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YOUTUBE VIDEO-BASED LEARNING IN IMPROVING STUDENTS' COGNITIVE AND PSYCHOMOTOR ABILITIES

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ABSTRACT

The research objective was to determine the increase in students' cognitive and psychomotor abilities in the implementation of simple practices carried out in science learning. This research is part of the learning that is carried out on elementary students on connecting plants. Through a descriptive qualitative research method, namely describing the implementation of science learning from the steps to the completion of grafting on plants. Based on data obtained through several relevant studies and existing literature on learning science. Science learning with the material of connecting plants is taught through learning videos carried out by the teacher for students to practice. The results of this study can improve students' cognitive abilities in understanding and improve students' psychomotor abilities in simple practicum activities in science learning.

Keyword: Youtube, Video, Cognitive, Psychomotor

1. INTRODUCTION

The 21st century, technological advances, especially in the field of education, cannot be avoided. Information technology has a huge impact on the world of education in Indonesia in particular, in terms of getting information, ter references*up to date* for educators both in terms of material and learning media. With this progress educators are required to be able to utilize and operate technology in its development. Educators must be able to provide instruction to students so that they can master various subjects, especially learning natural science which is full of real knowledge.

The teaching staff is the main facilitator in the teaching and learning process which plays a role in achieving the learning objectives. Selection of strategies in learning that are quite interesting and conventional as well as media for teaching that are interesting and appropriate will be able to help increase students' understanding of science concepts towards learning material efficiently and effectively. Educators have a fairly central role in developing innovation, and ideas for using technology in learning to increase effectiveness and understanding of science concepts that require broad knowledge. To facilitate the learning process, of course, requires an effective and efficient learning media. One of the interactive, innovative and interesting learning media is YouTube.

YouTube is the largest and most popular online video sharing media website on the internet (Arham, 2020). Currently YouTube users are spread all over the world, there are people of all ages, from children to adults. YouTube users can take advantage of content, upload videos, watch videos, search videos, comment fields for questions and answers about videos and at the same time share video clips for free without paying. Every day there are millions of people who access YouTube, so it's not wrong if YouTube has the potential to be used as an interactive mathematics learning medium. Learning media is important and useful in learning with video media and impressions on social media, one of which is YouTube. Youtube has many advantages if it is used as a medium of learning, especially mathematics, which has the potential, among others

Youtube is the most popular site on the internet today that can provide edits*value* to the world of education. Using YouTube will make the science learning process easier because on YouTube there are videos that contain science learning materials. One of the science learning materials is grafting on plants. Various types of plants reproduce in different ways both generatively and vegetatively. Propagation of Japanese frangipani plants can use seeds, but due to the low ability of these plants to produce fruit and seeds, people more often use stem cuttings and grafting techniques. One of the causes of the low ability of a plant to produce seeds is the sterility of male gametes (Grandgirard et al., 2002) and the position of the reproductive organs (pistils and stamens) which do not support the process of pollination and fertilization in Tjitrosoepomo (Humaira et al., 2018). Availability of seeds is the main key in adenium cultivation, considering that one way to quickly multiply a new type of finding/new motif in large quantities, having a nice/unique stem shape and with unchanged color is by grafting technique (Ihsan, 2016).

Graftting is to combine plant parts in the right way so that the combined parts will unite and continue to grow as one whole plant Koryati (2022). The success of grafting is largely determined by the rootstock to be spliced and the compatibility between the scion and rootstock (Rahmatika & Fajar, 2018). Besides that, the success of grafting is marked by the formation of perfect linkages between the rootstock and scion and the growth rate of the grafted seedlings (Ridwan et al., 2015). In connection with this material, to facilitate the explanation of the material, learning media is needed, in this case, an effective and efficient learning media for presenting material is YouTube.

In 2020, since the pandemic and online learning was carried out, the use of Youtube has increased. Most YouTube users are aged 15-20 years. This age is a productive age for students and students. Responding to the variety of shows and the large number of users from among students, the authors argue that it is important to conduct this research to find out the increase in student scores based on cognitive. Of course, it is a shame if they only spend time accessing content that is not useful for increasing their learning competence.

2. METHODS

This study used a qualitative approach with a case study type of research. This research focuses on the implementation of learning through YouTube as a learning medium that can improve the cognitive abilities of Kuta Bakmee Public Elementary School students. Data obtained through observation and interviews.

3. RESULTS & DISCUSSION

Utilization of yuotube as a medium for learning science subjects is actually very important to use because through YouTube students can carry out learning or hear direct explanations from educators. Seeing visually will certainly give birth to strong confidence and interest that the explanation regarding the material seen and heard is correct and understood, so that when given assignments and exercises these students will be able to understand the science subject matter provided.

Figure 1. YouTube Initial View

Utilization of YouTube as a learning medium helps convey messages. According to (Arifin et al., 2017), YouTube has one of the video sharing services available on the most popular internet media today. YouTube is a video sharing website that allows users to search for videos, upload, watch, ask questions and share video clips for free. These videos are movies, clips, TV, and user-generated videos. YouTube is one of the most dominant online video provider sites in the world and will not limit the duration for uploading videos. Another advantage, YouTube is that it offers free services, especially for enjoying and accessing videos that are included in its system. To access videos users do not need to have an account to pay a certain amount of money in a certain time scale. Users can access these videos for free. YouTube users can download several videos and after they have been successfully downloaded, the videos can be stored on their respective gadgets to be enjoyed at any time without using an internet connection. YouTube is used as a learning medium because it is one of the media that is close to students' everyday lives.

This research was conducted by providing socialization to educators about the benefits of using YouTube learning media for the world of education, one of which is learning science. The next step is to introduce various methods that are quite simple to download science learning materials for plant grafting. In this session the participants were not burdened with complicated material and theory. The next session is to enter into practice, namely explanations and educators immediately try continuously how to download the desired science learning program educator. Participants were also given a downloader program that was already owned by the researcher, making it easier for participants to use this application.

Figure 2. How to Save Videos on YouTube

At first, Educators' understanding of YouTube facilities was not fully maximized, namely they did not understand that YouTube provides a lot of information that is very useful for media teaching mathematics. This is caused by factors including educators who are more focused on the existing curriculum and are not fully willing to innovate in teaching methods of mathematics. The second factor is the lack of facilities such as wifi, infocus and electricity which often goes out after educators are given some understanding and try to apply it turns out that YouTube Learning media is an alternative media that can be used by educators as a medium in conveying mathematical material during the learning process. This is in accordance with what was expressed by (Tinambunan, 2022), watching YouTube is better than just reading or listening to audio.

Apart from that, YouTube can also be used for all topics of discussion, models learning models, and each domain: cognitive, affective, and psychomotor. In the cognitive domain, students can understand the concept of determining the ribs of cubes or blocks by color, because these elements are able to make images feel more attractive. Besides that, watching YouTube, after or before reading, can strengthen students' conceptual understanding of learning science..

Figure 3. Science Learning Video

In the psychomotor domain, YouTube has the advantage of showing how something works, learning videos that record motor activities can provide many opportunities for students to observe and re-evaluate the science learning material that has been taught. As an online teaching material, YouTube is very rich in information used in a learning process because it can reach students directly. In addition, YouTube adds a new dimension to learning science, students not only see pictures from printed teaching materials and sound from audio programs, but on YouTube, students can get everything, namely moving images and accompanying sound. The application of YouTube media will be able to present something that can be seen and heard so that it can motivate students to learn and provide learning experiences for students (Firdaus et al., 2021).

Youtube provides a variety of important information in the form of videos that can be accessed and viewed by anyone. This facility is very possible to use for the benefit of teaching and learning in schools. Even though the existing facilities are numerous, not everyone wants to use them for education.

Utilization of YouTube can stimulate the effectiveness, interest and motivation of educators. Besides that, through YouTube, the ability to understand science learning can be maximized, the preparation of teaching materials, the selection of appropriate material, the way educators deliver progress, which initially only copied and traced from YouTube into material, new material full of ideas in the style of each educator. respectively. Youtube also indirectly increases the effectiveness of learning among them, in terms of finding ideas and science learning materials.

4. CONCLUSION

Teaching science learning using YouTube is very fun because YouTube facilities are many and varied and can be chosen according to the wishes of the users. Material Science learning teaching is also available and can be accessed by anyone and anywhere. so that it can be used for online teaching of science subjects. Youtube can stimulate educators' ideas and increase the creativity and activity of educators in the online teaching and learning process. This activity can be continued in other schools because it provides benefits not only to educators but also to students. By using YouTube, learning becomes more interesting and improve students' understanding of science learning. Educators are also expected to convey to students that the negative impact of YouTube is, so that students are not affected by unwanted things.

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