

CHAPTER I

PRELIMINARY

1.1 Problem Background

Student interest in teaching and learning activities can influence student learning outcomes. This is in accordance with Sirait's (2016) assertion that student interest is a key factor in determining student learning activity. Students focused on the teacher who taught the material before the Covid-19 pandemic, but when Distance Learning was established, most students did not focus on the material provided by the teacher. This is confirmed by Mr. Sunarto, a biology teacher at MAN 3 Langkat, who claims that the learning objectives are not reached due to low student interest in learning. Therefore, if students' interest in learning is low, it can affect student learning outcomes.

Based on the interview with Mr. Sunarto, student learning outcomes after applying Distance Learning are not significant. Many students imitate the answers of other students so that it becomes difficult for the teacher to analyze student learning outcomes. In addition, the lack of teacher supervision and student attention in learning makes students not really study which results in students cheating. In this case, the lack of interest in student learning is the main thing that causes student learning outcomes to be insignificant.

Low student interest in learning can be caused by many different of factors, another is the impact of student adaptation to a foreign learning experience. Mr. Sunarto also stated that the teacher is unable to directly monitor if the student comprehends the topic. There are terminologies and complex respiratory processes in the subject of Respiratory System Biology which, if not explained interactively and variedly, can bore students and cause them to lose interest in studying. As can be confirmed, distance learning causes certain students to underestimate lessons, resulting in worse achievement and learning outcomes. The use of hybrid learning is one way to increase student interest. The Principal of MAN 3 Langkat has been supporting the local government by implementing hybrid learning at MAN 3 Langkat since the beginning of the odd semester in July 2021. In the hybrid learning mechanism, the class XI IPA are divided into two

shifts, which class XI IPA 1 and XI IPA 2 are first shift while class XI IPA 3, XI IPA 4, and XI IPA 5 are second shift. The first shift will take place from 7.30 to 10.00 WIB, while the second shift will take place from 10.00 to 12.30 WIB.

However, when face-to-face hybrid learning takes place, school policy applies a regulation that the time for teaching and learning activities is cut to 35 minutes from 45 minutes per hour. This excuse of course makes the teacher rush in teaching. According to the results of the interview with Mr. Sunarto, he did not have time to use learning media such as infocus with PowerPoint, or use interactive learning methods such as discussions. In hybrid learning with limited time, there is a need for learning media as well as practical and effective evaluations in order to increase student learning outcomes and interest in learning. It is expected that with the availability of practical access media, teaching and learning activities that take only 35 minutes per hour will be feasible.

The use of applications or web URLs that point to learning sites can also increase student curiosity and interest and create a new and interactive atmosphere. In order for learning media to be accessible to all students, it must be adaptable across a variety of platforms. Learning video, according to Ketut (2020), is a technological advancement that serves as a medium for providing material and other teaching and learning activities.

The teacher can know student learning outcomes by providing an assessment. Rakhmawati (2016) states that giving assessments to students will stimulate students' ability to think and be accepted in the form of responses to changes in attitudes or behavior, such as answering questions critically. So that the response received by the teacher can be used as an evaluation to see if there is a change from great curiosity and student learning outcomes. Kahoot! is a form of technology-based assessment that is modified as a quiz game. According to Akhmad (2020), the use of Kahoot! utilize a gamification method that will make students more interested in answering the quiz questions. Kahoot! It can also increase students' competitive attitude and self-confidence in completing quizzes correctly in a short time. The best students will be winners in the quiz game, which is expected to improve their learning outcomes.

In teaching and learning activities that are carried out briefly, the teacher must adjust the teaching time to the obstacles that may occur. One of these obstacles is adjusting the concise time to teaching and learning activities. For this reason, a new platform that is practical and saves time is needed to access videos and assessments that teachers and students will use. In this study, researchers will use the QR Code as a container or application in accessing learning videos and Kahoot! application. Nurhidayah (2021) states that the QR Code is a two-dimensional image that can access information and data only by scanning the QR Code using the QR Code Scanner application or similar applications already available on various types of smartphones. Thus, researchers hope that this QR Code can improve student learning outcomes, especially in biology lessons.

Based on observations that have been made to students of MAN 3 Langkat, with 44 students being respondents, 86.4% know about the QR Code, and 63.6% have and often use it. 27.3% of students use it as digital payment access, 29.5% use it as part of a health protocol, and 43.2% use it for other access. Based on their experience after using QR Code as required access, 93% of students agree that using QR Code is very practical to access whatever they need. This is supported by Mr. Sunarto's statement that he also uses QR Code as an access medium but is not used as a learning medium. He also said that the QR Code-based learning media was fascinating to try for class XI students of MAN 3 Langkat.

Based on the background described, it is necessary to make an innovation in learning media, especially in Biology subjects using Learning Videos and Kahoot! Based on QR Code.

1.2 Problem Identification

Based on the background described above, the researchers identified several problems as follows:

1. The decrease in interest in learning affects student learning outcomes in biology subjects. This is evidenced by the lack of interest in learning for MAN 3 Langkat students which causes students to copy each other during exams so that the learning outcomes of MAN 3 Langkat students are not significant.

2. The Principal of MAN 3 Langkat has been applied limited time in teaching when Face-to-face Learning, which is 35 minutes out of 45 minutes per hour.
3. According to Mr. Sunarto, the teacher explains the material in a hurry and does not have time to use learning media such as PowerPoint, so the class atmosphere is not interactive.
4. The teacher dominates the learning method yang menyebabkan tidak adanya interaksi terhadap siswa pada saat pembelajaran, so that students' interest and activity in learning decreases.

1.3 Scope of Problem

Based on the background and problem identification above, the scope of this research is:

1. Making learning videos as a medium for student learning in Respiratory System Biology.
2. Application of Kahoot! as an evaluation of student learning in an assessment to see student learning outcomes.
3. The use of QR Code as a basis for learning media increases student interest in learning Biology material for the Respiratory System.

1.4 Problem Limitation

With the number of problems that have been described in the background, researchers certainly will not examine all of the problems. Therefore, the researcher set a problem boundary for this research. The limitations of the problem are:

1. Application of learning videos and Kahoot! QR Code-based assessment for students only on Biology lessons on Respiratory System material.
2. Learning videos are animated videos created through Microsoft PowerPoint, then uploaded to Google Drive.
3. Learning videos and Kahoot! will be accessed by students of class XI IPA 4 via a QR Code which is scanned with each student's smartphone.
4. The results obtained from this study are to see the interest and learning outcomes in students.

5. The learning outcomes studied are cognitive learning outcomes by Bloom, who uses the High Order Thinking Skill (HOTS) question.

1.5 Problem Formulation

Based on the background and problem identification above, the formulation of the problem in this study is:

1. How are the students respond to learning videos and Kahoot! QR Code based on the respiratory system in class XI MAN 3 Langkat?
2. How are the effect of learning videos and Kahoot! based on QR Code of student interest in respiratory system material in class XI MAN 3 Langkat?
3. How are the effect of learning videos and Kahoot! based on QR Code of student learning outcomes in respiratory system material in class XI MAN 3 Langkat?

1.6 Research Purposes

Based on the problems that have been described previously, this research has several benefits, namely:

1. To find out the students respond to learning videos and Kahoot! QR Code based on the respiratory system in class XI MAN 3 Langkat?
2. To find out the effect of learning videos and Kahoot! based on QR Code of student interest in respiratory system material in class XI MAN 3 Langkat?
3. To find out the effect of learning videos and Kahoot! based on QR Code of student learning outcomes in respiratory system material in class XI MAN 3 Langkat?

1.7 Research Benefit

In addition to the research objectives mentioned above, this research also has benefits that can later be used as references or media development. The benefits of this research include two aspects, namely:

1. Theoretical benefits

This research is expected to provide benefits as a reference for further research in developing learning media for students, especially in applying technology to Biology subjects so that learning becomes interactive.

2. Practical Benefits

a. For student

This research is helpful as a reference to improve understanding of the Respiratory System and is expected to increase interest and learning outcomes in students. In addition, students can also access learning media in videos by scanning the QR Code at any time.

b. For teachers

This research is helpful as a reference in the use of interactive learning media. It is hoped that this research can develop innovations in teaching and learning activities.

c. For researchers

As one of the experiences in researching and implementing learning media to students.