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IMPLEMENTATION OF FLIPBOOK LEARNING MEDIA TO IMPROVE MOTIVATION AND ACHIEVEMENT IN BIOLOGY LEARNING

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Abstract. This study aimed to increase motivation and achievement in learning biology in class XII MIPA2 SMA Negeri 1 Kuta Selatan through the implementation of flipbook learning media. This research was conducted from 26 July 2022 to 8 October 2022, with research subjects being class XII MIPA2. The object of this research wass the motivation and achievement in studying biology. Student motivation data was collected through questionnaires and learning achievement data collected through learning achievement tests arranged in the form of objective tests. The data that had been collected was analysed descriptively. The results of this study indicated that there was an increase in student motivation and achievement through the implementation of flipbook learning media. The average student achievement in the first cycle was 65.57 in the sufficient category and 51.43% student completeness, while in the second cycle the average student achievement was 79.71 in the good category and 88.57% student completeness.

INTRODUCTION

According to Ki Hadjar Dewantara, education is a guide in the life of the growth of children which intends to guide all natural powers to children so that they as humans and members of society are able to achieve safety and happiness (Husamah et al., 2019). Education is essentially a process of fostering one's self in a learning process so that students can develop their potential to create a quality generation that has intelligence, noble character, and skills. Education is also very important to improve the competence and competitiveness of students so they can live in the future (Widana et al., 2023).

In Law Article 3 number 20 of 2003 concerning the National Education System it is stated that National Education functions to develop capabilities and form dignified national character and civilisation in the context of educating the nation's life, aiming at developing the potential of students so that they become human beings who believe and fear God Almighty. Astudent should have noble character, is healthy, knowledgeable, capable, creative, independent and becomes a democratic and responsible citizen (Musriadi, 2018).

Teachers have an important role in developing the potential of students to become human beings. In this case, the role of the teacher as a developer of knowledge is very large in choosing and carrying out appropriate and efficient learning for students, not only with conventional-based learning. However, teachers must create learning with a conducive learning atmosphere, namely creating a comfortable classroom atmosphere for students. According to Febriana (2021) & Sumandya et al. (2022), finding out the level of success of teaching programs cannot be separated from evaluation because through evaluation, evidentiary data is obtained that shows the success of students, teaching effectiveness, and the teaching methods used. So, evaluation is very important in the teaching and learning process.

According to data from the results of the evaluation of learning biology at SMAN 1 Kuta Selatan, the biology score for class XII MIPA for the Metabolism material is still low, which is averaged to 53.21. Students who succeed in achieving and exceeding the Minimum Completeness Criteria score are set at only 47%, this causes the teacher to carry out classical remedial learning. Several possible causes of students low biology that are linked to Metabolism material resulting in low class average scores and unachieved classical completeness are: (1) Learning is still centred on the teacher; (2) students feel bored so that students motivation in learning biology is still lacking; (3) in carrying out the learning process the teacher still does not use interesting teaching materials so that it can cause boredom and have an impact on the process and learning outcomes; (4) printed books are still the main material in the learning process, this results in learning that tends to be boring because they cannot display videos, moving images, animations and audio. If this condition is allowed to continue, it will have a negative impact on the learning quality of Biology subjects in Class XII MIPA in particular, at SMAN 1 Kuta Selatan as a whole, even though Metabolism material is one of the essential materials in the curriculum.

Efforts to improve the learning process, of course, are the responsibility of the teacher, so that the learning delivered can be understood by students correctly. The learning process that results in high student academic improvement is of course obtained from the teaching and learning process including the use of appropriate and correct learning methods. At present the handbooks owned by students are only limited to printed books, this makes students feel bored because they cannot display interesting forms such as moving pictures, audio, and video. According to Arsyad in (Anwar et al., 2022), learning media is part of a source of learning activities or a physical form in which there is instructional material in the students environment which can improve students learning abilities.

Learning media is very necessary for every lesson. This is because the media can increase learning motivation and the learning process becomes more interesting and not monotonous. In addition, learning media can make it easier to understand the material presented (Sugianto et al., 2017). With the problems that have been described, the teacher is highly demanded to be able to make interesting teaching materials that are able to motivate students in learning so that learning is far from boring. The effort to create interesting teaching materials is to develop an electronic module. The electronic module is a form of presenting independent teaching materials presented in an electronic format (Sugianto et al., 2017). Teaching materials can be presented in the form of the smallest per unit of material in electronic or digital form, all components contained in the printed module such as images, sound and video must also be inserted into a digital format (Ramadhani et al., 2020).

According to Wibawanto (2017), learning media has a large role and influences the achievement of desired educational goals including: clarifying the presentation of messages, overcoming the limitations of space, time and sensory power. In this case, learning media is useful for generating motivation to learn and facilitating understanding and making lessons more lively and interesting. Training student learning independence to achieve student learning goals, of course, must be balanced with learning media that suits students' learning needs. The media will certainly be better if it can accommodate various types of student learning styles. According to Porter & Hernacki (2010), student learning styles are divided into three, namely kinesthetic learning styles, auditory learning styles, and visual learning styles. One feature that can accommodate various types of student learning styles is using Flipbook media because it is equipped with text, images, audio, videos, even interactive animations.

The Flipbook feature which is equipped with pictures and text can help students who have a visual learning style to learn. Features that are equipped with videos also help students who use auditory and even visual learning styles to learn. Interactive features such as animations and quizzes can help students who have a kinesthetic learning style to learn. Anwar et al. (2022) states that flipbooks are multimedia that is more interactive with an appearance like a real book and is more enjoyed by the public because flipbooks use three-dimensional e-book technology, where pages can be opened like reading a book on a monitor screen. Flipbooks can increase learning independence and student learning outcomes Karimah & Churiyah (2021). Yogiswara (2019) also adds that learning with Flipbook media can increase student learning interest. Yulaika et al. (2020) states that the use of flip book-based electronic teaching materials has a positive impact on improving student learning outcomes, this is influenced by students' interest in the attractive and interactive appearance of printed books.

Based on this description, flipbook media in learning is thought to be able to increase motivation to study biology. Therefore, the researcher wants to examine further through a classroom action research through the implementation of flipbook media to increase motivation and achievement in learning biology in Class XII MIPA2 Students at SMA Negeri 1 Kuta Selatan in the academic year 2022/2023. Based on the background that has been stated, a problem can be formulated, namely: Can the implementation of flipbook media increase motivation to study biology in Class XII MIPA2 Students at SMA Negeri 1 Kuta Selatan in the academic year 2022/2023?; Can the implementation of flipbook media increase biology learning achievement in Class XII MIPA2 Students at SMA Negeri 1 Kuta Selatan in the 2022/2023 academic year?

METHOD

The classroom action research was carried out in two cycles in which each cycle consists of the stages of action planning, action implementation, observation/evaluation and reflection which can be seen in Figure 1.

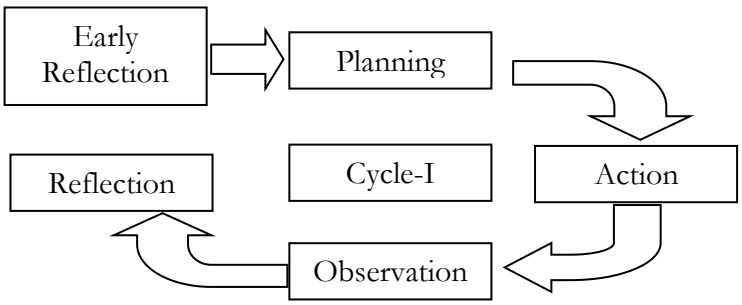

Figure 1. Scheme of Action Research Design (Arikunto, 2021)

The subjects in this study were 35 students of class XII MIPA 2 SMA Negeri 1 Kuta Selatan in the academic year 2022/2023, while the object of this study was motivation and learning achievement. The data collected in this study used questionnaires for learning motivation data and tests for learning achievement data. This research was planned to last 2 cycles, if cycle 2 also did not meet the indicators of success, it would be necessary to improve learning in the next cycle until learning met the indicators that had been set. The indicators of the success of this study were learning achievement in the good category, the average grade for learning achievement was at least 70, student motivation was in the good category and the number of students who pass was ≥80%.

RESULTS AND DISCUSSION

Based on the data obtained in the previous academic year, the students' achievement in biology subject in class XII IPA for Metabolism was still low, specifically the class average was 53.21. Students who scored below the Minimum Completeness Criteria were 47%, while students who succeeded in achieving and exceeding the specified standard score was 53%.

Cycle I includes the following activities. (1) Action Plan I includes: preparing learning implementation plans, making flipbook learning media using the Canva application, creating and preparing student motivation questionnaire sheets, preparing student worksheets, preparing learning materials and preparing evaluation tools. (2) Implementation of Action I includes: introduction (the teacher provides a flipbook link to students' smartphones), core activities (students are assigned to work on worksheets by discussing with members of heterogeneous groups and continuing to present the results of the discussion), closing activities (concluding, evaluating, and reflecting). (3) Observation. The analysis that can be conveyed in Cycle I is an assessment of learning motivation and student achievement.

Based on data on student motivation in cycle I, a score of 2.61 is obtained in the less category. These data indicate that students learning motivation is not in accordance with expectations in this study. The success indicator of student learning motivation is if student learning motivation has a score of at least 3.30 or is in the good category so that this research requires the next cycle. Student learning motivation data obtained from the results of the first cycle questionnaire are presented in table 1.

Table 1. Data on Student Learning Motivation

Class	Learning Motivation					Score	Category
	N1	N2	N3	N4	N5		
XII MIPA2	276	65	117	130	110	2,61	Less

Based on learning achievement data in cycle I, it shows that the percentage of students who have learning achievement in the good category is 51.43%, the sufficient category is 42.86%, the less is 5.71% and there are no students in very good and very poor categories. Classically, the average score of student achievement is 65.57 in the sufficient category and the mastery learning class is 51.43%. These data indicate that student achievement is not in accordance with expectations in this study. An indicator of the success of student learning achievement if it is in the good category, the average grade of learning achievement is at least 70 and the mastery of learning at least 80% so that it requires the next cycle. Student achievement test data in cycle I based on predetermined categories are presented in table 2.

Table 2. Distribution of Student Learning Achievement

Criteria	Number of students	%	Description
$85 \leq M \leq 100$	-	-	Very good
$70 \leq M < 85$	18	51.43%	Good
$55 \leq M < 70$	15	42.86%	Enough
$40 \leq M < 55$	2	5.71%	Less
$0 \leq M < 40$	-	-	Very less

Cycle II covers the activities as follows. (1) Action Plan II includes: preparing lesson plans, making flipbook learning media more attractive, preparing student learning motivation questionnaires, preparing student worksheets, preparing learning materials and preparing evaluation tools. (2) Implementation of Action II includes: introduction (the teacher provides a flipbook link to students' smartphones), core activities (students are assigned to do worksheets by discussing with members of heterogeneous groups and continuing to present the results of the discussion), closing activities (concluding, evaluating, and reflecting). (3) Observation. The analysis that can be submitted in Cycle II is an assessment of learning motivation and student achievement.

Based on data on student motivation in cycle II, a score of 3.86 is obtained in the good category. These data indicate that students learning motivation is in line with expectations

in this study. An indicator of success in increasing student learning motivation is if student learning motivation is in the good category so that this study does not require the next cycle. Student learning motivation data obtained from the results of the second cycle questionnaire are presented in table 3.

Table 3. Data on Student Learning Motivation

Class	Learning Motivation					Score	Catagory
	N1	N2	N3	N4	N5		
XII MIPA2	41	94	110	133	322	3,86	Good

Based on learning achievement data in cycle II, it can be seen that the percentage of students who have very good learning achievement is 37.14%, 51.43% is in the good category, 11.43% is in the sufficient category and no students are categorised in less and very less categories. Classically, the average score of student achievement is 79.71 in the good category and 88.57% in classical completeness. These data indicate that student achievement is in line with expectations in this study. An indicator of the success of student learning achievement if it is in the good category, the average grade of learning achievement is at least 70 and the mastery of learning at least 80% so that this research does not need the next cycle. The distribution of student achievement in cycle II based on predetermined categories is presented in table 4.

Table 4. Distribution of Student Learning Achievement

Criteria	**Number of students**	**%**	**Description**
85 ≤M≤100	13	37.14%	Very good
70 ≤M< 85	18	51.43%	Good
55 ≤M<70	4	11.43%	Enough
40≤M< 55	-	-	Less
0 ≤M< 40	-	-	Very less

In the discussion of the initial activities, there are obstacles that cause the expected results to not be achieved, namely: (1) students concentration in learning is not optimal, there are still students who are still chatting with their friends, (2) students are not used to using flipbook media. (3) the design/appearance of flipbook-based learning media is less attractive, so that it causes students to be less interested in reading it, (4) there are still many students who have not prepared themselves when facing achievement tests. The existence of these obstacles causes learning to be not optimal so that it has an impact on learning achievement. There are 18 students (51.43%) whose learning achievement is in the good

category, 15 students (42.86%) whose learning achievement is in the sufficient category 2 students (5.71%) whose learning achievement is in the less category. Therefore, in cycle II learning is carried out by focusing on eliminating these weaknesses.

In cycle II, improvements are made by making improvements to overcome these obstacles, specifically by taking the following actions: (1) supervision of students is carried out more intensively. (2) the design of flipbook-based learning media is adjusted to the subject matter so that it attracts students' interest. (3) students are more enthusiastic about learning before taking the achievement test. With the implementation of learning that has been perfected, student learning motivation has increased. The average score of students learning motivation increases from 2.61 in the poor category in cycle I to 3.86 in the good category in cycle II. The average score of student achievement also increases from 65.57 in the sufficient category in cycle I to 79.71 in the good category in cycle II. The mastery of classical learning also increases from 51.43% in cycle I to 88.57% in cycle II. From these results, it appears that the implementation of flipbook learning media has been able to increase students motivation and achievement in learning biology. Motivation is an impetus that exists within a person to try to make changes in behaviour that are better in meeting their needs, such as for achievement and someone's curiosity about something (Uno, 2021). The results of this study are in accordance with the results of research conducted by Yogiswara (2019) & Puspaningsih (2020) which reveals that the application of flipbook media can increase students interest and cognitive learning outcomes. This is also reinforced by research conducted by Rediansyah (2021) & Vikiantika et al. (2022) that asserts that flipbook-based learning media can improve student learning outcomes. Likewise, research conducted by Karimah & Churiyah, (2021) states that flipbook-based learning media is appropriate for use to increase student independence and learning outcomes.

In cycle II students are able to work well together, are able to communicate with group members, are more responsible for tasks and can respect the opinions of others, and can synergise with group members according to their abilities resulting in an increase in motivation and learning achievement from cycle I to cycle II. The existence of internal and external encouragement to students who are learning to make changes in behaviour has a very big role in the success of achieving the learning objectives of this lesson which serves as an indicator of student motivation (Badaruddin, 2015). This is also reinforced by research conducted by Hapsari (2016) & Putra (2021) proving that through the application of flipbook learning media can increase student motivation in subjects taught by the teacher.

CONCLUSION

Based on the results of the research and discussion, it can be concluded that the flipbook learning media is very effective for increasing Biology learning motivation and achievement in class XII MIPA2 students at SMA Negeri 1 Kuta Selatan in the academic year 2022/2023. Referring to the results of this study, the developed flipbook learning media can be used as a source of learning in addition to other learning resources. It is suggested to teachers to try to apply flipbook learning media in teaching because it can help teachers convey material, motivate students, and make learning materials more varied.

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