

The Examination of Teaching Aid Board Game Innovation in Bakery Module for Disabilities Students of Malaysian Polytechnic (Hearing Impaired Categories)

Bustamam Bin Bonari¹, Abu Hanifah Bin Mohd Said¹ and Rosmini Bt Abdul Rahman¹

¹Department of Tourism and Hospitality Polytechnic Tuanku Syed Sirajuddin, 02600 Arau, Perlis, Malaysia

Abstract: This disabilities student is taught in the classroom by an experienced lecturer and assisted by an interpreter lecturer who plays the role of translating what he is trying to convey to the student. Constraints often occur in the process of teaching and learning is because the process of communicating information by lecturers to students is not entirely due to communication problems. Indirectly, students do not understand the topic in the course of the syllabus. This is because, the mental capabilities of hearing-impaired people differ from ordinary people due to the lack of stimulation of hearing sensory and speech they experience. Therefore this study aimed to examine the level of disabilities students in their achievement on bakery module using game board and overcome the problem occurs at Malaysian Polytechnic. Through stratified random sampling technique, there were there were 86 respondents been selected from 110 students located at three polytechnic namely Polytechnic Tuanku Syed Sirajuddin, Perlis, Polytechnic Kota Kinabalu, Sabah and Polytechnic Ibrahim Sultan, Johor. Through the quantitative study, descriptive analysis found variable interest was at higher level with the highest dimension after post test result. The study was implied to a lecturer for paying more attention to their roles as teachers in terms of their way to teach, attract the student in the class room and make the learning process become more attractive. Some suggestions were proposed for the future study.

Key words: *Board Game, Bakery Module, Disabilities Student*

1. INTRODUCTION

In this convergence era, the country's education system has changed and experienced many reforms in the 21st century. The main goal of this change is to make Malaysia a center of academic excellence in the Asian region as well as internationally in the 21st century this is. The widespread development and advancement of technology has affected reforms in the country's education system. Technology-based learning is also increasingly being implemented in the teaching and learning process (R&D) in higher education institutions. This is in line with the contents of the Education Development Master Plan (PIPP), 2010 in which the Ministry of National Education emphasizes the development of a creative and innovative educational system to meet the needs of the country in the 21st century.

According to Han and Chin [1], students are also always lazy to participate in sharing their thoughts during a learning discussion. This is due to the weakness in terms of planning, construction and use of Teaching Aids (ABBM) which is not interesting. Especially during the teaching and learning process the lecturers do not use teaching aids that can attract students to engage in activities carried out in lecture teaching at tertiary institutions [2]. Therefore, innovation is needed not only in the field of technology, but in all fields including education, especially knowledge and application in teaching to implement innovative learning formats [3].

This disabilities student is taught in the classroom by an experienced lecturer and assisted by an interpreter lecturer who plays the role of translating what he is trying to convey to the student. Constraints often occur in the process of teaching and learning is because the process of communicating information by lecturers to

students is not entirely due to communication problems. Indirectly, students do not understand the topic in the course of the syllabus. This is because, the mental capabilities of hearing-impaired people differ from ordinary people due to the lack of stimulation of hearing sensory and speech they experience.

This opinion is further strengthened by Woolfolk [4], which emphasizes that information processing is a human mental activity associated with the process of receiving information, storing and reproducing it for use. This activity involves sensory memory which involves the senses of sight, hearing senses, senses, senses and touches. The results of the study have found that 70% of these problems are caused by communication problems and 30% arising from the teaching aids as well as the students themselves. According to Darvina [5], the use of media as a tool not only can attract students to follow the process of teaching and learning better but also to help improve student understanding and facilitate educators to communicate knowledge.

In fact, it is in line with the needs of the 21st century in the field of education that should adopt a new approach in teaching sessions to ensure graduates are creative, critical, innovative, thoughtful, problem-solving and communicative [6].

The objectives of the study include:

1. To examine the level of disabilities students in their achievement on bakery module using game board
2. To identify the problem occurs during teaching session
3. To overcome the problem occurs towards disabilities students at Malaysian Polytechnic

2. LITERATURE REVIEW

2.1 Board game

Board games are an important tool to provide hands-on and heads-on skill and knowledge development for people of all ages on all subjects. Not only do well-designed games create an engaging atmosphere, they also provide a nonthreatening, playful, yet competitive environment in which to focus on content and reinforce and apply learning [7]. Mistakes are useful and point out what we need to learn. The board itself provides a visual metaphor to help connect information. Game elements, discussions, and problem solving with fellow team members about the content are vehicles for learning. Subtle redundancy to reinforce learning and insure

retention should be incorporated into the game design. Good questions, problems to solve, and situations to consider allow players to think through and apply what they learn.

In addition to requiring critical thinking, team-based board games help to build communication and relationship skills as players work face-to-face to answer questions or solve problems and see that together they often figure out something they thought they didn't know. The power of collaboration becomes apparent to all and, in organizational settings, can transform working relationships.

3. RESEARCH METHODOLOGY

This quantitative study was used an individual as a unit of analysis. Data was collected from the population of students at 2 polytechnic at Malaysia such as Polytechnic Tuanku Syed Sirajuddin, Perlis and Polytechnic Ibrahim Sultan Johor Darul Takzim using stratified sampling technique. Through this technique, the population of 110 students was grouped into strata which includes certificate of special skills program. As derived from Krejcie and Morgan [8], a total of 86 students were made as sample size of the study.

A set of questionnaire were used with 5 –points Likert scale to measure all variables. As refer to Pallant [9], realibility of the instruments were acceptable because the analysis of Cronbach Alpha have shown good values.

4. ANALYSIS AND RESULTS

Table 1 shows 86 questionnaires were distributed. From 86 respondents, disabilities students were male 40 (46.5 %) and 46 were female disabilities student (53.4 %).

Table 1 Distribution of respondents based on gender

Gender	Frequency	Percentage
Male	40	46.5
Female	46	53.4
Total	86	100

Table 2 shows the level of disabilities student on their achievement for pre test evaluation. On variables of attitude the score is 3.2251 and at average level. The result found dimensions of commitment scored 3.361 and intellectual scored 3.2210

Table 2 Analysis level of disabilities students in their achievement for experimental design (pre test)

Variables	Mean	Varian	Level
Commitment	3.3361	.4446	Average
Interest	3.3350	.4755	Average
Intellectual	3.2210	.44424	Average
Attitude	3.2251	0.4222	Average

Table 3 Analysis level of disabilities students in their achievement for experimental design (post test)

Variables	Mean	Varian	Level
Commitment	4.4430	.50912	Very high
Interest	4.4460	.52785	Very high
Intellectual	4.5087	.51371	Very high
Attitude	4.3796	.49973	Very high

The result found (Table 3) showed level of disabilities students in their achievement for post test evaluation. The highest scored is dimension of intellectual (4.5087) and the level is very high. It showed comparisons between pre test and post test evaluation. The lowest scored is dimension of attitude where the means (4.3796). Meanwhile for dimension of commitment and interest the score are 4.4430 and 4.4460 and at very high level.

5. DISCUSSION AND IMPLICATION

The result of intellectual dimension was the highest level after the post test evaluation. It shows the increment of achievement disabilities student after playing the board game. There for, we need to challenge the current bias in many educational settings against designing and using games. Games are useful, effective, and enjoyable for all ages. Board games provide many educational and teaching benefits and have proven their value when designed appropriately for learning [7]. Board games provide exceptional, cost-effective resources. They are incorporate heads- and hands-on learning, summarize and reinforce important information in an easy-to-grasp format, reduce the time needed to learn, remember, and

apply new information also promote discussion, collaboration, and build communication.

6. CONCLUSION

As a conclusion, all participants in the game stated that they would be happy to recommend it to colleagues. The game is an educational tool that offers relaxed learning environment for participants. We feel it would be beneficial to integrate this learning tool as part of the educational programme. According to Darvina [5], the use of media as a tool not only can attract students to follow the process of teaching and learning better but also to help improve student understanding and facilitate educators to communicate knowledge. Future work needs to be done to assess whether there is evidence of knowledge acquisition after this game is played and to determine how best this tool should be utilized in an education programme.

REFERENCES

- [1] Han & Chin (2012). Computer games application within alternative classroom goal structures: Cognitive, metacognitive, and affective evaluation. *Educational Technology Research and Development*, 56(5), 539-556.
- [2] Khalil, A.M (2011). Alternative goal structures for computer game-based learning. *International Journal of Computer-Supported Collaborative Learning*, 3(4), 429-445
- [3] Zaini Ujang. (2010). *Berpaksi Inovasi Mengangkasa* Universiti Menjana Nilai Tinggi, Johor Bahru, Johor. Penerbit UTM.
- [4] Woolfolk, A.E. (1998). *Educational Psychology*. (7th ed.). Boston: Allyn & Bacon.
- [5] Darvina (2003). –Kajian pembangunan dan penilaian bahan pembelajaran berbantuan computer. Penerbit UTHM
- [6] Babette Moeller & Tim Reitzes (2011). *Education Development Center, Inc. (EDC). Integrating Technology with Student-Centered Learning*. Quincy, MA: Nellie Mae Education Foundation.
- [7] Treher, E. N. (2011). *Learning with Board Games*. Atlanta: Learning key.
- [8] Krejcie and Morgan (1970) - Determining sample size for research activities. *Educational and psychological measurement*, 30, 607-610
- [9] Pallant 2007 – *SPSS Survival Manual: A Step by Step Guide to Data Analysis using SPSS for Windows 3rd edition*, Open University Press