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## Using Android-Based Learning Media Using Smart Apps Creator (SAC) to Increase Motivation Students Learn Biology

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Received: November 30<sup>th</sup>, 2022

Accepted: January 27<sup>th</sup>, 2023

Online Published: January 31<sup>st</sup>, 2023

### Abstract

The purpose of writing this Best Practice is to find out whether the use of Android-based learning media with the Smart Apps Creator (SAC) can increase the motivation to learn biology for SMA Negeri 3 Palembang students. This type of research is Classroom Action Research (CAR), which consists of two cycles. The research subjects were students of class X IPA SMA Negeri 3 Palembang in the 2022/2023 academic year, with a total of 21 students consisting of 13 girls and 8 boys. Data collection techniques in this study were observation, questionnaires, tests and documentation. The data analysis technique used is descriptive qualitative analysis. Learning Outcomes by using an android application which contains motion system material takes place actively, students are motivated to explore the material provided by the teacher through the application. They discussed in their respective groups with enthusiasm. This gives them a new experience on how to use Android for learning in a more interesting way. Based on the results of the implementation of learning using Android-based learning media with the Smart Apps Creator (SAC) application, results showed an increase in learning motivation of students in class X IPA SMA Negeri 3 Palembang. The results of students' responses to Android-based learning media on motion system material for class class X IPA SMA Negeri 3 Palembang. is Good, with a percentage of 76.44%.

**Keywords:** Smart Apps Creator, Android, Motivation

### How to cite this article :

Sugiyono. (2023). Using Android-Based Learning Media Using Smart Apps Creator (SAC) to Increase Motivation Students Learn Biology. *IJIS Edu : Indonesian Journal of Integrated Science Education*, 5(1), 25-31. doi:<http://dx.doi.org/10.29300/ijisedu.v5i1.10467>

## INTRODUCTION

Integrating Information and Communication Technology in learning is a necessity in responding to the challenges of technological advances in the field of Education along with the times. Educators are required to be able to present learning that is in accordance with the times of students, learning that is closely related to their daily lives, which is able to present 21st century skills as part of preparing students as part of modern society (Mudinillah, 2021).

Presenting learning that is in accordance with the times and technological developments, one of which can be done by selecting Learning Media that can be used to convey messages or information in the teaching and learning process (Kustandi, C, Darmawan, n.d.). The use of appropriate and interesting learning media in the learning process can generate desire and interest in students, generate motivation to learn and even bring a psychological influence on students. Besides being able to increase students' learning motivation, the use or use of media can also increase students' understanding of the subject matter (Arsyad, 2005).

So far, learning media that are often used in schools have started to integrate Information and Communication Technology but are limited, such as the use of worksheets, power point slides, picture media, textbooks. These learning media cannot be used at any time by students (less practical)(Mahuda, I., Meilisa, R., & Nasrullah, 2021), This condition sometimes makes students less enthusiastic about exploring learning material. On the other hand, students so far at school seem very interested in accessing various content via cell phones, but for content that is entertainment in nature, not for learning. This condition leads teachers to be able to develop learning media that are innovative and easily accessible to students(Sardiman, 2011). One thing that allows teachers to do is to present media that is easy for students to access via cell phones (Batubara, 2020).

Smart Apps Creator (SAC) is an application that can be used as a learning medium. SAC includes a desktop application for creating applications that can be used on android and iOS mobile operating systems without programming code (Prabowo, I. A., Wijayanto, H., Yudanto, B. W., & Nugroho, 2020). This application can contain animated images, videos, music and other menus. This simple appearance can be easily accepted by students, because the

display presented is a combination of ebooks and Power Point.

Smart App Creator is a platform that allows users to create mobile applications without having in-depth programming knowledge (Putra, 2021). By using Smart App Creator, users can design and build applications with an intuitive visual interface, without the need to write code manually.

Smart App Creator provides various features and tools that make it easier for users to create mobile applications, including in learning contexts such as in the field of biology (Asbullah, & Selvi, 2018) With this platform, you can create interactive applications, including multimedia content, interactive questions, animations, and various other features that can increase student engagement and motivation in learning biology (Ingsih, K., Ratnawati, J., Nuryanto, I., & Astuti, n.d.).

By using the Smart App Creator, you can design interesting and relevant biology applications, enrich subject matter, and provide students with interactive learning experiences (Wahyuningsih, n.d.)Based on the previous explanation, the researcher would like to find out the significant effect of using SAC to increase Students' motivation in learning Biology in the class.

## METHOD

This study was Classroom Action Research, According to (Suhardjono, 2007) Classroom Action Research is research conducted by someone in the classroom so that they are able to improve their learning practices. This Classroom Action Research was carried out at SMA Negeri 3 Palembang for three months, from 28 January to 6 March 2023 in the even semester of the 2022/2023 school year. The subjects of this study were students of XI IPA class at SMA Negeri 3 Palembang. Numbered 21 people, consisting of 13 women and 8 men. To obtain the data needed in this study, the authors used data collection techniques to fill out questionnaires and tests.

In this study the data collection tool used was a student motivational questionnaire used in each cycle containing 10 questions and a written test containing 20 multiple choice questions per cycle. Data analysis technique carried out by researchers is using descriptive qualitative data analysis. Where the data obtained is in the form of a description with sentences as a result of research. The research data to be obtained by

researchers is in the form of observational data on students' motivation and learning outcomes in participating in learning conducted by observers as well as the results of motivational questionnaires filled in by students (Darmadi, 2019)

Data for student motivation was obtained from the results of filling out the motivational questionnaire and then the data were analyzed using percentage descriptive statistics, namely:

$$Percentage (\%) = \frac{Total\ Score \times 100\%}{Maximal\ Score}$$

Analysis of student learning outcomes data on plant tissue material was carried out by looking at individual completeness and classical learning mastery.

Data on student learning outcomes are also analyzed using the percentage formula as follows.

$$Pb = \frac{x}{y \times 100\%}$$

Information:

Pb = percentage of completeness of student learning outcomes

X = number of students who have completed their studies ( $\geq 75$ )

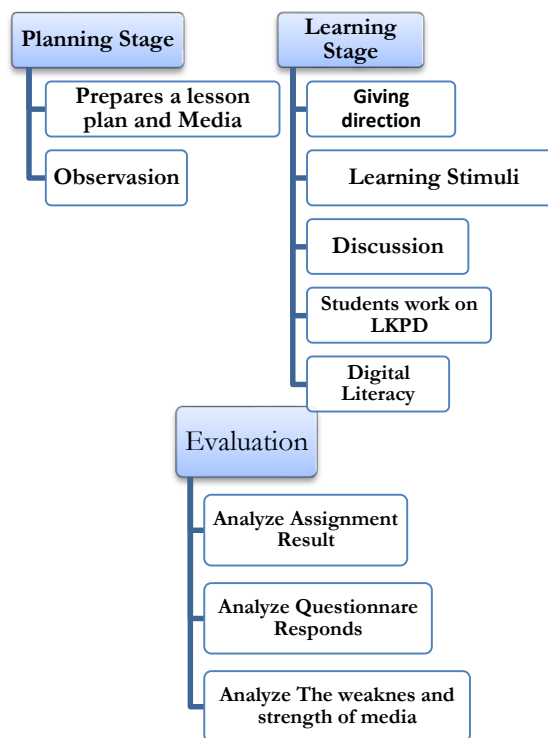
Y = total number of students

(Nurkencana and Sunartana, 2000: 92).

This research was conducted using a class action research model (PTK) or Classroom Action Research (CAR). Classroom action research (CAR), namely research conducted in the classroom with the aim of improving the quality and quantity of teaching based on educational assumptions and theories. Classroom action research (CAR) consists of four stages of learning activities that are carried out repeatedly, namely planning, implementing, observing and reflecting (Arikunto, 2010: 137).

The stages of classroom action research carried out are as follows:

### Implementation Steps



### RESULT AND DISCUSSION

Learning by using an android application that contains motion system material takes place actively, students are motivated to explore the material provided by the teacher through the application. They discussed in their respective groups with enthusiasm. This gives them a new experience on how to use Android for learning in a more interesting way. Learning is closed with reflection activities carried out by students by accessing the Google form link provided by the teacher.

Based on the results of reflection on the learning activities that have been carried out, most of the students have understood the learning material well, and they are very happy with the learning activities using Android-based learning media with applications that contain learning materials.

After the learning activities designed to increase student motivation using learning media based on Android have been completed, the author analyzes the results of the assignments done by students and the results of the questionnaire responses of students to the learning process with Android-based learning media which is implemented in biology learning system material motion with 10 statements filled in by 18 students.

The students' responses to Android-based learning media as a whole can be seen in the table.

*Table 1. Student Response Analysis*

No	Statement	Evaluation				
		1	2	3	4	5
1	The design of Android-based learning media with SAC is interesting and makes you interested in learning the material in it.	0	0	4	7	7
2	Android-based learning media with SAC is very easy to use or operate	1	2	3	10	2
3	The learning material presented with an Android-based application supports you to better master the learning material.	0	0	5	9	4
4	Interaction in this Android-based learning media helps you understand learning material	0	1	6	8	3
5	The existence of Android-based learning media can provide motivation to	0	1	3	10	4

	study biology subject matter					
6	The delivery of material in this Android-based learning media is easy to understand	0	2	5	7	4
7	The material presented in this Android-based learning media is easy for you to understand	0	2	5	9	2
8	This Android-based learning media contains practice questions that can test your understanding of the subject matter	0	1	6	8	3
9	Presentation of material in this media helps you to answer questions	1	1	5	7	4
10	The shape, style and size of the letters used are simple and easy to read	0	0	2	9	7
<b>Number of Frequency</b>		4	8	44	84	36
<b>Total score</b>		4	16	13	33	20
			6	2	6	0
<b>Total Total Score</b>		688				

<b>Average</b>	3.82
<b>Percentage</b>	76.44%
<b>Criteria</b>	Good

From the results in table 1 above, it can be said that the Android-based learning media that was developed using the Smart Apps Creator (SAC) application in biology learning for motion system material showed positive results. Good.

### Important Value And Novelty

Based on the results that have been achieved from learning activities using Android-based learning media with the Smart Apps Creator (SAC) application, there are important and novel values that we need to know, including:

- a) The use of Android-based learning media with the Smart Apps Creator (SAC) application is very appropriate to use in the learning process to increase student learning motivation.
- b) The use of Android-based learning media with the Smart Apps Creator (SAC) application makes it easier for students to understand learning material
- c) The use of Android-based learning media with the Smart Apps Creator (SAC) application is a digital application that helps students find information related to learning materials as a substitute for textbooks, because it is easy to use anytime and anywhere.
- d) Learning motivation is increasing because learning begins to introduce learning by integrating technology that is close to the era in which students are.

### Supporting and Inhibiting Factors

There are so many factors that can support the use of Android-based learning media with applications. Following are several factors supporting the use of Android-based media in learning, namely:

- a) Android-based learning media with this application are easy for students to use as a form of digital literacy at any time because they don't use an internet connection.
- b) Android-based learning media makes it easier for teachers to teach and is very helpful for reaching students in a large capacity.

- c) Android-based learning media has the ability to display images, videos and sound so that it really helps the process of delivering material by the teacher to students.
- d) Android-based learning media meets user friendly criteria with an easy-to-access display and very easy-to-run navigation.
- e) Android-based learning media can increase students' learning interest with the presence of images as well as sound in the application so that it can arouse the emotions and attitudes of students. In addition to the many supporting factors, the author also found several obstacles that became obstacles in the implementation of learning. Based on the author's analysis of these obstacles, if no solution is found, it will greatly affect the success of achieving learning objectives. For this reason, the author is looking for the best solution to overcome this problem. In the following, the author describes the obstacles and solutions for implementing learning using Android-based learning media with the Smart Apps Creator (SAC) application as follows:

1. Students' lack of discipline during group work.

When the learning process is in progress, especially during group discussion activities, students are found discussing things that are not related to the learning material being discussed. Of course this greatly disrupts the process of collaborative learning activities, especially for other group members.

The author anticipates these problems, in the following way:

- a) Make agreements related to discussion limits when group discussions are running and conveyed at the beginning of learning activities.

- b) Give awards to students who take part in learning activities well.

2. Lack of self-confidence of students with application media

In learning activities there are students who look less confident when operating the application. In addition, students also seemed reluctant to ask about the difficulties they experienced.

To overcome this the author makes the following solutions:

a) Approach directly to students who are considered not confident in learning activities to provide motivation and guidance. Both inside and outside the classroom and outside of active learning hours

b) Encouraging through classmates to be more actively involved, providing opportunities for opinions and asking questions and providing assistance related to learning difficulties experienced by students.

The results of this study are in line with the results of research on the subject of mathematics conducted by Mahuda, I., Meilisa, R., & Nasrullah, A. (2021). The practicality test by students using learning media obtained that Android-based mathematics learning media assisted by Smart Apps Creator is included in the criteria very practical. As for the effectiveness test of the product developed, it was found that the learning media Android-based mathematics assisted by Smart Apps Creator is effective in improving abilities mathematical problem solving.

## CONCLUSION

Based on the results of implementing learning using Android-based learning media with the Smart Apps Creator (SAC) application, the results are obtained shows an increase in the learning motivation of class X IPA students at SMA Negeri 3 Palembang. The results of students' responses to Android-based learning media on motion system material for class X IPA at SMA Negeri 3 Palembang is Good, with a percentage of 76.44%.

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