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Utilizing Video Graphics as a Digital Learning Media to Improve Students' Green Skills

Mayrahma Lisdiantika[1]*, Josephine Tanesha[2], Mustika Nuramalia Handayani[3], Yasyfa Aulia Rustandi Putri[4]

[1*, 2, 4]Study Program of Agroindustrial Technology Education, Faculty of Technology and Vocational Education, Universitas Pendidikan Indonesia

[3]Study Program of Agroindustrial Technology Education and PUI – TVET Research Centre Universitas Pendidikan Indonesia

Email: mayrahmalisdiantika21@upi.edu[a*], josephinetanesha@upi.edu[b], mustika@upi.edu[c], yasyfaaulia@upi.edu[d]

ABSTRACT

This study aims to explain how video graphics-based digital learning media can be an alternative in the learning process that can meet the needs of green skills and support the concept of SDGs. The research used a literature review by collecting data from several articles, proceedings, and books from 2013-2022. The results showed that green skills could be applied in education by using environmentally friendly learning media. One of the learning media that can be used is videography. The use of videography can support the application of green skills by using the paperless principle in every learning activity. So, applying green skills in everyday life can attain several SDGs goals, such as innovation and climate action.

Keywords: *digitalization, green skills, learning media, SDGs, video graphics*

INTRODUCTION

Learning media is an essential tool that distributes teaching messages from the carrier to the recipient of the message, in this case, from educators to students (Sulkipani, 2019). It includes books, tape recorders, cassettes, video cameras, films, slides (picture frames), photos, pictures, graphics, television, and computers (Hasnida, 2014). The use of learning media in the learning process can generate new interest in students; increase motivation and stimulation learning activities; affect the psychology of students; improve understanding, and display data attractively and reliably (Trisiana, 2020).

According to Sanaky (2013), learning media has a function for both educators and students. He revealed that, for teachers, learning media could (1) provide guidelines and directions to achieve goals; (2) explain the structure and sequence of teaching well; (3) provide a systematic framework for teaching well; (4) make it easier for teachers to control the subject material; (5) assisting accuracy and thoroughness in the presentation of subject

material; (6) raise the confidence of a teacher, and (7) improve the quality of the lessons. On the other hand, for students, learning media can (1) increase learning motivation; (2) provide and increase learning variations for students; (3) provide the structure of the subject material and make it easier for students to learn; (4) provide core information systems to make it easier for students to learn; (5) stimulate students to focus and analyze; (6) create conditions and learning situations without pressure; and (7) students can understand the subject material systematically.

Along with the rapid development of technology, various sectors of life are now entering the digital era. Workers in the fields of development, economy, and education must have digital skills. Educators need to use digital technology-based learning media to meet the demands of the times. In addition, using digital technology as a learning medium can also make it easier for students to absorb learning materials (Sagita & Nisa, 2019).

In addition, using digital technology-based learning media can also support the fulfillment of green skills to achieve the SDGs (Sustainable Development Goals) needed in this era. Diep & Hartmann (2016, in Kamis 2017) states that climate change is a big concern today and requires urgent solutions. One of the solutions we can do is to include elements of sustainability or green skills in all areas of life, including technical and vocational areas. Integrating green skills with technical and vocational curricula can provide human resources aware of their environment (Kamis, 2017). Thus, it can support the success of transitioning the economy to developing a green economy and clean environment (Ramlee, 2015 in Kamis, 2017).

According to Pavlova (2008, in Mangambe et al., 2021), green skills are the skills to adapt products, services, and processes to be environmentally friendly. These skills can help the community in implementing the SDGs. Understanding green skills are helpful for making people aware that the environment is needed so that humans can love and pay attention to their environment. According to Kamis et al. (2017), green skills are needed in education so that future generations can be competent in preserving the environment. Environmental preservation is important so that human life in the future can run well. Green skills focus on the technical skills, knowledge, values, and behaviors required for green jobs to promote a sustainable economy, environment, and society in industry and society (Strietska-Ilina et al., 2011, in Ibrahim et al., 2020). Based on Sern et al. (2018, in Ibrahim et al., 2020), components of green skills that are needed by the industry are shown in Table 1.

TABLE 1. Components of Green Skills

No.	Components
1.	Design skills
2.	Energy skills
3.	Communication skills
4.	Procurement skills
5.	Leadership skills
6.	City planning skills
7.	Waste management skills
8.	Financial skills
9.	Management skills
10.	Landscaping skills

Among all the components of green skills, a study states that design skill is in the first position in terms of assessment in the industry (Zubir et al., 2021). It is a skill in creating and

designing technologies, products, and processes that reduce carbon emissions (Zubir et al., 2021). So, design skill is an essential aspect of the green skills component in vocational education.

Wahyuningsih (2017) stated that the Sustainable Development Goals, better known as SDGs, are a reference in the framework of development and negotiations of countries in the world. The goals of the SDGs in Wahyuningsih (2017) are: 1) No Poverty. 2) Zero Hunger. 3) Good Health and Well-Being. 4) Quality Education. 5) Gender Equality. 6) Clean Water and Sanitation. 7) Affordable and Clean Energy. 8) Decent Work and Economic Growth. 9) Industry, Innovation and Infrastructure. 10) Reduced Inequalities. 11) Sustainable Cities and Communities. 12) Responsible Consumption and Production. 13) Climate Action. 14) Life Below Water. 15) Life on Land. 16) Peace, Justice, and Strong Institutions. 17) Partnerships for the Goals.

One of the digital technology-based learning media is video graphics. Video graphics is a media that is included in the audio-visual media that displays moving images and sounds. Video graphics describe events or activities usually used in education, entertainment, advertising, and animation (Arthana et al., 2018). According to Astuti & Mustadi (2014), video graphics used in the learning process can motivate students better. Putrawangsa & Hasanah (2018) also mention that digital technology-based visualization is more effective, efficient, interactive, and attractive. So, videography can be a good alternative for learning media.

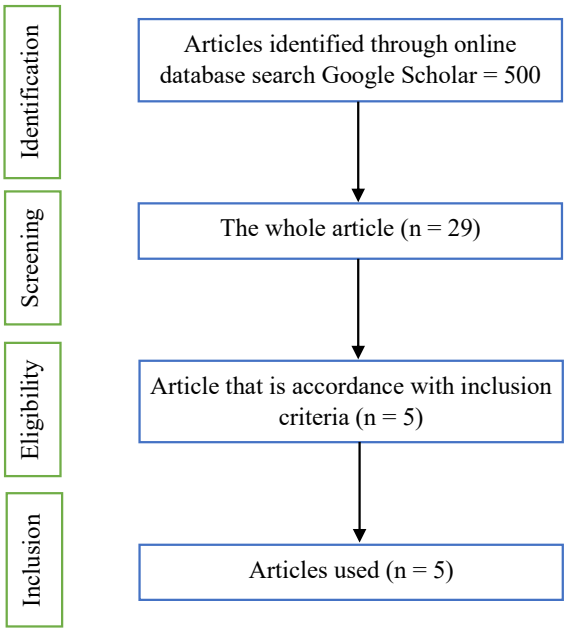
This paper aims to explain why video graphicsphics-based digital learning media can be a good alternative to be used in the learning process. In addition, it will also reveal if using video graphics as a learning media can meet the need for green skills and promote SDGs (Sustainable Development Goals).

METHOD

The research method used was a systematic review, which is carried out to analyze video graphics that can improve green skills. The review is based on the research question, "Can video graphics as a learning media improve students' green skills?". The systematic review used the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) as the basis for researching the study.

A systematic search was carried out on all studies regarding video graphics as a learning media to improve students' green skills using the online database on Google Scholar with the search year 2013-2022. The keywords used to consist of "video graphics," "learning media," "green skills," "SDGs," and "digitalization." An article search brings about a total of 500 articles; the filter used was full-text access, articles from the lastten0 years, and using English or Indonesian.

Furthermore, an analysis of the suitability of the title and abstract with the eligibility criteria was carried out with as many as 24 articles, and proceedings were eliminated. A total of 29 articles and complete proceedings underwent the second screening stage to obtain five articles that met the inclusion criteria.



The analysis process was carried out independently by screening, looking at the title and abstract, then reading the article's contents to see if the eligibility criteria are appropriate so that articles that do not meet the inclusion criteria are excluded from the review.

RESULTS AND DISCUSSION

The Importance of Green Skills in Vocational Education

Applying green skills in everyday life can help the community attain the SDGs. For example, one of the needed components of green skills is communication skills. From the statement by Mangambe et al. (2021), it can be concluded that environmentally friendly communication can be done with paperless communication. This has already attained several SDGs goals, such as innovation and activities on climate. Paperless communication by utilizing several digital media is a constructive innovation. Paperless communication is also one way to deal with climate change because paper use is reduced.

Applying green skills in education is very important, especially in vocational education. In vocational education, students must be equipped with skills that prepare them to work to advance their country (Zolkifli et al., 2016). The provision of green skills in vocational education can help create qualified human beings, which is essential in supporting the SDGs. One way to apply green skills in education is to use environmentally friendly learning media.

Video graphics Learning Media

Educators can use learning media in the learning process so that the teaching-learning process can run more directly. Indriyani (2019) states that learning media can be used to distribute messages to students to encourage the learning process. An educator must be able to design innovative learning media. One learning media that can be used in this digital era is videography. Video graphics itself is a video concept that describes events or activities (Arthana et al., 2018). Video is audio-visual media, which means learning media that can be seen using the sense of sight and heard using the sense of hearing (Hadi, 2017). Video is considered an effective media to be used in the teaching and learning process. Two theories support this, the first comes from Edgar Dale, wherein this theory, the level of student understanding, is described in a cone of experience. This video position is better than image and audio media (Hadi, 2017). The second theory comes from Brunner (Arsyad, 2006, in Hadi, 2017), who states that this theory classifies learning modes into three levels: direct experience, image experience, and abstract experience. From these

two theories, it was concluded that the learning media in the form of video was adequate for the learning process because of the five senses used by students. As Hadi (2017) stated, students, will feel a more meaningful learning experience if they can use all of their five senses.

A study by Murtopo et al. (2022) showed that 50% of teenagers in video graphics training tend to like activities related to video graphics. They also enjoyed the videography training process. This percentage indicates that teenagers are curious about something that is visually appealing to them. Thus, using video graphics as a learning medium is the right solution.

According to Arthana et al. (2018), several applications can be used to develop graphic videos, namely:

1. Powtoon
2. VideoScribe
3. Garsupati

Powtoon is an audio-visual media that is useful for making video presentations that contain animated features such as handwriting, animated cartoons, and livelier transition effects (Akmalia et al., 2021). Research (Rahmawati & Ramadan, 2021) shows that the effectiveness of using Powtoon animation video media is 98.33%, which is very practical. Powtoon is adequate to use because it is easy to use and access; there is a large selection of background templates, so the user only needs to add images, text, audio, and video; there are animated content, fonts, and transition effects; attractive appearance; can be saved in various formats (MPEG, MP4, AVI), can also be directly shared on YouTube; and can combine video and audio (Akmalia et al., 2021).

Videoscribe is media software that combines audio and visual and creates animated whiteboards (Bhakti et al., 2020). Based on research from (Jannah et al., 2019), the average percentage of effectiveness of using Videoscribe is 66.67% and 68.33%. This percentage is included in the high category, and it can be concluded that the Videoscribe learning media is effective in teaching and learning activities.

The combination of several elements, such as video graphics, music, animation, and film, is called motion graphics. Motion graphics is one of the science in graphic design. The word motion means movement, and graphical means the art of drawing from a combination of videography, photography, typography, and illustration using animation methods or other methods in the form of image movement or a variety of several parts of the image that have continuity so that the pictures look alive. A visually appealing video is created (Siti & Nastiti, 2019). So, it can be said that videography is part of the graphic design branch. The advantages of using motion graphics as learning media are being able to attract attention and motivate someone, including encouraging students to learn; as a tool for delivering various types of subject material; being able to minimize production costs, and making it easier for students to playback or review the material. However, the disadvantages of using motion graphics are that it requires special skills in the making process, need computer media to produce it, and will be less attractive if motion graphics do not have reinforcement in design and color accuracy.

Several studies have shown that video graphics could be used as a learning medium in Vocational High Schools. Anggraeni & Setiawan (2021), who developed a learning video in one of the subjects in Vocational High School, got good results on the feasibility test. It consisted of learning, material, benefit, and usage aspects. Material experts, media experts, and students as prospective users of the videos assessed the feasibility test. The footage had been categorized as very feasible, with a feasibility percentage of 95.0% from material experts, 93.9% from media experts, and 88.1% from prospective users.

A similar study was also conducted by Pambudi & Anggraeni (2021). Based on material experts' assessment, the video's feasibility was 97.9%, consisting of 4 aspects: learning 100.0%, material 96.7%, benefit 100.0%, and usage 100.0%. Whereas media experts scored 95.8%, consisting of 3 factors: media 96.1%, help 91.7%, and use 96.9%. The results by the prospective users were in the very feasible category with a percentage of 91.2%, consisting of 5 aspects: learning 93.0%, material 94.4%, media 90.6%, usage 92.3%, and benefit 91.3%.

Using Video graphics as Learning Media to Improve Green Skills Students

Efforts that can be made by academics to protect the environment are by using the paperless principle in every learning activity, and video graphics can be utilized in this paperless principle. In addition, one of the essential components of the ten components of green skills needed in the industry, namely design skills and video graphics, is included in aspects related to design skills. Thus, the use of video graphics can support the application of green skills for attaining the SDGs.

The paperless principle occurs because of the development of information technology and computers in minimizing the use of filing cabinets for archive storage which can take longer. Paperless can also help reduce tree logging in the forest and minimize water use and pollution (Mudrikah et al.,2021). According to Dea (2013, in Pyrenia & Wardiani, 2020), one of the main contributors to pollution is the paper industry, which also contributes to greenhouse gasses. Where every year, there are 900 million tree loggings. The impact of tree logging itself can result in forest degradation and decrease the quantity of trees, eventually leading to global warming due to excess carbon. Besides that, paperless helps increase effectiveness, cost efficiency, and space (Khaniatulmaslaka, 2009, in Pyrenia & Wardani, 2020).

Some researchers say that the use of video graphics media in distance learning can have a positive impact on both teachers and students. Teachers can improve their skills in developing videography as a learning media. In addition, the learning process becomes qualified can improve student competence in the field of skills (Kusuma et al., 2021). Meanwhile, students can access learning materials related to greening skills electronically or digitally. This will help students have unrestricted access to various materials and expand their knowledge and skills about the green economy. Thus, students are expected to recognize multiple digital media, knowledge, and skills and identify different

methods for implementing learning and green skills (Afeez et al., 2017).

CONCLUSIONS

It can be concluded that using videography as a learning medium is an excellent alternative to support the application of green skills to implement the SDGs. Because video graphics are paperless, their uses can improve design skills, and it is environmentally friendly, so they can also help overcome global warming, which is increasing today.

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