

CHAPTER I

INTRODUCTION

1.1 Research Background

The learning process, which includes students, teachers, and the learning environment, all of which interact with one another, is inextricably linked to education. Learning media helps to clarify the meaning of the message being delivered, which improves the teaching and learning process and results in more efficient and successful learning outcomes. The use of media in education, such as in the form of visuals coupled with animations, helps make the learning experience more captivating. The use of a wide range of acceptable media in the learning process is related to this, as it can boost learning results and lesson student inactivity (Kuswanto & Radiansah, 2018).

The development of Smart Apps Creator learning media is a crucial innovation because it offers the concept of Mobile Learning that makes the learning process flexible (accessible anytime and anywhere), interactive, and engaging for students in the digital age. Besides the benefits of digital learning, there's also another side. We cannot deny that developing interactive learning media based on information technology also presents challenges in today's learning process. Students are highly attached to applications. Therefore, in a learning process that is increasingly intertwined with a complex world, the need to develop interactive learning media based on information technology has become a necessity (Hidayah, Y.2004). This innovation specifically supports the implementation of the 2013 Curriculum for the topic of the Human Respiratory System in 8th Grade by accommodating various student learning styles Visual (through 3D animations, interactive diagrams, and video demonstrations of the respiratory organs), Auditory (through narration and audio explanations), Kinesthetic (through interactive simulations or educational games that require physical device interaction to explore organ function or answer quick quizzes), which can significantly boost motivation and learning outcomes compared to conventional print media (Astuti et al.2017).

The compulsory subject in education is Natural Sciences. The scope of scientific studies is closely related to living things and the environment. The body

of knowledge known as IPA is derived from the findings of scientific reasoning and experiments carried out using the scientific method, which involves natural objects and phenomena. Thus, science subjects must be able to arouse students' interest so that they want to increase their intelligence and student learning outcomes regarding the nature and contents and attract students' attention to play an active role in the learning process. In the junior high school curriculum 8th Class. There are several related materials with the system going on inside human body. Competency standards must be achieved in the subject matter so that students are able to understand systems in human life. Material related to systems in humans are abstract and related to functions and processes complex. One of the materials about the system being studied is a system respiration in humans. Competence the basis of the material is students able to describe the system respiration in humans and relation to health. Materials used in the human respiratory system include ones that need a range of learning media in order for pupils to grasp the concepts being taught. Ritonga (2016) holds that understanding the human respiratory system requires students to grasp a variety of concepts, which is in line with this. In order to learn about the human respiratory system, students need to understand a variety of concepts related to its functions and mechanisms, and they also need to make connections between them.

This is also in line with direct interviews with science teachers at SMP Negeri 2 Percut Sei Tuan who stated that there were still many problems experienced by students in science subjects. The instructor provides additional information about the human respiratory system and uses media to keep the learning process interesting and prevent students from participating in active learning activities, making learning activities less effective right away. Such a learning method causes students to become bored with learning very fast. He would simply perish if he passed away suddenly, which would happen after the effects of *Lernergebnisse der Schuler* took effect. In line with Silvia et al. (2021) notion that teachers' teaching habits, which continue to lean towards the lecture method, contribute to students' lack of motivation and ability to improve their creativity and activity throughout the learning process. Students can't develop that ability have and students do not have desire to participate in activities Study. This situation has

an impact at less maximal activity and learning outcomes achieved by students, learning media that students need are representative media that can be repeated at any time and media that provide lots of pictures or videos of existing processes. Anidityas, (2012) stated that it was not achieved mastery learning on system material human respiration due to matter difficult respiratory system only in learning use the book, as well as this related material with mechanisms and processes happens in the body that is difficult to understand by students. In fact it still is there are teachers who have not utilized learning media in order explain and give examples phenomena in science learning. because it doesn't exist yet innovations made within learning, as well as a lack of used variety learning media. then an alternative.

learning improvements that can be conducted by researchers at SMP Negeri 2 Percut Sei Tuan is to develop based learning media android. Science and technology, teacher professionalism, and the ability to teach students are insufficient for fostering development. Instead, it requires the ability to manage information and the environment, as well as facilitate learning activities, such as enriching learning resources and the media. To ensure that students comprehend the content easily, teaching materials must be presented in the most engaging manner possible. One of the measures used by educational media to address the issue of students' poor learning outcomes. In light of this, Lehrmaterialien was developed for Android that is packed with resources that can aid students in their modern learning (Anggraeni & Kustijono, 2013).

One application of the 21st-century learning style is the utilization of educational materials based on Android. Additional Android operating systems exist, starting with those for smartphones, tablets, and other devices. The use of smartphones and tablets in education has the potential to be beneficial, as they have the ability to revolutionize the learning process. The use of Android devices for educational media development means that students will be able to access and use them anywhere, anytime (Silaban & Panggabean, 2022). The SmartApps Creator (SAC) is an Android-based learning medium that is simple to use and implement. The most recent digital interactive media for generating multimedia content that may be installed on Android-based smartphones is SmartApps Creator. SmartApps

Creator is one of the chosen media because it is a program for creating Android or iOS mobile and desktop applications without prior programming expertise, and it produces HTML 5 and EXE with an intuitive interface. With Smart Apps Creator, you can easily develop interactive learning media and add background music or animations to make the material more engaging (Fahri, 2022).

In a similar study, Silaban et al. (2022) demonstrate that using Android-based chemistry instructional materials enhances students' learning outcomes in thermochemistry. Remarkably intriguing pupil answers. This is because Android-based chemistry learning materials may capture students' attention and motivate them to engage more in the learning process. As a consequence, students learn more effectively.

Fatmawati et al. (2021) conducted similar research and discovered that creating learning materials using Android apps is a highly effective and useful way to connect students' learning outcomes with the course content. Students attain 85% of the results, and the average grade jumps from 65 to 75 after using the media. In related research, Nurainun (2021) discovered that the development of interactive learning tools fulfills extremely legitimate requirements in terms of design.

The development of learning media that can address learning challenges is the key to the significance of innovation in digital learning media. The acquisition of knowledge in this day and age cannot be controlled or based solely on facts. Using communication tools, students can develop creativity without the instructor serving as a catalyst, which subsequently stems from the insight or information they discover within these communication tools. Naturally, instructors must offer a range of methods for carrying out the learning process because they serve as catalysts for students with creative thinking. Teachers may now more easily develop cutting-edge instructional materials that pupils will utilize in the learning process thanks to the application of modern digital technological advancements. Learning media is anything used as a medium in learning, with the expectation that students may replicate what they have learned from any teacher and in any location, not just at learning events.

Based on the description above, in order to Develop SMART APPS CREATOR Media In Human Respiratory System Material To Increase Student

Learning Interest, the author conduct a study with the title "Development Of SMART APPS CREATOR Media In Human Respiratory System Material To Increase Student cognitive learning outcomes 8th Grade Junior High School".

1.2 Identification of the problem

Based on the background of the problems above, several problems can be identified as follows :

1. The learning media used by the teacher is severe monotonous so it is necessary to have alternative learning media that supports learning
2. Android is a technology that is now in great demand, but the use of Android as a learning medium has not been fully used by students.
3. Educators still use conventional teaching materials in the form of printed books which are used as learning resources

1.3 Scope of study

The scope of development is needed in conducting research to make it easier for researchers to focus on research. The scope of this research is as follows :

1. Android-based learning media focuses on the material human respiratory system
2. Android-based learning media is shown in class VIII
3. The development model used in the development of this learning media is the 4D model

1.4 Limitation of the study

Based on the identification of the problems that have been raised, the limitations of this problem are limited to:

1. The research method used is the 4D development research method (define, design, development, disseminate).
2. The aspects of learning outcomes that are used are limited to the cognitive aspects of students.

1.5 Problem formulation

Based on the identification of the problems that have been raised, the problem formulation follow :

1. How is the feasibility of learning media based on Smart apps creator as a science learning resource based on material experts?

2. How is the feasibility of Smart apps creator learning media as a science learning resource according to media experts?
3. How is the feasibility of Smart apps creator based learning media as a natural science learning resource according to learning design media experts?
4. How the feasibility of Smart apps creator based learning media as a science learning resource in student responses?
5. How the feasibility of Smart apps creator based learning media as a science learning resource in teacher responses?
6. How effective is Smart Apps Creator-based learning media in improving student learning outcomes?

1.6 Research purpose

This research is expected to provide benefits, namely:

1. To find out how the feasibility of Smart apps creator based learning media as a science learning resource according to material experts.
2. To find out how the feasibility of Smart apps creator based learning media as a science learning resource according to media experts.
3. To find out how the feasibility of learning media based on Smart apps creator as a science learning resource according to learning design media experts.
4. To find out how the feasibility of Smart apps creator based learning media as a science learning resource in student responses.
5. To find out how the feasibility of Smart apps creator based learning media as a science learning resource in teacher responses.
6. To find out how effective is Smart Apps Creator-based learning media in improving student learning outcomes.

1.7 Research Benefit

Based on the objectives to be achieved, this research is expected to provide contributions and benefits such as:

1. For students, students are active, creative and competent because they can increase their understanding of natural science learning activities, especially

environmental pollution material, and arouse their curiosity about natural science.

2. For teachers, teachers will find it easier to increase motivation, creativity, and activeness and make it easier for teachers to explain natural science lessons.
3. For Researchers, Providing researchers with experience and knowledge about the process of creating and developing Smartapps creator-based learning media.

