Learning Media Design Based on Local Potential Developed at Vocational School

Dian Hardianti Eka Lestari [a*], Hasanah Nur [b] and Jamaluddin [b]

[a] Department of Vocational and Engineering, Universitas Negeri Makassar, Indonesia.
[b] Department of Engineering, Universitas Negeri Makassar, Indonesia.

Original Research Article

ABSTRACT

This research aims to develop local potential-based learning media in Visual Communication Design subjects at SMK Gowa, with the aim of improving students' creativity and learning outcomes. The research method used is Research and Development (R&D) with development stages adapted from the ADDIE and Borg & Gall models. The pilot test was conducted at SMK Negeri 1 Gowa and SMK Negeri 4 Gowa, Somba Opu District, Gowa Regency, South Sulawesi, in the odd semester of 2023/2024. The subjects of this research were students of class X Multimedia Department in Visual Communication Design subject at SMK Gowa. The trial involved 3 people for the one to one trial, 10 people for the small group trial, and 25 people for the extended trial. The results of this study are expected to contribute to the development of learning media that are relevant to local potential, as well as improve the creativity and learning outcomes of students at SMK Gowa. Local potential-based learning media fulfils practical criteria as indicated by the implementation of the learning process, the response of students and educators. The use of video learning media has a very high effect on learner learning outcomes. Video learning media is very effective in the learning process at every level of education.

Corresponding author: Email: lestariekadian416@gmail.com;

Keywords: Learning media; local potential; information systems.

1. INTRODUCTION

Technological developments can be utilised to improve information systems to the community, especially in the world of education. The industrial revolution 4.0 is currently one of the vital phenomena in the world spotlight. Every country is preparing for an industrial revolution that has clearly touched various aspects of life including the economy and governance, therefore learning media also requires various innovations to form motivation from students of course. Education is a very important and inseparable part of the process of preparing high-quality human resources and good character [1].

Government Regulation of the Republic of Indonesia Number 4 of 2022 concerning National Education functions to develop abilities and shape the character and civilisation of a dignified nation in order to educate the nation's life, aims to develop the potential of students to become human beings who are faithful and devoted to God Almighty, noble, healthy, knowledgeable, capable, creative, independent, and become democratic and responsible.

Education can create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation and state. The learning process is an interaction between fellow students, educators, and learning resources in a learning environment (Learning Process Standards based on Minister of Education and Culture Regulation No.34 of 2018).

The learning process requires specific media to achieve effective learning objectives that can be used as a tool in teaching and learning activities. Learning media is a container for delivering learning materials and interacting in the learning process [2,3]. There are many types of learning media, but not all learning media can accommodate the needs of vocational education and the challenges of the industrial revolution 4.0, namely encouraging critical thinking and developing practical skills. Interesting learning media can be a stimulus for students in the learning process. Management of learning aids is needed in formal educational institutions. Educators must be able to choose appropriate and suitable learning media to be used so as to achieve the learning objectives set by the school [4].

Learning media development can be implemented in students and can improve Science Literacy [5]. Cahyono et al. [6] argues that the use of learning videos can improve abstraction skills in students. Learning video-based media not only enhances the learning experience, but also has a positive impact on learner decision making [7].

Visual Communication Design is a productive subject in vocational schools. This subject studies visual elements, such as typography, photography, symbols, images, and text to form visual representations of ideas and messages.

The integration of learning media in Visual Communication Design subjects related to local potential is that this subject is not only required to be an expert in design, but also must be able to produce works of art in order to achieve predetermined goals, such as influencing one's behaviour.

The material in the learning video is in accordance with the existing curriculum, the relationship of the material with local potential so that indirectly this learning raises the local wisdom of tribes/ethnic cultures in South Sulawesi and practical design of local wisdom. The intended product design is a local wisdom-based product, such as: t-shirt design and traditional house design with local characteristics in South Sulawesi, Bugis *songko* design, and so on.

Currently, Visual Communication Design is often categorised as commercial art because it is a combination of fine art and communication for business purposes. Where we know that the Visual Communication Design industry is growing rapidly today. Therefore, with the development of learning media based on local potential, it will greatly help students in the learning process. In addition, Learning Videos really help students learn independently and are able to increase student learning creativity [8]. The use of video learning media at the elementary, junior high, high school and vocational education levels has a very high effect on student learning outcomes. Video learning media is very effective in the learning process at every level of education [9]. In the SMK

environment, the use of learning videos is very effective in increasing student motivation and learning outcomes [10]. Learning videos have proven to be useful in increasing students' learning motivation, especially in vocational schools [11].

SMK is a level of education that prepares students to develop skills and expertise needed in the world of work. Therefore, the development of learning media based on local potential in SMK is very relevant to do. The local potential in question is the cultural wealth, natural resources, and other potentials owned by the area where the SMK is located. Learning videos based on local potential can more easily provide understanding to students and apply learning materials to everyday life. The use of local potential-based learning videos is effective in stimulating the development of students [12]. Learning videos based on local potential are also very effective in increasing students' learning motivation at the high school level [13]. These points of view illustrate that the use of learning media in the form of learning videos is needed in the present and future along with technological developments in the learning process, especially at the SMK level.

SMK in Gowa Regency is a vocational high school located in South Sulawesi Province. Based on the results of preliminary observations at several SMKs in Gowa district, such as SMK Negeri 1, 2, 3 and 4, what is really needed is an increase in local potential-based learning capabilities and low motivation of students to learn. Interviews conducted with each educator from the school were that the learning process was rather difficult because students were less motivated to participate in learning both online and offline. The media used previously had not developed local potential-based learning media, some used technology but still used YouTube to teach, some still used printed media only, and the lack of interaction between educators and students because there was no interesting media to display and projects produced in the learning process.

The results obtained show that the use of local potential-based learning media in vocational education has a high effect to be applied in learning. Local potential-based learning media in technology and vocational education is very effective in providing a positive impact on the quality of learning and increasing students' learning motivation [14]. Learning media can

increase students' learning motivation and make students think creatively in the learning process [15].

The content of the Learning Media based on Local Potential in Visual Communication Design in the title that the author raises is about the relationship between Professional Ethics and Visual Communication Design. One aspect of Professional Ethics in Visual Communication Design (DKV) is concern for local culture and the use of local products in design.

The practice of DKV Professional Ethics plays a role in preserving local potential, for example the Bugis woven fabric. In this context, local potential such as the Bugis Tribal Woven Fabric can be considered as an important resource in Visual Communication Design. Taking inspiration from the motifs and colours of the woven fabric, a designer can create a work that promotes and appreciates the rich culture of the Bugis Tribe. However, it is important to remember that utilising local potential must also be done ethically and responsibly.

Practising good Visual Communication Design (CCD) Professional Ethics and playing an active role in preserving local potential such as the Bugis tribal woven fabric, CCD designers can help create design results that are aesthetically pleasing, communicatively effective, and have a positive impact on the community and its surroundings. The expected goal of this research is to produce a learning media design based on local potential in SMK. This research is expected to help students to better understand learning and increase student motivation and creativity in designing visual images based on local potential.

2. METHODS

This type of research is Research and Development (R&D), which produces local potential-based learning media to improve students' creativity and learning outcomes. The provided text discusses the stages of the research model adapted from the ADDIE and Borg & Gall models. The text outlines the stages of the research model, which include Analyze, Design, Development, Implementation, and Evaluation, as well as the stages of learning development, which include Acquisition, Development, Integration, and Evaluation. The grammar and structure of the text are clear and coherent.

This research was tested at SMK Negeri 1 Gowa and SMK Negeri 4 Gowa, Somba Opu District, Gowa Regency, South Sulawesi. The implementation time of this research trial was in the odd semester of 2023/2024.

The subjects of this study were students of class X Multimedia Department in Visual Communication Design subject at SMK Gowa. The subjects needed are 3 people for one to one trials and 10 people for small group trials, 25 people for extended trials. The details of the research subjects are as follows:

The data collected in this research are quantitative and qualitative data. The data provides information or an overview of the validity, practicality, and effectiveness of the learning media produced.

The data collected in this research are quantitative and qualitative data. The data provides information or an overview of the validity, practicality, and effectiveness of the learning media produced.

3. RESULTS AND DISCUSSION

Based on the results of the needs analysis and identification of the initial abilities of students, the next stage is to design learning media based on local potential.

The main goal in using local potential learning media for Visual Communication Design subjects is to create interesting, fun and practical learning.

This Local Potential Learning Media automatically creates independent learning. The flow of video making is shown in Fig. 1.

3.1 Storyboarding the Learning Video

The results of this study show that the developed media can increase student creativity. This is supported by the results of the study:

Learning media development can be implemented in students and can improve Science Literacy [5]. Cahyono et al. [6] argues that the use of learning videos can improve abstraction skills in students. Learning video-based media not only enhances the learning experience, but also has a positive impact on learner decision making [7].

Furthermore, the results of this study are effective in improving students' learning outcomes. This is supported by the research results:

The use of video learning media has a very high effect on learner learning outcomes. Video learning media is very effective in the learning process at every level of education [9]. In the SMK environment, the use of learning videos is very effective in increasing student motivation and learning outcomes [10]. Learning videos have proven to be useful in increasing students' learning motivation, especially in vocational schools [11].
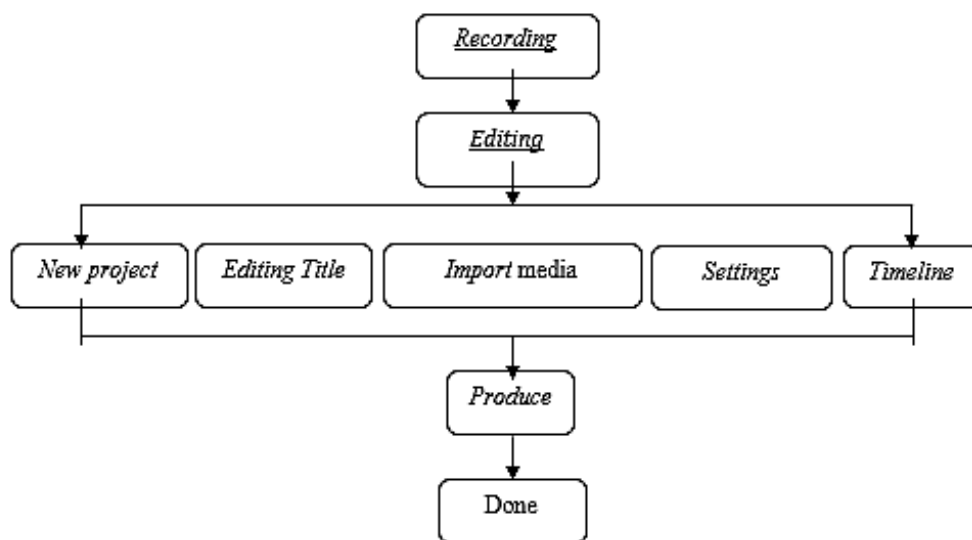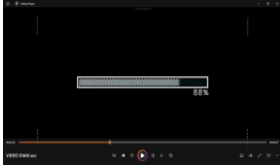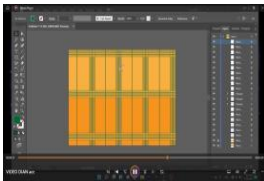

Fig. 1. Flowchart of making local potential learning media

Table 1. Composition function learning video storyboard
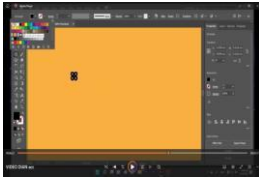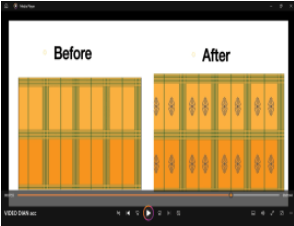
Scene	Description	Visual	Audio	Duration
1	A screen with a black background with typography animation characters as the opening video that contains the opening objectives in the local potential video.			00.00-00.03 (3 seconds)
2	Title Display in Local Potential Video			00.00-00.30 (30 seconds)
3	Basic Competence: Explain the Principles of Ethics in Visual Communication Design Implement Professional Ethics in Visual Communication Design		Instrumental	00.00-00.30 (30 seconds)
4.	The content of the material in the Local Potential Video is about an overview of Visual Communication Design and DKV Professional Ethics.			00.00-01.50 (1 Minutes 50 seconds)
5	The Relationship between DKV Professional Ethics and Local Potential			00.00-02.50 (2 Minutes 50 seconds)
6.	The next picture contains the local potential of the Bugis Tribe			00.00-03.13 (3 Minutes 3 seconds)

Scene	Description	Visual	Audio	Duration
7.	Snippet of DKV Professional Ethics and local potential material			00.00-03.20 (3 Minutes, 20 seconds)
8.	Blackout			03.20-03.32 (12 seconds)
9.	Explanation of the local potential of the Bugis tribe			03.33-03.38 (5 seconds)
10.	One of the local potentials described is about woven fabrics.			03.33-03.38 (5 seconds)
11.	Explanation of the application of DKV Professional Ethics and local potential (Bugis tribal woven fabric) and weaving process.			03.39-06.13 (3 Minutes 24 seconds)
12.	The results of the weaving and design of the image in the application corel draw			00.00-06.14 (6 Minutes 14 seconds)
13.	The motif design process in the picture			00.00-06.22 (6 Minutes 22 seconds)
14 .	The process of creating a design in the Corel Draw application			00.00-06.43 (6 Minutes 43 seconds)

Scene	Description	Visual	Audio	Duration
15.	Corel draw design result			00.00-07.55 (7 Minutes 55 seconds)
16.	Local potential video section containing motivational words about education and ethics in culture			00.00-08.46 (8 Minutes 46 seconds)
17.	Closing assignments are given to students as a form of deepening material based on local potential design.			00.00-09.35 (9 Minutes 35 seconds)

4. CONCLUSION

Local potential-based learning media fulfils practical criteria as indicated by the implementation of the learning process, the response of students and educators. Learning media based on local potential meets the criteria of effectively increasing creativity and learning outcomes through the creativity of students in creating new works (in the form of portfolios) and test results of class X students majoring in Visual Communication Design (DKV) SMKN 1 and 4 Gowa in the 2022/2023 school year. That local potential learning media is effectively used to improve students' creativity and learning outcomes so that institutions can organise training on the use of these learning media for educators in Gowa district.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Alpian Y, Anggraeni SW, Wiharti U, Soleha N M. The importance of education for humans. Buana Devotion Journal. 2019;1(1):66–72.
2. Muhson A. Development of information technology-based learning media. Indonesian Journal of Accounting Education. 2010;8(2).
3. Nurfadhillah S. Learning media at elementary school level. CV Trace (Publisher Trace); 2021.
4. Nurita T. Development of Learning Media to Improve Student Learning Outcomes. Misykat. 2018;3(1).
5. Ramdani A, Jufri AW, Jamaluddin J. Development of android-based learning media during the Covid-19 pandemic to increase students' scientific literacy. Journal of Education: Journal of Research Results and Literature Reviews in the Field of Education, Teaching and Learning. 2020;6(3):433–440.
6. Cahyono H. Using video learning based on the Bandicam application in graph theory courses to improve students' abstraction abilities. Journal of Modern Education. 2021;6(2):114–119.
7. Costley J, Lange CH. Video lectures in e-learning: Effects of viewership and media diversity on learning, satisfaction, engagement, interest, and future behavioral intention. Interactive Technology and Smart Education; 2017.
8. Novianto NK, Masykuri M, Sukarmin S. Development of a project-based physics learning module (project based learning) on static fluid material to increase the learning creativity of class X SMA/MA

students. Inquiry: Journal of Science Education. 2018;7(1):81–92.

9. Widianta IMN. Physics learning videos as an online learning resource to increase students' learning motivation at SMAN 9 mataram during the Covid-19 pandemic. Journal of Pedagogy. 2021; 8(3):377–385.

10. Irwanto I. Effectiveness of using learning videos in increasing student motivation and learning outcomes in front office learning in class xi hospitality accommodation at smkn 3 garut. LITERACY (Journal of Educational Sciences). 2019;10(2):77–91.

11. Yulianto A, Sisworo S, Hidayanto E. Mathematics learning assisted by learning videos to increase student motivation and learning outcomes. Mosharafa: Journal of Mathematics Education. 2022;11(3): 403–414.

12. Suryana D, Hijriani A. Development of thematic learning video media for early age children 5-6 years based on local wisdom. Obsession Journal: Journal of Early Childhood Education. 2022;6(2): 1077–1094.

13. Esa NAK, Wiyono K, Pasaribu A. Development of learning videos based on local wisdom in oki regency archimedes' law material for high schools. Sriwijaya University; 2018.

14. Ginting SJB. Learning media based on local wisdom in learning indonesian literature language at smp negeri 1 berastagi. Proceedings of the National Seminar on Indonesian Language and Literature Education I Unimed. 2018;1:95–101.

15. Mauliddiyah L, Wulandari SS. The influence of online learning media, learning facilities and learning motivation on student learning outcomes during the Covid-19 pandemic at SMKN 1 surabaya. Educative: Journal of Educational Sciences.2022;4(2):2213–2227. Available:https://doi.org/10.31004/edukatif. v4i2.2417