CHAPTER I
INTRODUCTION

1.1. Background of Study

Learning is the process of interacting students with educators and learning resources in a learning environment. Learning is also assistance provided by educators so that the process of acquiring knowledge and knowledge, mastering skills and habits, and forming attitudes and beliefs in students can occur (Djamaluddin & Wardana, 2019). In line with the views of Gunawan & Ritonga (2019), who say that learning is an effort made by a person through interaction with their environment to change their behavior. Thus, the result of learning activities is a relatively permanent change in behavior in the person who learns. In this learning, teachers must be able to design effective learning. Effective learning is when the learning objectives that have been formulated are successfully applied in learning (Saefuddin & Berdiati, 2016). Effective learning can be said to be achieved if (1) Good material organization, (2) Effective communication, (3) Mastery and enthusiasm for the subject matter, (4) Positive attitude towards students, (5) Giving fair grades, (6) Flexibility in learning approaches, (7) Good student learning outcomes. Good organization of materials is a very important factor in conveying information and concepts. The organization of the material also includes other supporting factors used during the presentation process. These supporting factors include, the use of media, attitude, and the speed of presentation (Uno & Mohamad, 2015).

Science or Natural Sciences is a branch of knowledge, having specific characteristics which are studying factual natural phenomena, whether they are in the form of facts or events and their cause-and-effect relationships (Wisudawati & Sulistyowati, 2015). If science materials are taught well, they will stimulate curiosity and a desire to experiment in students. However, not all science materials are easy to comprehend and put into practice, and they can even lead to

laziness and boredom among students. Furthermore, some of the materials studied may not be directly observable. As reported by Umami (2021), the challenges faced during science learning are not solely attributed to the students themselves, other factors can also influence the understanding of science subjects. One of these factors is the availability of learning media in science materials.

Respiratory System material is one of the junior high school science materials. This material is not possible to see directly both the organs and how the organs work. In line with what Panjaitan *et al*. (2020) reported Human Respiration System material is considered difficult because students are unable to see the organs of the Human Respiratory System directly. Then according to Sani *et al*. (2019) Human Respiration System is considered difficult because it is abstract, has a lot of Latin, lacks learning resources, and lacks learning media. If the learning process lacks visualization and reinforcement, it can make the delivery of material to students less than optimal (Baktiar & Khotimah, 2020). Visualization through learning media is one way that teachers can use for students to concretize or clarify something abstract for students (Audie, 2019). So, when presenting material about the respiratory system, it is not enough just to present pictures and text from books. Because this material requires students to have the competence to understand the working mechanisms of organs.

The solution for optimizing learning requires the help of appropriate learning media to support learning according to the material's and students' characteristics. Media influences learning effectiveness (Putri & Muhtadi, 2018). Media can be defined as an element that functions as a tool to deliver lesson concepts to reach goals that can be innovated according to student needs. Details according to Tafanao (2018) that learning media can make the teaching and learning process more effective and efficient and establish a good relationship between teachers and students. In addition, the media can play a role in overcoming boredom in learning in the classroom. The support of increasingly sophisticated information and communication technology tools makes learning media not only help an educator in teaching learning material but become a learning resource (Pagarra *et al*., 2022). So, in this case, learning media is not only

positioned as a complement to learning resources but can be the main source of learning.

Video learning media is an effective learning media in the form of audio-visual media which can attract the attention of students through the senses of sight and hearing in the learning process (Irwana *et al*., 2021). One of the technology-based learning media that supports various learning processes is explainer video. Explainer video is used in aspects that require visualization of science. Explainer videos are rich in information and straightforward when used in delivering learning materials (Ikbal & Cantika, 2022). The advantages of the infographic model explainer video learning media according to Andriana & Dewi (2022) are; (1) the combination of images and text on the video allows students (audience) to quickly understand the meaning of the message or the image itself, (2) the form of a diagram or map on the video will make it easier for students (audience) because in principle, the human brain tends to store data in the form of images more easily than writing which is very saturating, and (3) the use of language or sentences accompanied by more interesting images is also very influential, so that students will more easily understand the learning material presented. As reported by Ikbal & Cantika (2022), the use of explainer videos in learning increases students' learning interest, thus further clarifying the benefits of using explainer videos in education. In addition, learning video media is very effective to develop because it can make the learning process more effective and can improve student learning outcomes (Hastuti *et al*., 2020). However, the current problem is that many teachers still have limitations both in terms of time and ability to develop interesting video media, especially in science subjects (Utama *et al*., 2021).

Based on the results of observations and interviews conducted at SMP Negeri 37 Medan, it was found that science teachers still use simple media in implementing the learning process in class, such as the use of picture and PowerPoint media which are still dominated by writing on each slide. Teachers also usually take the learning media from the internet without modifying it as learning media. In addition, during the science learning process, both teachers and students only use science textbooks as learning resources. One of the materials studied is the material of the human respiratory system which is abstract material,

so it was found that the difficulty experienced by students was that they had to imagine the organs of the respiratory system because it was impossible to see directly the entire organ and its mechanism. As a result, learning becomes less effective and students often feel bored because the learning system still uses monotonous media and has difficulty imagining the material to be learned.

The main task of science teachers is to carry out the science learning process. The science learning process consists of three stages, namely the planning stage, the implementation stage, and the assessment stage (Wisudawati & Sulistyowati, 2015). In effective learning, teachers also need to pay attention to student characteristics. In other words, effective learning is a learning strategy that pays attention to student abilities, student characteristics, appropriate methods, appropriate media, and accurate evaluation (Uno & Mohamad, 2015). Based on the results of observations and interviews, science teachers have carried out the implementation stage of learning strategies and learning assessment well. Where teachers carry out learning with Problem Based Learming model and assessments that already consist of cognitive, affective and psychomotor assessments. However, in the planning stage of the science learning process, learning that takes place in the classroom is still not effective. This is because teachers only provide simple learning media with the help of powerpoints obtained from the internet without any modifications according to the needs and characteristics of students. Because the right learning media will create effective and efficient learning activities so that the material conveyed by the teacher to students can be absorbed optimally (Sapriyah, 2019).

Based on these problems, there needs to be a solution to improve the learning process. Learning media can improve student understanding and learning outcomes and create effective learning. One way to achieve learning objectives requires appropriate, creative, effective, interesting learning media and ICT-based media. So teachers need; 1) explainer video learning media to support Human Respiratory System material that contains images, videos and animations in accordance with learning objectives, 2) explainer video learning media that can guide students in understanding the concepts being studied, 3) explainer video learning media that is effective in achieving learning objectives.

Learning by using explainer video is one of the ways used by researcher to improve the quality of teaching and learning so that the learning process is more interesting and effective so that concepts can be accepted by students easily and learning objectives can be achieved. In developing this explainer video as learning media, researcher use the Kinemaster application by utilizing the features in the application.

Based on the description of the problem, researcher are motivated to conduct research and development with the title "**Development of Explainer Video as Learning Media Using Kinemaster on Human Respiratory System Material for VIII Grade Students at SMP Negeri 37 Medan** ".

1.2. Problem Identification

Some of the problems that can be identified from the background are as follows:

1. The learning process is still ineffective because the learning media used is still simple and dominated by writing and is not made based on student characteristics.
2. During the learning process, only uses science textbooks as a learning resource.
3. The human respiratory system is an abstract material and cannot be seen directly, so students have difficulty imagining the organs of the respiratory system and its mechanisms.
4. Lack of technology utilization in making learning media.

1.3. Scope of the Problem

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

1. The material presented in the learning media using explainer video focuses on the material of the Human Respiratory System in junior high school class VIII even semester of the 2023/2024 academic year.
2. The application used in making media is Kinemaster by utilizes editing features.

3. The development model used in developing explainer video learning media is the ADDIE development model (Analysis, Design, Development, Implementation, and Evaluation).

1.4. Problem Limitation

Based on the identification of problems, in this study, it is important to limit the problem so that the research can be more focused and measurable. The limitations of the problem in question are as follows:

1. Testing the feasibility of learning media using explainer video on Human Respiratory System material according to media expert, material expert, and learning expert.
2. Knowing the effectiveness of learning media using explainer video on Human Respiratory System material through student learning outcomes.
3. Knowing the responses of teachers and students to the use of learning media on the material of the Human Respiratory System.
4. This research was conducted in class VIII even semester of the 2023/2024 academic year at SMP Negeri 37 Medan.

1.5. Problem Formulation

The problem formulations in this study are as follows:

1. How is the feasibility of learning media using explainer video on Human Respiratory System material for junior high school students in Class VIII by media expert, material expert, and learning expert?
2. How is the effectiveness of learning media using explainer video on Human Respiratory System material for junior high school students in Class VIII?
3. How is the response from teacher and students to the use of learning media using explainer video on Human Respiratory System material for junior high school students in Class VIII?

1.6. Research Objectives

1. Knowing the feasibility of learning media using explainer video on Human Respiratory System material for junior high school students in Class VIII by media expert, material expert, and learning expert.
2. Knowing the effectiveness of learning media using explainer video on Human Respiratory System material for junior high school students in Class VIII.
3. Knowing the responses of teachers and students to the use of learning media using explainer video on Human Respiratory System material for junior high school students in Class VIII.

1.7. Research Benefits

1.7.1. Theoretical benefits

The theoretical benefit expected from this research is that it can be used as a reference for the development of science learning media in the learning process.

1.7.2. Practical benefits

For researchers	:	The results of this study can add insight to researchers as prospective educators to improve their ability to develop learning media that can prepare students to compete in the world of education in the future.
For students	:	Increase students' enthusiasm in participating in the learning process, and increase their interest in learning science.
For teachers	:	Provide a variety of learning media to support the achievement of learning objectives, create effective learning and improve teachers' ability to use ICT-based media.
For school	:	Improve the quality of learning in the classroom, through learning media using the Kinemaster application.

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