

## **DESIGNING SOCIAL MEDIA-BASED SCIENCE LEARNING MEDIA AS ALTERNATIVE MEDIA IN ELEMENTARY SCHOOLS**

**Tongam E Panggabean \*<sup>1</sup>**

Universitas Budidarma, Indonesia  
Email : tongampanggabean@gmail.com

**Kusno Setiadi**

Universitas Muhammadiyah Luwuk, Indonesia  
Email : kusnosetiadi17@gmail.com

**Siti Aisyah Hanim**

Universitas Malikussaleh, Indonesia  
Email : hanim@unimal.ac.id

### **Abstract**

The process of learning activities currently follows technological developments, one of which is learning via the internet. One effort to overcome students' passive attitude is to increase students' involvement in learning through the use of learning media. There are many learning media that can be used in the learning process, especially in science subjects. This includes images, videos and animated media and can use existing school infrastructure to provide these media. One of them is the use of social media-based learning media. Instagram social media is very suitable as an online learning medium because Instagram is very easy to use and is an application that is familiar to the millennial generation. The use of Instagram as a learning medium has emerged as an alternative solution in improving the quality of learning in the current digital era. Instagram social media is very fast in conveying information and easy to access by students. Using Instagram as a learning medium can also increase student participation in learning activities. With more intense interaction and attractive visuals, students will be more motivated to learn.

**Keywords:** Learning Media, Science, Social Media

### **INTRODUCTION**

Education has a mission to improve and develop the resources possessed by each individual. Through education, students are able to develop their abilities optimally and fulfill their functions according to the needs of individuals and society. Because education is an effort to develop students'

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<sup>1</sup> Correspondence author.

potential, children must be seen as creatures who have developing potential (Iriane, R., et al, 2022). Education is basically designed to help people develop themselves so that they are able to face all changes or problems with an open attitude and creative approach, without losing their identity.

The development of science and technology is increasingly encouraging renewal efforts in the use of technological results in the learning process, in this case innovative efforts are being made to maximize the use of ICT developments in learning activities. According to Munir in (Listiana, N., & Jaharadak, A. A, 2019) The use of ICT in education is one of the things that is emphasized in efforts to improve the quality of human resources and the quality of education. Thus, implementing information technology in learning is a strategic step to improve the quality and access of education, not just to catch up with global trends. Social media is a form of ICT that can be used as a means of internet-based learning in this era.

In the current industrial era, social media has become a phenomenon and an inseparable part of modern society's life. Through social media platforms, users can communicate online. (Ratnasari, L. T., et al, 2022). Its existence, which is easily accessible via various devices such as smartphones and computers, has made social media users in Indonesia increase rapidly. According to Kotler & Keller (2016), social media users use the platform as a place to share writing, images, audio and video with other people or institutions. But more than that, social media is not only a means of communicating or sharing information, but also has great potential to support teaching and learning activities.

Learning in the current era aims to improve digital skills that are relevant to current needs with the 4C characteristics, namely Communication, Collaboration, Critical Thinking and Problem Solving, Creativity and Innovation (Sallamah, I. B., & Sabiq, A. H. A, 2020). In achieving these learning objectives, social media plays an important role because it can be used as a tool to facilitate collaborative and interactive learning between educators and students. Social media allows students to share information, ideas and experiences thereby improving the quality of learning. So the use of social media in learning can help students to learn in a more effective and enjoyable way.

The process of learning activities currently follows technological developments, one of which is learning via the internet. According to Meutia Puspita (2018), one effort to overcome students' passive attitude is to increase students' involvement in learning through the use of learning media.

Learning Media is a tool used in the learning process, thereby making teaching staff more creative and more innovative in presenting the material and can make students not feel bored in the learning process (Spencer, K, 2017). Learning media are various types of components in the students' environment that can stimulate students to learn by transmitting messages, can stimulate the mind, stimulate students' abilities and can encourage the teaching and learning process (Sudarsana, I. K., et al, 2020).

The use of learning media makes learning less monotonous and more interesting, and allows students to be directly involved in using the media, making students more active and creating a more comfortable classroom atmosphere (Yakin, I., & Gencel, I. E, 2013). Therefore, media plays a very important role in the learning process. The idea behind this is that humans are social creatures who always depend on the help of other people to fulfill all their needs.

There are many learning media that can be used in the learning process, especially in science subjects. This includes images, videos, and animated media. You can also use your school's existing infrastructure to provide this media. One of them is the use of social media-based learning media.

## **RESEARCH METHOD**

The study in this research is qualitative with literature. The literature study research method is a research approach that involves the analysis and synthesis of information from various literature sources that are relevant to a particular research topic. Documents taken from literature research are journals, books and references related to the discussion you want to research (Earley, M.A. 2014; Snyder, H. 2019).

## **RESULT AND DISCUSSION**

### **Study of Learning Media**

Learning media is one component of the teaching system which is the dominant factor in supporting the success of the teaching and learning process. Learning media is used to make it easier for teachers to convey lesson material so that students understand the lesson material more easily. Apart from that, learning media also helps to make the teaching and learning activities that take place between teachers and students more varied, thereby arousing student interest and providing stimulation for learning (An, Y, 2021).

#### **A. Understanding Learning Media**

The word media comes from Latin and is the plural form of the word medium which literally means intermediary or introduction. Media is an intermediary or messenger from the sender to the recipient of the message (Holden, J. T., & Westfall, P. J. L, 2007). Umar Suwito defines learning media as follows: learning media is a learning tool that is used as a means to achieve goals. Azhar Smaldino, S. E., et al (2008) stated that learning media includes tools that are physically used to convey the content of teaching material. R. Angkowo and A. Kosasih (in Aisyah, S., & Haryudin, A, 2020) state that media is anything that can be used to convey messages, stimulate students' thoughts, feelings, attention and will so that they can be encouraged to be involved in the process. learning.

Based on the opinion above, it can be concluded that learning media is a tool used to build communication and interaction between teachers and students and the teaching and learning process.

#### B. Types of Learning Media

Learning media has different types. Learning media according to Listiana, N., & Jaharadak, A. A (2019) are grouped into 3 which include audio media, visual media, and audio-visual media. The first group is audio media, audio media is a type of learning media that uses the senses in the form of hearing to convey the content of learning material during the teaching and learning process. Examples of audio media are radio, vinyl records, and others.

The second group is visual media, visual media is a type of learning media that uses the senses in the form of sight to convey learning material. Visual media can also be divided into 2, namely three-dimensional and two-dimensional media. Examples of visual media include posters, pictures, etc. (Fajriah, U. N., & Churiyah, M, 2016).

The third group is audio visual media, audio visual media is a combination of audio media and visual media. Audio visual media is learning media that uses the senses of hearing and sight to convey the content of learning material. So that students can use their hearing and vision in learning. Examples of audio visual media are television (TV), films, videos, and others.

#### C. Benefits of Learning Media

The benefit of media is as a teaching aid that is arranged by the teacher and can influence the ease with which children receive lessons (Spencer, K, 2017). Thus, media is a tool to make it easier for children to follow lessons so that they can understand what they are learning more

clearly, moreover the author uses number symbol cards as media, so with number symbol cards children can more easily recognize the concept of numbers, distinguish between number symbol cards and know numbers. Because the number symbol cards are equipped with pictures whose number is the same as the number value.

### **Learning Media Based on Instagram Social Media**

Currently, the development of information and communication technology has entered the 4.0 era or the era of interactive communication (Patmanthara, S., et al, 2019). This rapid development has given rise to significant changes in all sectors of life, including the world of education. Era 4.0 requires educators to be able to develop skills in the field of information technology so they can integrate them into learning. Ratnasari, L. T., et al (2022) said that the implementation of information technology in the world of education is one of the key factors for improving the quality of education and the quality of human resources. By using information technology in the world of education, it is hoped that it will be able to improve the teaching and learning process.

The application and development of information technology is not just following global trends but is a strategic step and an effort to improve access and quality of education. (Mahzum, E., et al, 2020). The use of information technology in the teaching and learning process will make it easier for students to find learning materials or resources, learning is not limited by space and time, increases interaction between students and educators or between students, and can be used as storage for the data and information needed. Therefore, the application of information and communication technology has the potential to increase the efficiency and quality of learning.

Era 4.0 learning combines digital technology and the internet to improve the quality and effectiveness of learning. Characteristics of learning in the 4.0 era include: (Salehudin, M., et al, 2020)

1. Technology-based learning:  
Use of technological devices such as computers, tablets and smartphones in learning.
2. Internet based learning:  
Use of the internet to access learning resources such as videos, study materials and other sources of information.
3. Collaboration-based learning:

Learning is supported by interaction and collaboration between students and teachers.

4. Customizable learning:

Learning that can be adapted to students' needs and level of mastery.

5. Measurable learning:

Learning is carried out using measurable methods to evaluate students' level of mastery.

Instagram or often abbreviated as IG is a social media platform that allows users to share photos and videos, as well as interact with other people through likes, comments and direct messages. Instagram is currently a social media platform that is very popular with teenagers. The intensity of use of the Instagram application has increased from year to year. The average time spent on social media Instagram by teenagers is 2-3, even 4 hours a day (Sallamah, I. B., & Sabiq, A. H. A, 2020).

Instagram social media is very suitable as an online learning medium because Instagram is very easy to use and is an application that is familiar to the millennial generation. (Rinda, R. K., et al, 2018). The use of Instagram as a learning medium has emerged as an alternative solution in improving the quality of learning in the current digital era. Instagram social media is very fast in conveying information and easy to access by students.

Some of the features that Instagram has that can be used for teaching and learning activities include:

1. IGTV: this feature allows users to upload long videos that can be used as tutorials, demonstrations or presentations.
2. Live: this feature allows users to conduct question and answer sessions or live streaming which can be used for online classes
3. Instagram Reels: this feature allows users to create short videos with a duration of 90 seconds which can be used for content containing a summary of the subject matter.
4. Instagram Stories: this feature allows users to upload daily content that can be used for online classes or provide updates about classes that are being held. Instagram Stories also has various features that can be used to increase interaction between educators and quiz students.
5. Instagram Explore: this feature allows users to find content that is relevant to the topic being discussed in learning (MR, E. R., & Seftika, S, 2019).

The various features that Instagram has can help students more easily understand the material being taught. Using Instagram as a learning medium can also increase student participation in learning activities. With more intense

interaction and attractive visuals, students will be more motivated to learn (Iriane, R., et al, 2022).

### **Utilization of Social Media as a Science Learning Media**

#### **A. Utilization of Learning Videos Through YouTube Social Media**

Learning recordings are very likely the most appropriate media used by educators as a messenger for the teaching and learning steps conveyed to students while learning from home is still being carried out at this time. Basically, video is a tool or media that can display original items. Video is a computerized media that can show a rational grouping or plan of images and display fantasies, images and dreams into moving images. The recordings provide a very interesting data channel. Video is the most unique and interesting source or mechanism for conveying data (Sudarsana, I. K., et al, 2020).

In accordance with scientists' perceptions, during the current pandemic, one of the teachers' efforts to keep students from getting tired and enthusiastic about learning is by using learning recordings, especially in science subjects for the human respiratory system. Educators use learning recordings via YouTube web-based media, as well as using existing innovations. The reason for using learning recordings via YouTube online media is to help and collaborate with students in the learning cycle, and to help make things easier for teachers (Filosofi, S. A, 2018).

Helps make things easier for educators and is very helpful for guardians who show students while concentrating from home. Because, in the video the material introduced is made very interesting and displayed using energetic images which make students understand the exercises given by the instructor more quickly. Then, children can also learn while playing by watching recordings on YouTube so that children are not just fixated on learning (Vinnie, G., et al, 2021). Likewise, the use of learning recordings via the web-based media YouTube is very easy for both educators and guardians to use.

Thus, learning by utilizing learning recordings via YouTube web-based media has a great influence on learning interactions. Children who are initially sluggish when doing assignments so that sometimes they don't submit assignments will become more enthusiastic and faster in doing and collecting assignments remembering the learning videos. And furthermore, the use of learning recordings via web-based YouTube media during this pandemic can be used effectively by teachers or student guardians so that

the learning cycle runs well with coordinated efforts between educators, guardians and students (Yakin, I., & Gencel, I. E , 2013).

#### B. Effectiveness of Using Learning Videos Through YouTube Social Media

Effectiveness is the extent to which it is applied or used in everyday life. In the context of YouTube, this means looking at the effectiveness of using YouTube. The usefulness referred to here is the extent to which the media provides benefits. Basically, YouTube provides services for uploading, downloading and sharing videos. YouTube provides various technical things, such as how to use applications on a computer and various practical ways to do things that were initially complicated and impractical (Salam, R., et al, 2018). If we realize that YouTube actually has various uses which aim to make things easier for its users.

YouTube is currently very beneficial and has various uses which aim to make things easier, such as in the world of education during the pandemic. Learning in current conditions with learning videos from YouTube is very helpful for students to understand the lessons delivered by the master quickly and students are very enthusiastic during the lesson (Patmanthara, S., et al, 2019).

One way to determine the extent to which the media is accurate and precise is in terms of time. YouTube always provides the latest news and information, the information presented can be seen through various media so it feels more real. YouTube also offers free to enjoy and access videos so that users can access jokes anytime and anywhere, so be careful with the conditions of the tools used such as computers and cellphones that are connected to the web making it easy to access, typing in the specific structure key you are looking for and not It takes a long time to get the things you are looking for, this is what makes YouTube very easy to use (Trisnawati, N., et al, 2021).

This learning video via YouTube web-based media is very suitable for use in learning, the video contains very precise substance so that children feel that the images and sounds displayed in the video are genuine. The use of learning recordings via the web-based media YouTube also helps educators in terms of time (Aladasari, G. A., et al, 2021).

Extension considering consistency and fulfillment of substance for the media. YouTube provides various content such as information about events, instructions, special issues and much more. This makes the breadth of YouTube considered total and the content provided is more detailed because of the different media. YouTube is very suitable as a learning



medium because YouTube-based learning recordings are equipped with audio and movement effects that are very entertaining and interesting. This makes students more interested in listening and studying the material presented in the video (Sudarsana, I. K., et al, 2020).

Learning recordings via YouTube web-based media provide a variety of teaching materials that are very useful in today's conditions. Because, a lot of learning recordings are available on YouTube, starting from youth training level and surprisingly up to school. With the aim that the breadth of YouTube is considered complete and the material provided is more ins and outs because it is a different medium (Filosofi, S. A, 2018).

#### C. Supporting and Inhibiting Factors for Learning Videos via YouTube Social Media

Learning recordings in current conditions are a very useful medium and are very helpful for educators in the learning cycle so that the instructions given can be conveyed optimally. Learning recordings have several supporting variables, while the supporting components for using YouTube Web-Based Media as Learning Recordings are as follows: (Ratnasari, D., & Haryanto, H, 2019).

- a. Practical, namely learning videos via social media that are simple and easy to understand by all groups, including children, teenagers, adults and the elderly.
- b. Informative, namely learning videos via social media that provide information about current developments such as developments in technology, science, education and so on.
- c. Interactive, namely learning videos via social media which provide complete facilities for questions and answers regarding matters related to learning videos.
- d. Economical, namely learning videos via YouTube social media that are free for all groups.

Considering the consequences of specialist perception, the presence of some of the above supporting elements makes YouTube preferable to a wider area, especially during the current pandemic, widely used by instructors and students. Apart from not being difficult to use, recorded learning via the online media YouTube also has a supporting variable called conservative, where recorded learning via YouTube can be used for free, so this is the factor that makes YouTube's allure increasingly well known to a wider local audience. Areas and are generally interested in both young people and adults (Aladasari, G. A., et al, 2021).

## CONCLUSION

Social media has become a phenomenon and an inseparable part of modern society. Through social media platforms, users can communicate online. Social media users use this platform as a place to share writing, images, audio and video with other people or institutions. But more than that, social media is not only a means of communicating or sharing information, but also has great potential to support teaching and learning activities. Instagram social media is very suitable as an online learning medium because Instagram is very easy to use and is an application that is familiar to the millennial generation. The use of Instagram as a learning medium has emerged as an alternative solution in improving the quality of learning in the current digital era. Instagram social media is very fast in conveying information and easy to access by students. The various features that Instagram has can help students more easily understand the material being taught. Using Instagram as a learning medium can also increase student participation in learning activities. With more intense interaction and attractive visuals, students will be more motivated to learn.

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