

Evaluating the Impact of Gamification using Quizizz towards Students Performance

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Abstract –; Gamification is nowadays a part of student's daily lives. Students spend a lot of time playing, especially digitally. Gamification involves the application of game-based mechanics to increase student engagement in learning. Along with that, the gamification method is seen to be able to help to increase student involvement in learning according to the current learning style or trend. One of the platforms of gamification is Quizizz. Quizizz was introduced in 2015 to engage students in active and interactive learning during teaching and learning sessions in the classroom. However too many applications or platforms exist and research needs to be conducted to see the effectiveness of Quizizz nowadays. This study aims to evaluating the impact of Quizizz towards students' performance to proven the relevance of Quizizz platform to be use for educators as a teaching and learning methods. The data was collected by using an online questionnaire with 30 participants of students from Diploma in Landscape Horticulture for Agrotechnology and Bio-industry Department in Nilai Polytechnic. Students were response to questionnaire with demographic info, students' knowledge, students' interest, motivation and attitude. Data for final grade of students also stated. The data obtained were analysed using descriptive statical analysis. Findings show that Quizizz is still relevance nowadays to be implement in teaching and learning. Positive feedback was obtained from respondents to the Quizizz application because it increased their understanding of learning and learning become more interactive and entertaining. In conclusion, educators able to apply Quizizz gamification in teaching and learning process to enhance digital learning skills and technology skills among themselves as well as to improve students' performance.

Keywords – Gamification, Quizizz, Student performance, Digital learning.

I. INTRODUCTION

As technological advances in teaching and learning continue to grow rapidly, educators as leaders in education should be able to adapt to these changes. The emergence of technology has indirectly changed the progress of education. Education today has required educators to be more sensitive to the importance of technology in order to be able to apply its use during teaching and learning sessions. Educators face great challenges given the many gamification technologies have been introduced. It is the responsibility of educators to take the initiative in maintaining students' interest and motivation in applying various techniques and meaningful approaches during teaching and learning (Iberahim, 2017).

Digital technology allows educators to use variety of gamification platform to support teaching and learning process. Quizizz is one of the platforms consists interactive quiz with grade level. Quizizz can be used as an alternative

to another gamification application such as Kahoot. Research by Thulasirani et.al, (2021) stated using Quizizz in Malay grammar class among Tamil students contributed to learning achievement and accepted by the students. Quizizz will be focus for this study as it is believed to be a highly effective platform to increase students' performance and still relevance as a formative assessment for teaching and learning.

II. PROBLEM STATEMENT

Teaching and learning methods importance to ensure learning outcome achieved. Learning outcomes measure the achievements of students after learning is complete and the level of performance that should be achieved. Interesting teaching and learning techniques are essential to ensure that the topics taught can be understood by students. However, challenge of educators in educating students today is techniques of teaching and learning must keep along with the latest technological developments as students nowadays belong to the cyber generation that is inclined to the era of digitalization. Quizizz engage active learning and effectively used in the learning process (Thowijah & Susapti, 2022). Most of lecturer using Quizizz application as a method of interactive learning but how effective Quizizz today on students' performance due to too much gamification being introduced.

III. LITERATURE REVIEW

Quizizz Platforms

Quizizz is gamification application offers multiplayer exercises to make practice in the classroom to be more interesting and enjoyable. Zhao (2019) said that Quizizz application is educational tool for assessment with a lot of features and themes which different from others gamification application.

The effectiveness of quizizz had proven to improve reading skills (Nur Faathinah, 2021), positive feedback on students' motivation on online learning (Damayanti et. al, 2020). Quizizz is an interesting tool and enjoyable approach to be use as an online study (Anugrawati & Hermansyah, 2020).

Dhikrullah & Shafi'I, 2021 conclude that Quizizz helps students used the platform more easily with an interactive display.

IV. METHOD

Quantitative method is decided to be used as a study approach relate to aims of the research. The data was collected by using an online questionnaire with 30

participants of students from Diploma in Landscape Horticulture from Agrotechnology and Bio-industry Department in Nilai Polytechnic. Students were response to questionnaire with demographic info and asked for students' knowledge, students' interest, motivation and attitude. Five Likert scale use in close-ended questionnaire (5-strongly agree, 4-agree, 3-neither agree or neither disagree, 2-disagree and 1-strongly disagree). Data for final grade of students also stated to proven the cognitive performance of students. The data received were coded with Statistical Package for Social Science (SPSS) version 22 for analysis. The data obtained were analysed using descriptive statical analysis.

V. FINDINGS

TABLE 1: DEMOGRAPHIC PROFILE

Characteristic	Frequency (n)	Percentage (%)
Age (years)		
19	23	76.67
20	3	10
21	4	13.33
Gender		
Male	18	60
Female	12	40

TABLE 2: STUDENTS FINAL SCORE GRADE

Grade	Frequency	Percentage (%)
A+	1	3.33
A	20	66.67
A-	5	16.67
B+	3	10
B	1	3.33

TABLE 3: MEAN SCORE OF STUDENT PERFORMANCE

Variables	Mean	Score
Knowledge	3.93	High
Interest	4.93	Very high
Motivation	4.16	High
Attitude	4.86	Very high

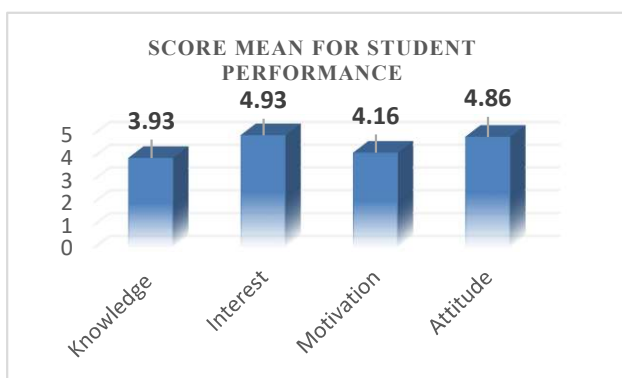


Figure1: Level of Students Performance

VI. DISCUSSION

Table 1 show the age of respondent around 19 to 21 years old which from Sijil Pelajaran Malaysia (SPM) and Sijil Landscape. More male students with 60% while another 40% are female students.

Table 2 show student final grade for this course with highest grade is grade A with 66.67% and the lowest grade is grade B with 3.33%. The range of final grade from A+ until B. Grade A+ is 90% and above, grade A is 89-85%, grade A- is 84-80%, grade B+ is 79-75% and grade B is 74%-70%.

Figure 1 and Table 3 demonstrate mean score and level of student's performance in class with highest score mean for interest of students with 4.93. Next score is 4.86 (very high) in student attitude. Student show good and positive attitude throughout the class. Motivation shows high score level with 4.16 for students' enthusiasm to learn, enjoy and actively participated and 3.93 (high level) for knowledge to understand the objectives of learning sessions.

VII. CONCLUSION (OR LIMITATION OR SUGGESTION FOR FURTHER STUDIES)

From the finding we could summarize that the application of Quizizz Platform in learning Introduction to Landscape Horticulture course effectively impact the performance of students towards their knowledge, interest, motivation and attitude. Result supported with the final grade of student with grade A+ to B which is the best grade or achievement of students. Future researchers recommended to conduct study focused on investigating the effectiveness of Quizizz platform with another platform such as Kahoot, Quizlet or others platform towards students' performance.

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