

Analysis of Students' Perceptions Impacted by The COVID-19 Pandemic about Implementation of Quizizz in Microbiology Courses

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Abstract

Students are using the Quizizz application for the first time in a Microbiology course, so it is necessary to know their response regarding using this application. The purpose of this study was to describe the responses of students affected by the COVID-19 pandemic regarding the use of Quizizz while attending Microbiology lectures. This research is descriptive. This research was conducted in the January-June 2021 and 2022 semesters. This research involved 79 students of the 2019 and 2020 batches of Raja Ali Haji Maritime University who had taken online Microbiology courses. This study used a questionnaire distributed via Google Forms after students attended Microbiology lectures with the Quizizz application until the end of the semester. The number of questionnaire items given was 18, which were grouped into three aspects: 1) easiness of the application, 2) available benefits, and 3) unique benefits felt by students during and after the COVID-19 pandemic. Based on the results, the response of students affected by the COVID-19 pandemic related to the use of Quizizz while attending Microbiology courses is in a good category.

Keywords: Response, Quizizz, COVID-19, Microbiology, Course

1. Introduction

The learning process in universities has changed since the COVID-19 pandemic hit the world. This has led to various extraordinary impacts in all aspects of life, including education. The entire educational process must adapt in both elementary and tertiary institutions to maintain targeted learning competencies. As is the case with the Indonesian National Qualifications Framework (KKNI), every tertiary institution must produce competent graduates according to their level. To achieve this, tertiary institutions need appropriate learning strategies to produce graduates who meet the standards. One aspect that a graduate must own is the aspect of mastery of knowledge in his field.

However, due to the COVID-19 pandemic, aspects of knowledge that students should have become less than optimal. There was some learning loss during the pandemic, which resulted in student learning outcomes not increasing (Anggun & Rahmawati, 2022). This is due to various regulations, such as restrictions on social

interaction in all areas of life, including education. The presence of these restrictions causes tertiary institutions to feel obstacles when carrying out the learning process from lecturers to students, so lecturers need to find solutions to resolve this problem. One way that can be done is to use the Quizizz application.

According to Supriadi et al. (2021), Quizizz is a free application that can increase students' learning motivation, including college students. Quizizz can help lecturers to stimulate student curiosity regarding challenging Microbiology courses with various advantages. Various features in it, such as quizzes, *leaderboards*, and music, can be used by lecturers to make learning during a pandemic more enjoyable. In addition, this application also helps students overcome the learning problems they face, including in microbiology courses.

Microbiology is one of the fields of biology that must be mastered, especially by prospective biology teacher students. According to Afidah (2020), this course has an abstract material concept. This is because the objects studied in microbiology courses cannot be seen directly by the eye. In addition, some of the ideas in this microbiology course must be mastered by students as

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biology teacher candidates as a provision of basic skills related to various procedures in a microbiology laboratory. Microbiology course is a subject that requires skills and knowledge. This needs to be optimally obtained by students due to the difficulty of applying interesting learning strategies (Wulansari & Sutrisna, 2018). If the concepts or theories in this course cannot be adequately conveyed, the competency aspects of prospective biology teacher graduates expected in the IQF will not be achieved. Therefore, lecturers need to innovate in the learning process, such as by using the Quizizz application.

However, various obstacles arose when using this application for the first time at the beginning of the January-June 2021 semester. For example, the internet network was unevenly distributed in all regions of the Riau Islands. With various limited facilities and infrastructure at the Raja Ali Haji Maritime University (UMRAH) Biology Education Study Program, which are still relatively minimal such as laboratories that are still limited, the learning process in class is carried out online, including microbiology courses. Then, UMRAH also implemented hybrid learning *from* the beginning of the January-June 2022 semester to overcome problems during online learning. In hybrid learning, it is expected that students can use web-based learning media to help their distance learning (Miftahussa'adiah, 2022). The learning process in microbiology courses still utilizes Quizizz as a training method, presentation of material, *pre-test* and *post-test work* up to the midterm and final semester exams.

Giving pre-tests and post-tests during learning can help to monitor the development of students' competencies (Anggun, 2021). Everything is done to maximize the potential of this application to achieve learning outcomes.

Based on the description of this problem, researchers need to analyze how students respond to the impact of the COVID-19 pandemic in microbiology courses when using the Quizizz application for the first time. This response is used as a basis for researchers to improve the learning process, especially in this course in the future. The purpose of this study was to describe the responses of students affected by the COVID-19 pandemic regarding the use of Quizizz while attending Microbiology lectures. The response we want to express is the ease of use, available and unique benefits felt by students affected by the COVID-19 pandemic while using the Quizizz application, especially in microbiology courses.

2. Methods

This research is descriptive. This research was conducted in the January-June 2021 and 2022 semesters. This research involved 79 students of the 2019 and 2020

batches of Raja Ali Haji Maritime University who had taken online Microbiology courses. This study used a questionnaire distributed via Google Forms after students attended Microbiology lectures with the Quizizz application until the end of the semester. The number of questionnaire items given was 18, which were grouped into three aspects:

- a. Easiness of the application
- b. General benefits felt by students
- c. Unique benefits felt by students during and after the COVID-19 pandemic

The grouping of the questionnaire item analysis results is carried out in Table 1.

Table 1 . Percentage of Student Perceptions about Using Quizizz in Microbiology Courses

Percentages	Interpretation
0-24	Terrible
25-49	Not Good
50-74	good
75-100	Excellent

(Source:Asria et al., 2021)

3. Results and Discussion

- a. Student's Perceptions of the Easiness of the Application

The results of the questionnaire analysis of student's perceptions about the ease of the application can be seen in Table 2.

Table 2. Student's Perceptions of the Easiness of the Application

Statement	Highest Response (%)
The Quizizz application is easy to use.	48.1% Totally Agree
While using the Quizizz application, I had no problems despite having the wrong network.	51.9% Agree
Average	50.00 % Good

Table 2 shows that in the first statement, as many as 38 students (48.1%) stated that they strongly agreed that the Quizizz application was easy to operate. Then, in the second statement, as many as 41 students felt they were not experiencing interference during lectures using this application even though the network had problems. This is because most students at UMRAH live in island areas where the internet network still needs to be improved. However, they stated that they found no significant obstacles during this Microbiology lecture. This follows the opinion of Supriadi et al. (2021) that Quizizz can be used anytime and anywhere if connected to a good internet network. When the application can be connected to the internet network, all the features provided by Quizizz can be maximized so that the learning process will run smoothly. If the results of these responses are

averaged, then the result is 50.00%. Based on the perception grouping criteria in Table 1, these results indicate that students give a good perception regarding the ease of using the Quizizz application while taking the Microbiology course.

b. Student's Perceptions of General Benefits

The results of the questionnaire analysis of student's perceptions about the public benefits of the application can be seen in Table 3.

Table 3. Student's Perceptions of General Benefits

Statement	Highest Response (%)
The questions presented by the lecturer through Quizizz make the class more interactive.	50.6% Agree
Quizizz is easier to drill me for some questions in class than paper in style.	49.4% Totally Agree
Quizizz helps me repeat the subject that I learned.	53.2% Totally Agree
Through the Quizizz application, I am more actively involved during learning activities in class.	49.4% Agree
By drilling the questions from the lecturer using Quizizz, I am more motivated to study harder.	51.9% Agree
With the sound of music in Quizizz, I am more enthusiastic about answering the questions.	35.4% Agree
I feel able to reduce my anxiety about facing exams through this application.	49.4% Agree
The <i>leaderboard</i> feature displayed by Quizizz can motivate me to keep learning even better.	46.8% Totally Agree
I have to understand the material being studied without the help of others through this application.	50.6% Agree
I have to be more accurate in answering these Quizizz questions correctly.	60.8% Totally Agree
I think I can improve my concentration on learning in the classroom with this application	53.2% Agree
Learning is to be fun by using this application.	49.4% Totally Agree
Average	50,01 % Good

Based on Table 3, students' perceptions of the public benefits felt by students while using the Quizizz application are in the excellent category (50.01%). All features, such as practice questions, leaderboards, and music, can increase motivation and involvement in learning and can create a fun understanding atmosphere for students. This follows the opinion of Simanjuntak (2020) that the Quizizz application, which displays many features like a game, can make the learning process more enjoyable. During the lecture process, students can become more active during online learning. Besides that, games in learning can help students to relax for a moment in receiving lessons (Ulfa et al., 2020). Through a series of features in the Quizizz application, lecturers can use it to create a better understanding and be able to help students, especially in learning microbiology courses.

c. Student's Perceptions of Special benefits during and after the COVID-19 pandemic

Table 4. Student's Perceptions of Special benefits during and after the COVID-19 pandemic

Statement	Highest Response (%)
During the COVID-19 pandemic, Quizizz can help me relieve boredom during online learning.	49.4% Totally Agree
Through this application, I can reduce the distraction caused by other electronic devices during the learning process in the post-pandemic period.	65.8% Agree
I hope the Quizizz application can be applied in the learning process of other courses, even though the COVID-19 pandemic has ended.	55.7% Agree
Average	55.08 % Good

Based on Table 4, students' perceptions of the unique benefits felt by students while using the Quizizz application, especially during the COVID-19 pandemic, were in the excellent category (55.08%). The specific benefits asked for include overcoming boredom, reducing distractions from using other electronic devices when studying, and the hope that this application can still be used in the next Microbiology lesson. These results are strengthened by the results of research conducted by Nurhayati (2020) that the Quizizz application can provide benefits in terms of learning motivation, especially when facing the COVID-19 pandemic. Students who experience many problems in learning, coupled with the COVID-19 pandemic, need innovation to motivate them to learn. Then, the issue of distraction is a picture of a psychological condition that has also been described by Andini & Pudjiati (2021). Based on student perceptions

regarding this point, this problem can be overcome by using the Quizizz application. This also needs to be studied further in other studies.

4. Conclusion

The conclusion of this study is the response of students affected by the COVID-19 pandemic related to the use of Quizizz while attending Microbiology lectures in terms of ease of use, available and unique benefits felt by students affected by the COVID-19 pandemic while using the Quizizz application, especially in microbiology courses at good category.

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