

The Attitude towards Board Game usage in Interactive Learning

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Abstract: Today, interactive learning has slowly replaced the traditional method of learning in classroom, which relies on listening to teacher's lectures, using textbook, memorization of learning, information, figures and equations. Student claims that using traditional method of learning, makes them difficult to understand the content particularly for economics subject. Keeping students motivated and interested during the lesson is a remarkable challenge for the lecturers. Therefore, developed an interactive economics game board named "Catur Ekonomi" to enable students give full attention and interest in learning economics subject. It provides an attractive way of learning economics subjects as the students' understanding towards this subject could be enhanced and their academic performance could be improved. However, how far this board game really achieved its objective? Hence, this paper investigated the perception and attitude of students on the application of "Catur Ekonomi". Besides, this paper also identifies the difference of students' attitude on interactive learning across two demographic factors; gender and academic achievement. The students were given a set of questionnaires after playing the "Catur Ekonomi" and the data were analyzed. The result showed that students enjoy learning using the "Catur Ekonomi" and showed positive attitude towards its applications. On the other hand, both male and female students enjoy using the board game and high achiever students enjoyed more the board game than low achiever students.

Keywords: Catur Ekonomi, interactive learning, perception, gender, academic performance

1. Introduction

Education is important in one's life. Having education will transform a person's way of life, way of thinking and also the way we socialize. However, in today's world, educators, teachers and even lecturers may have constraint in delivering the knowledge to the students. Nowadays we are facing students who are more interested with interactive learning styles rather than traditional method. Keeping students motivated and interested during the lesson is a remarkable challenge for the lecturers. For new generation students who grow up with constant exposure to digital media more prefer to learn by seeing and hearing. These "digital natives" learn far more in an interactive, collaborative environment. Sitting at a desk copying figures from a whiteboard is not playing into their strengths as students. Passive learning still plays their important role in learning process, as students need to memorize facts and figures just as ever before. However, today most educational institutions have turned to interactive learning to inspire students and keep the teacher-student relationship vital.

Thus, the development of "Catur Ekonomi" is more than a normal board game. The ultimate objective of this board game is to provide learning efficiency and enhance students' performance in economics subject. This "Catur Ekonomi" is proven to ease and provide an interactive learning style for students. This economics board game also provides an interactive way of teaching economics subjects that can capture the students' interest. Therefore, this paper investigated the perception and attitude of students on the application of "Catur Ekonomi". Besides, this paper also identifies the difference of students' attitude on interactive learning across two demographic factors; gender and academic achievement.

This paper contains of 5 parts; introduction, literature review, research methodology, findings dan discussion and conclusion. Literature reviews provide the previous studies of other researchers that related to the attitude of students on interactive learning. For research methodology part, it explains how the research was done and being

analysed. All the data collected were analysed in the findings part and followed by conclusion part in the last section.

2. Literature Review

Interactive learning and academic performance

Mohammadjani and Tonkaboni (2015) conducted a study on fifth grade elementary school in Iran to compare the effect of interactive learning method and lecture method on students' learning. They found that the average of the points of the students' learning evaluation test in the cooperative learning method was significantly higher compared to the lecture teaching method. Similarly, Menekse, Stump, Krause and Chi (2013) said that the discussion after the interactive learning was the factor of the higher score's achievement. Students learned better and gain deeper understanding through the process of learning.

Nevertheless, some researchers (Ali, 2011; Dianati and Adib-Hajbaghery, 2012) found that there was no statistical difference in terms of the performance of students and interactive learning about knowledge and application. They reported that the interactive learning was benefited as it caters for interaction, participation, communication, motivation and discussion. However, some students found the noisiness created by their interactions with each other disturbing and this affected their learning. Ali (2011) suggested that the learning environment must be suitable and accommodating to the variety of approaches to teaching and that the time allotted for a session must be appropriate for effective learning to take place.

Attitude of Students on Interactive Learning

A study on students' perceptions toward using board games in the language classroom (Lee, 2012), shows that all respondents think that board games should be introduced in the English classroom and they also believe that language board games can help them learn the target language. The researcher also found that the results obtained from the use of board games in the test had improved the students' performance in the post test compared to the results obtained in the pre-test previously. They believed that the board games they used could improve the students' language learning. Another study conducted by Cheong et al. (2014) on undergraduate Information Technology (IT) students' perception of systems that use game elements in learning showed that the respondents were positive towards the systems. They became more interested in its use of learning. Overall, the students preferred social interaction, engagement, feedback, and increased learning, which suggests that gamification is specially suited to learning approaches such as social constructivism. The researchers suggested that the development of a prototype for a game-like educational system should be included in the future research as it helps to provide useful feedback for students about their learning progress.

Proposing method is a combination of teaching through art, cooperative and experiential learning and project method must discover and apply in new teaching methods to achieve the best possible results in academic. Using this method, student easier to understand and created additional motives the teaching process (Brinia V., Kalogri P. & Stavrakouli K.M. (2016). According to Ester O. & Patricia (2013), new dynamics in teaching methodologies results that student value positively those dynamics improving their learning and creating greater involvement.

Hoang Y. P. & Thao N. P. N. (2017) studied about the impact of board games on English as a Foreign Language (EFL) learners' grammar retention, they found most participants had positive attitudes about the board games and benefit they will bring. Patricia A. R. (1996) and Hoang Y. P. & Thao N. P. N. (2017), games are not only related to fun but also provides motivation, reduce stress among students and give them the occasion to practice communication.

3. Research Methodology

The objective of this study was to investigate the perception and attitude of students on the application of "Catur Ekonomi" and to identifies the difference of students' attitude on interactive learning across two demographic factors; gender and academic achievement. In this study, a self-structured questionnaire was designed and distributed to 70 students of Faculty Administrative Science and Policy Studies at Universiti Teknologi MARA (UiTM) Pahang, who have used and played the "Catur Ekonomi" during tutorial session.

Every set of "Catur Ekonomi" was played by at least 2 players during the tutorial session. While playing the "Catur Ekonomi", the player needs to complete and answer the question that related to the economics subject and marks would be given for correct answers. The player with highest total marks would be announced as winner.

Therefore, “Catur Ekonomi” could be an interactive teaching tool that may help to enhance students’ knowledge on economics.

After playing the “Catur Ekonomi”, the students answered the questionnaire given to them. The questionnaire contained three sections; Section A, demographic profile including their marks obtained in their Examination Test which as a proxy of academic achievement and Section B, knowledge on economics and section C for the application of “Catur Ekonomi”.

In this study, the descriptive analysis and the inferential statistical models; t-test for independent samples were used. The Statistical Package for Social Sciences, version 22.0 was used to generate the findings in this study.

4. Findings and Discussion

The respondents are 70 students from Faculty of Administrative Sciences and Policy Studies, UiTM Pahang who registered for ECO162 subjects and had played the “Catur Ekonomi” during their tutorial class. Most of them are female students, 80% while the other 20% are male students. Most of the respondents were aged between 16 and 20 years old which was 91.4% the rest are aged between 21 – 25 years old. In terms of basic knowledge on economics, only 35.7% of the respondents have some basic knowledge on economics subject while the others do not have any background on economics. The summary of the respondents as in Table 1 below.

Table 1 Demographic Profiles

Demographic variable	No.	%
Gender		
Male	14	20
Female	56	80
Age		
16 to 20 years old	64	91.4
21 to 25 years old	6	8.6
26 to 30years old	0	0
30 years and above	0	0
Background on Economics		
Has basic knowledge on economics	25	35.7%
Do not have any knowledge	45	64.3

Next, the study tries to investigate the attitude of students towards application of board game in the class. The findings were shown in Table 2.

Table 2 Mean and Percentage for the Usage of Catur Ekonomi

	Mean	Strongly disagree	Disagree	Agree	Strongly Agree
I am enjoy playing this Catur Ekonomi	4.5714	-	-	30 (42.9%)	40 (57.1%)
I can play and understand the technique needed in Catur Ekonomi	4.4286	-	-	40 (7.10%)	30 (42.9%)
I can get the benefits from this Catur Ekonomi	4.4857	-	-	36 (51.4%)	34 (48.6%)
I do have strengths to complete playing Catur Ekonomi	3.3286	6 (8.6%)	18 (25.7%)	39 (55.7%)	7 (10%)
I can understand the economics concept better by playing Catur Ekonomi	4.1286	-	1 (1.4%)	58 (82.9)	11 (15.7%)

Questions in Catur Ekonomi makes me feel excited to learn this subject.	3.8571	3 (4.3%)	8 (11.4%)	44 (62.9%)	15 (21.4%)
I can perform better in my tests and exam.	4.1429	-	1 (1.4%)	57 (81.4%)	12 (17.1%)
Generally, I really like this Catur Economics.	4.4571	-	-	38 (54.3%)	32 (45.7%)

All items stated mean score more than 3. According to this result, it is clearly stated that students agree with the usage of “Catur Ekonomi” could improve their academic performance. Most of the students enjoyed learning using “Catur Ekonomi” and believed that this board game may help them in understanding the economics concepts better (means score at 4.1286 and standard deviation at 0.448). Besides, most of the students also agree that, they can perform better in test and exam by having this board game (means score at 4.1429 and standard deviation at 460). This prove that the students showed positive attitude towards board game usage in interactive learning and agree that using this interactive learning method may help in improving their academic performance. This finding supported by Sanchal and Sharma (2017), stated that, the student’s attitudes towards learning mathematics was improved when they learned it in sporting context. The students feel more comfortable and enjoyed. Balta and Duran (2015) also found similar result. Interactive whiteboard is highly preferred by students in their learning process.

For further investigation, this study tries to analyse whether the difference of attitude across gender exist. The related statistical analysis was presented in table 3 below.

Table 3 T-tests for Comparisons between Genders and Academic Achievement

	Levene's Statistics		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI	
Gender	Equal variances assumed	0.299	0.587	0.292	68	0.771	0.04241	0.14524	[-0.24741, 0.3223]
	Equal variances not assumed			0.284	19.383	0.779	0.04241	0.14926	[-0.26957, 0.35439]
Academic Achievement	Equal variances assumed	7.344	.010	2.175	38	.036	.32080	.14752	[0.02217, 0.61943]
	Equal variances not assumed			2.124	29.059	.042	.32080	.15106	[0.01187, 0.62974]

Table 3 shows the analysis for the attitude towards the board game usage across gender and academic achievement. The study contains of 20% of male students and 80% of female students and the Levene’s test (F=0.299, sig=0.587) indicated that equal variance assumed. Then, we refer to the t-test and it also indicated that there was equal variance assumed; therefore, the null hypothesis cannot be rejected. The results of t-test indicated that there was no significant difference; for male students (M=4.045, SD=0.5040 and female students (M=4.002, SD=0.482) conditions; $t(68) = 0.292$, $p = 0.771$. Similar result has been found by Oz (2014) whereby there no significance difference perceptions between male and female students on interactive learning method. However, this result found to be contrary with the study of Balta and Duran (2015), where they found that male students having more positive attitude towards interactive learning than female students.

Whereby, for academic achievement, only 2 groups of students have been analysed; high achiever for those get 80% and above in test and low achiever for those who get below 50%. Therefore only 40 students have been tested. Surprisingly, the Levene’s tests (F=7.334, sig=0.010) are found to be statistically significant; therefore, the null hypothesis was rejected. The results of indicated that there was a significant difference; for high achiever students (M=4.2024, SD=0.346) and low achiever students (M=3.8816, SD=0.571) conditions; $t(38) = 2.175$, $p = 0.036$. This result showed that the high achiever enjoyed more the usage of “Catur Ekonomi” as compared to low achiever.

5. Conclusion

This paper was carried out to identify the attitude and perception of students towards the usage of board game in economics subject. The finding from this study showed that students feel enjoyed and comfortable using the “Catur Ekonomi” in their learning process. Thus, with this positive result, it can be stated that students have good attitude towards the usage of board game in interactive learning.

In addition, this paper also analyses whether the differences across gender and academic achievement exist. The results showed that male and female students did not have any significant different perceptions of the application of board game. On the other hand, high achiever students have more favourable perceptions than low achiever students.

Therefore, the positive attitude of students towards board game may encourage the lecturers to initiate this interactive learning and applied it in their teaching.

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