

Interactive Power Point On Human Movement System Material; An Effort To Improve Biology Learning Outcomes At Kaima Advent Middle School

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Abstract: *The world of education plays a significant role in the development of students. So, to facilitate the learning process for students is the main task of a teacher. For this reason, teachers are not only required to make the learning atmosphere comfortable and exciting. However, the teacher must also be able to improve maximum learning outcomes for students. This study aims to determine whether the application of interactive PowerPoint learning media in the classroom can help improve student's learning outcomes in class VIII on the material of the human movement system as well as research. In contrast, the object used in this research is the application of learning media using interactive PowerPoint media at Arrival Junior High School Kaima. The type of research used is classroom action research by applying two cycles of data collection obtained from observations of teacher activities and observations of student activities as well as tests before and after the action and documentation. The data analysis technique used in this study is a qualitative descriptive technique. Based on the study results, the class action that the researchers had carried out found that before the action was taken, the student's learning outcomes were 0%, or the number of students who had completed was absent. At the same time, there was an increase of 83.33% in the first cycle, and in the second cycle, again experienced an increase of 100%. This means that learning using interactive PowerPoint media is proven to help teachers improve learning outcomes in Kaima Adventist Junior High School class VIII students.*

Keywords: *Learning outcomes, interactive powerpoint, human movement system*

Abstrak: Dunia pendidikan mempunyai peranan yang sangat besar terhadap perkembangan peserta didik. Maka memperlancar proses belajar bagi siswa merupakan tugas utama seorang guru. Untuk itu guru tidak hanya dituntut menciptakan suasana pembelajaran yang nyaman dan menyenangkan. Namun guru juga harus mampu meningkatkan hasil belajar siswa secara maksimal. Penelitian ini bertujuan untuk mengetahui apakah penerapan media pembelajaran PowerPoint interaktif di kelas dapat membantu meningkatkan hasil belajar siswa di kelas VIII pada materi sistem gerak manusia serta penelitian. Sedangkan objek yang digunakan dalam penelitian ini adalah penerapan media pembelajaran menggunakan media PowerPoint interaktif di SMP Arrival Kaima. Jenis penelitian yang digunakan adalah penelitian tindakan kelas dengan menerapkan dua siklus pengumpulan data diperoleh dari observasi aktivitas guru dan observasi aktivitas siswa serta tes sebelum dan sesudah tindakan dan dokumentasi. Teknik analisis data yang digunakan dalam penelitian ini adalah teknik deskriptif kualitatif. Berdasarkan hasil penelitian tindakan kelas yang telah peneliti lakukan didapatkan hasil sebelum dilakukan tindakan hasil belajar siswa sebesar 0% atau jumlah siswa yang tuntas tidak hadir. Sedangkan pada siklus I terjadi peningkatan sebesar 83,33% dan pada siklus II kembali mengalami peningkatan sebesar 100%. Artinya pembelajaran dengan menggunakan media PowerPoint interaktif terbukti membantu guru meningkatkan hasil belajar pada siswa kelas VIII SMP Advent Kaima.

Kata Kunci: Hasil Belajar, Powerpoint Interaktif, Sistem Gerak Manusia

INTRODUCTION

Education is a system with complex activities, including various interrelated components. Education is a process that prepares humans to survive in their environment. The Law of the Republic of Indonesia, no. 20 of 2003, concerning the National Education System

states: "Education is a conscious and planned effort to create a learning atmosphere and learning process so that students can actively develop their potential to have religious soul strength, self-control, personality, intelligence, noble character, and skills what is needed in society" (Amaliah, 2017)

Education is always related to the learning process of teachers as educators and students as learners. Law No. 20 of 2003 concerning the National Education System states that learning is an interaction process between students, teachers, and learning resources in the learning environment (Anisatul & Fayakunia, 2021). The learning process plays a significant role in efforts to improve the quality of education (Anugrah, 2019). Education is seen as a process of cultivating and empowering students so that it can last forever (Anyan etc., 2020). Education also takes the form of student creativity in the learning process by giving examples, building will, and developing talents (Aqip, 2018).

Biology is a compulsory subject in high school environments. Biology is an instrument related to improving skills, knowledge, attitudes, and responsibility to the environment (Arifin, 2020). Biology has to do with how to discover and understand living things and nature systematically, and thus, studying biology is not only about mastering various facts but the process of discovering them as well (Azhim etc., 2022). One of the many difficulties students have in studying biology is understanding the biology material because more than the learning media at the learning stage is needed to make students interested in increasing their activeness to understand the material being taught immediately (Depdiknas, 2018).

The problem in learning biology today is that most students only use textbooks and other materials, which often only contain information on subject areas and aspects of teaching, such as goals, motivation, and student roles that should be addressed. Related to this, the teacher needs to make the most of the available teaching materials (Devi, 2017). Teachers are often negligent in using learning media, which they know has a positive effect on improving the quality of student learning (Fathurrohman, 2017). Teachers need a variety of practice questions (Hardani, 2020). Thus, it is not easy to find out whether students understand the material and whether they succeed in achieving learning goals (Ifrah, 2020). The inappropriate media selection at the learning stage can make biology learning dull (Innaka, 2020). If this matter is ignored and continues, it can impact the teaching process, which is less effective (Nizar & Putri, 2022).

To improve the learning and teaching process to be more effective, teachers have used various learning media, including PowerPoint. Powerpoint is an auxiliary software that can be used in making learning materials in the form of interactive presentation slides; thus, the

material's appearance looks attractive (Nurul, 2019). Using PowerPoint interactively can also assist teachers regarding the practical presentation of material to students to improve knowledge transformation (Rusydi, 2019). In addition, the interactive use of PowerPoint can facilitate teachers regarding class mastery and keep students focused on the material the teacher explains (Saadiyah, 2017). It can also encourage students to be fully involved during learning activities, providing them with a unique learning experience (Srimaya, 2017). Even though PowerPoint is no stranger to being used in the teaching and learning process, not all PowerPoints that are made can be interactive (Suardi, 2018).

Interactive is taken from the word interaction, namely things that act on each other, influence, and are related. Interactions are found because there is a causal relationship. The definition of interactive is a matter related to two-way communication or a thing with its nature that gives action to each other, is connected and active with each other, and reciprocates (Sulastri, 2017).

Regarding the educational aspect, the learning stage is called interactive if it can impress fun rather than the teaching and learning method, which is only done by listening and recording explanations from a teacher. Interactive learning is learning in which there are invitations for students to involve their minds, sight, hearing, and skills. Through interactive learning, students are stimulated to answer, ask questions, and exchange opinions (Talizaro, 2018). The interactive learning system does not emphasize results either but rather processes (Titin & Iin, 2022). Thus, students gain knowledge not only through memorization but through understanding (Umi, 2022). By using an interactive learning system, the teacher does not always have to be involved in the teaching process; based on another meaning, the teacher is not required to be the primary source but only a facilitator, namely using interactive learning multimedia technology (Wibawanto, 2017). Interactive learning generally utilizes a laptop or computer and various supporting tools, such as a mouse, keyboard, LCD (Liquid Cristal Display), and other applications (Yunita, 2020).

METHOD

The classroom action research model (PTK) was carried out using two cycles through model development by Arikunto, each cycle of which includes 4 stages of activity, namely planning, implementation, observation or observation, and reflection. The following is the model that researchers use:

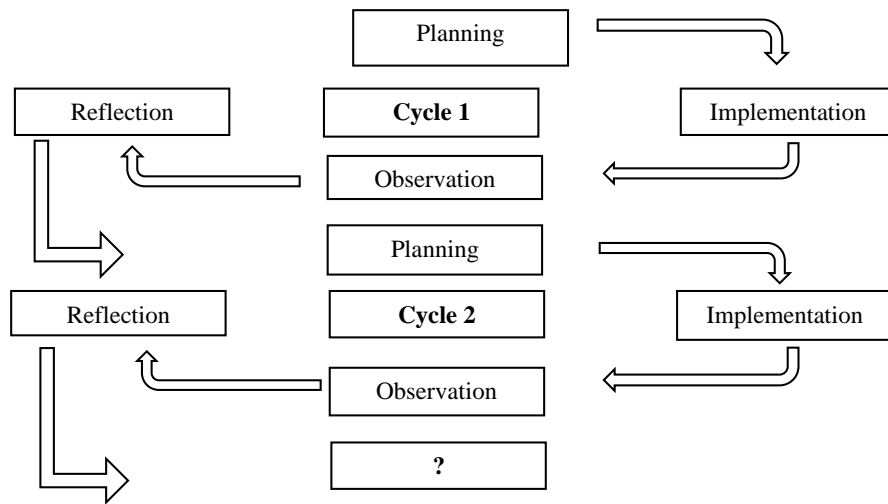


Figure 1. Implementation Cycle (PTK)

This research was conducted at Kaima Advent Middle School, Jl. Arnold Mononutu, Karegesan, Kauditan District, North Minahasa Regency, North Sulawesi Province. The time for conducting research is in the even semester of the 2021/2022 school year. The subjects used in this study were class VIII students and science teachers at SMP Advent Kaima, with 6 students.

There are 3 data collection techniques when researching: observation, testing, and documentation. The data analysis technique uses analysis of teacher and student activities and assessment of student learning outcomes. The instruments used are the Syllabus and the Learning Implementation Plan (RPP).

This research was carried out through a cycle model, and the discussion was carried out in each cycle. Then, the cycle was terminated, which was a sign of the success of the research if it was obtained that student learning outcomes in Biology had increased in the subject of human movement systems in class VIII SMP Advent Kaima.

RESULT AND DISCUSSION

The authors collect pre-action data before taking action through interactive PowerPoint learning media. Retrieval of pre-action data intends to observe how far interactive PowerPoint learning media can increase student learning outcomes.

Table 1 Learning Outcomes Test Before Action

No	Name	Learning Results	Information
1	Adinda Aramana	47	Unfinished
2	Charly Watulingas	20	Unfinished
3	Chelsie J. Mantik	33	Unfinished
4	Israel Mokoginta	20	Unfinished
5	Reynold C. Sakul	40	Unfinished
6	Liven Palanggu	20	Unfinished
Total		180	
Average		30	
Completeness (KKM 70)		0	
Complete Percentage		0	

Cycle 1

Table 2 Student Learning Outcomes Test Cycle I

No	Name	Learning Result	Information
1	Liven Palanggu	100	Completed
2	Reynold Sakul	80	Completed
3	Adinda Aramana	80	Completed
4	Chelsie Mantik	80	Completed
5	Israel Mokoginta	70	Completed
6	Charly Watulingas	60	Unfinished
Total		470	
Average		78.33	
Completeness (KKM 70)		5	
Percentage of Complete		83.33	

Based on Table 2 above, student learning outcomes have increased. It can be observed based on the number of students who have completed five (5) students with an average score of 78.33 with a percentage result of 83.33. The number of students completed is 0 before being given the action. In other words, students must complete the average value of 30, with percentage results 0. So, there is an increase experienced by students before the action is taken to the first cycle.

Cyle 2

Table 3 Student Learning Outcomes Test Cycle II

No	Name	Learning Result	Information
1	Reynold Sakul	90	Complete
2	Charly Watulingas	90	Complete
3	Adinda Aramana	80	Complete
4	Chelsie Mantik	80	Complete
5	Liven Palanggu	80	Complete
6	Israel Mokoginta	70	Complete
Total		490	
Average		85	
Completeness (KKM 70)		6	
Complete Percentage		100	

Based on Table 3, we can observe that the percentage of completeness of student learning outcomes using interactive PowerPoint media in the teaching and learning process in the classroom has increased very high from the first cycle, the details of which are more detailed, namely: the number of 490 with an average of 85, and with the results of the percentage obtained 100%.

This second cycle of research was carried out better than in cycle I. These results can be observed based on the number, average value, and percentage of completeness obtained by students in cycles I and II. This is evidence of the discovery of increased student learning outcomes through learning using interactive PowerPoint media.

Learning Results

Based on the observation results from the study tests before the action was carried out, it was shown that the results of student learning tests were seen from the average value. The percentage did not reach the Minimum Completeness Criteria (KKM) score, with the following number of student acquisitions: the total number of scores obtained before the action was 180, with the acquisition of an average student score of 30, and with a total percentage of student completeness of 0%. Whereas in the first cycle, it shows that the acquisition of student learning outcomes has increased in the number of completeness with the following acquisitions: the total number of scores obtained by students in cycle I is 470, with an average value of 78.33, with a total percentage of student completeness of 83.33, from the data it can be concluded that there was an increase or increase from before the action was taken to cycle I with a percentage increase of 83.33%. In cycle II, Return experienced an increase with a total score of 490, an average of 85, and a total percentage of student completeness of 100%. This means that there is another increase of 14.67% between cycles I and II.

To see more precise and more detailed results can be seen in Diagram 1 below:

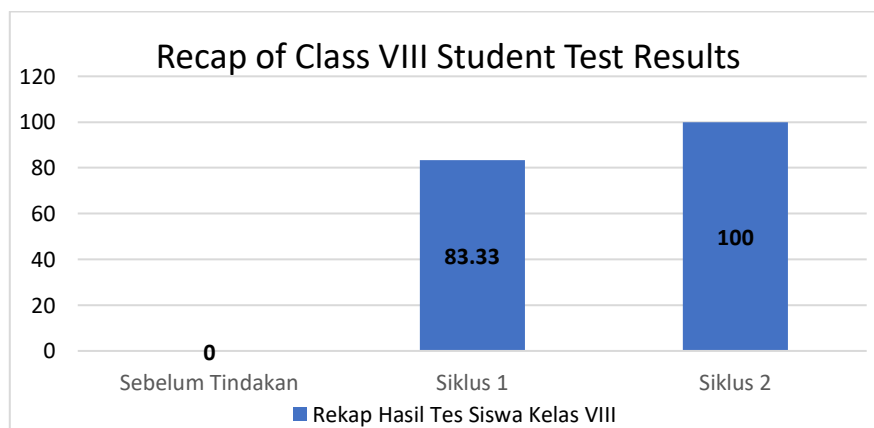


Diagram 1 Comparison of Learning Outcomes Based on Completeness Percentage Before Action, Cycle 1, and Cycle 11

The increase in the acquisition of percentage scores on student learning outcomes tests in cycle II compared to the results of the pre-action tests and cycle I tests provides evidence that the use of interactive PowerPoint media to teach students in class can focus students' attention on the learning material taught by the teacher so that it is very effect on increasing student learning achievement until they can achieve the minimum completeness criterion score (KKM)—namely the acquisition of students with an average value of 85 in the very good category.

CONCLUSION

Based on the results of research conducted on class VIII students of SMP Advent Kaima, it can be concluded that: Using interactive PowerPoint can improve the learning outcomes of class VIII students at Kaima Adventist Middle School in human movement systems and have achieved the research target of 100%. This is indicated by an increase in the percentage of completeness of student learning outcomes from 83.33% in cycle I to 100% in cycle II. In addition, the average increase in class cycle I was 78.33 to 85 in cycle II.

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