of murabahah, bai' bithaman 'ajil and al-ijarah thumma al-bai. Other than that, the topics on charge or ar-rahnu, and takaful are also included in the calculation method (Introductory Module Islam Accounting). There are several formulas and ways of calculations for specific topics such as zakat of business etc. The Islamic counting game contains questions and schemes based on the syllabus and in parallel with the development of the external industry. The provided computation question consisted of three levels, namely high, medium and low levels. Lecturers need to give clear explanation of how this tool is used. The smoothness of the teaching and learning method through this game is largely dependent on the accuracy and skill of the students in completing group assignments in turns within the set periods. The lecturer only acts as a facilitator, as well as to ensure that students can discuss in groups and have access to all materials and facts required to complete the assignment. This method allows the students the opportunity to understand, appreciate or

discern something directly in the real context. Through this method the lecturer can give a clear picture of what is taught in the classroom theoretically using the actual situation and considered as practices.

According to the study of Hamdan [4] every lecturer must first prepare a teaching and learning strategy before the teaching and learning process is conducted. Therefore, teachers can prepare reference materials, student activities, and teaching methods that are suitable with the time available in the schedule. In general, teaching aids may educate the student to be a leader with problem-solving skills. In addition, students can build interest and motivation to continue learning, to develop critical and creative thinking skills, and to analyse and solve problems. As such, students can improve the understanding and knowledge of the subject easily and profoundly. Indirectly, it will boost the student's academic achievement. Similarly, Ward and Lee [5] reported that students who followed the teaching aid can understand the subject matter more deeply.

2.3 The Advantage and Importance of Islamic Counting Game as A Learning Tool

This teaching tool is an entertaining and informative game. It aims to test students' understanding on a subject easily through games. The unique features of this Islamic counting game teaching tool include a scholarly gaming tool that is Shariah-compliant, and the principal formulas are oriented based on the current Islamic financial institutions. In fact, it is an ideal learning and teaching method to be applied. It is easy to use and compact, which allows it to be carried everywhere and this tool has been registered as Intellectual Property Right (IPR) under the Research Innovation Business Unit (RIBU) at UiTM. The importance of the invention of this tool to the ummah is to increase students' interest and attention towards the learning of Islamic accounting. Additionally, it provides opportunities for instructors to diversify teaching and learning methods. Moreover, the tool facilitates the process of understanding and memorizing the calculation formula and enhancing the students' understanding and awareness on the advantages of Islamic accounting. Therefore, the learning process will be smooth, interesting and effective if the lecturer uses a variety of methods that are appropriate with the content of the lessons and the skills to be learned by the students.

3.0 Research Methodology

The research method used in the present study is the analysis of demographic and descriptive data. To ensure the success of the present study, the author combines qualitative and quantitative methods. The data obtained from the present study were the result of data collection from primary sources, namely questionnaires and secondary sources such as written reference materials obtained through literature research. The present study is a descriptive study of the survey which the instrument used in this study is a questionnaire. The use of the questionnaire is very suitable for the survey as it is easier to receive feedback from the respondents. According to Mohamad Majid [6] descriptive methods are suitable for use in research that aims to explain a problem or phenomenon. The present study involved collection of descriptive data that examines the background of the respondents and discusses their perceptions on using Islamic Counting Game in learning Islamic accounting. In the current study, researchers were keen to know the knowledge of students on Islamic Counting Game and their perceptions on learning through interactive application of Islamic Counting Game using several research questions.

3.1 Participants and Sample Selection

This study was conducted at UiTM Machang, Kelantan involving students in Semester 02 in the Faculty of Accounting session September-January 2018. The total number of respondents were 30, where seven were males and 23 were females.

3.2 Study Approach

The present study used qualitative and quantitative approach. Qualitative approaches are applied with the use of observation in field studies and documentation or literature search. While quantitative approach involves the use of protocol form. This method was chosen because it is able to provide the information needed for each student. A literature search is a research conducted to obtain documented data on the topic of study. This is done to collect data and information through the reading of relevant documents such as books, journals, scientific studies, dissertations, theses, papers, written reports, newsletters, newspapers and other resources related to library utilization. While the field study used three procedures, namely collecting information and data, observation and questionnaire. Observation method was used to strengthen the research data. Through this method, researchers can identify the problems and constraints that arise.

3.3 Data Analysis

In data analysis, qualitative methods were used to derive theory from analyzed patterns, themes or general categories based on collected information. This method were performed through four stages, namely research device, data collection, data organization and finally data analysis. The questionnaire is divided into two parts, i.e. Profiles of Respondents and Satisfaction Levels of the Respondents towards Kahoot! and SELFex Islam (using Likert scales of 1 to 5, which range from Highly Not Agreed to Highly Agreed). All the answered questionnaires have been analysed using Microsoft Excel 2010.

4. Results and Discussion

The results for this study are divided into two sections, namely Demographic and Descriptive analysis.

4.1 Demographic Analysis

The sample of study was comprised of 30 diploma students in Semester September-January 2018 at UiTM Machang campus. All respondents were randomly selected from the Section 02 students from the Faculty of Accountancy.

Table 1: Demographic characteristics of respondents

Characteristic	N	Percentage (%)
Gender		
Male	7	23.3
Female	23	76.7
Total, N	30	100
Experience in using Islamic counting game		
Yes	0	0
No	30	100
Total, N	30	100

A total of 30 respondents were involved in the present study which were the diploma students from semester September – January 2018 at UiTM Machang. Table 1 shows that 23 respondents (76.7%) were female and another seven (23.3%) were male. Additionally, the

entire respondents had never experienced using the Islamic counting game during their lifetime.

4.2 Descriptive analysis

This study also analysed the perception levels of the respondents towards Islamic counting game. The perception levels were based on 1 to 5 scale (i.e. (1) Highly Disagree, (2) Disagree, (3) Neutral, (4) Agree and (5) Highly Agree. The results are presented in figures as follows:

i. Satisfaction level with the quality of Islamic counting game

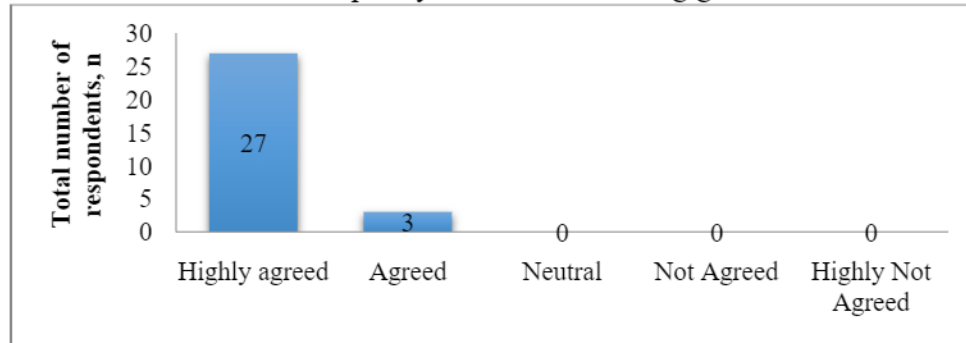


Figure 1: Satisfaction level with the quality of Islamic counting game

Figure 1 shows that 27 or 90% of the respondents highly agreed with the satisfaction of the quality of Islamic counting game. Only 3 or 10% of the respondents merely agreed on that matter while none of the respondents were dissatisfied with the product. Thus, the data suggest that the respondents perceived that the product is good in terms of its functions, contents and interactions.

ii. User-friendliness level of Islamic counting game

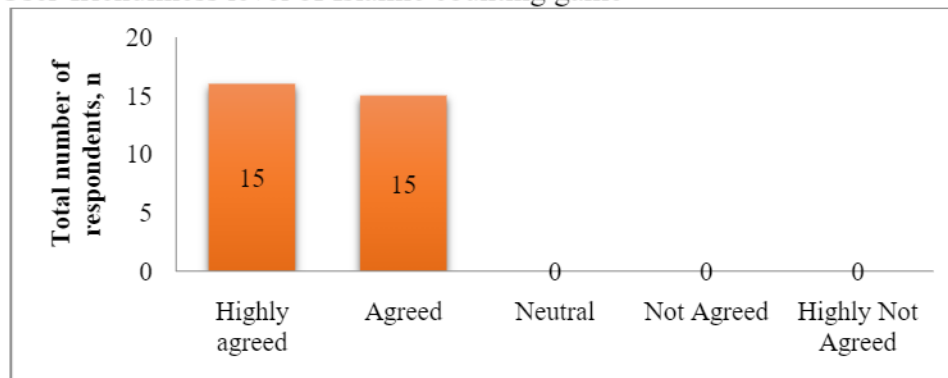


Figure 2: User-friendliness level of Islamic counting game

Figure 2 presents the perception levels of the respondents in the user-friendliness level of Islamic counting game in learning Islamic Accounting. The results show that 15 or 50% of the respondents highly agreed that Islamic counting game is user friendly. The rest of the respondents, 15 or 50% simply agreed on it. The findings verify that all respondents agreed that Islamic counting game was easy to use, had good interactions and it helped them in learning Islamic Accounting.

iii. Usefulness of Islamic counting game

Table 2: Usefulness of Islamic counting game

Item	Highly Agree	Agree	Neutral	Disagree	Highly Disagree
Usefulness of Islamic counting game	21	9	0	0	0

Table 2 illustrates the findings on the respondents' views about the usefulness of Islamic counting game in learning Islamic Accounting. It shows that 21 or 70% of the respondents were highly contented that the game is useful and the remaining nine respondents or 30% agreed that it is useful for them. Thus, the respondents agreed that game can enhance their knowledge on Islamic Accounting and facilitate them in understanding the course. Based on the above results, the present study proves that Islamic counting game is a practical tool in teaching and learning Islamic computations related to accounting, banking and finance.

5. CONCLUSION

Islamic counting game is a new and user-friendly tool in teaching and learning especially for Islamic computational courses at schools and higher institutions. The usage of the game will benefit and give significant impacts on both parties, namely the students and teachers. Based on the findings, we can infer that the product is acceptable and recognised by the students. This tool is beneficial for the national education system and it is an effective leaning tool especially for young generations for new knowledge enhancement. This coincides with the importance of learning the Islamic accounting system to meet the needs of Muslims and spreading the eminence of Islam. Furthermore, the model and design of the game can be improved to fit other requirements, to include other calculations and to enhance its effectiveness in future. Additionally, this tool can empower teachers and students and foster the development of 21st century skills.

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