Sustainability Digital Learning in Civic Education: An Effort to Improve Student's Civic Skills

Pitria Sopianingsih[1] Nisrina Nurul Insani[2] Diana Noor Anggraini[3] Aura Sabrina Malika[4]
Pancasila and Civic Education, Faculty of Social Sciences Education, University of Education Indonesia, Bandung, West Java, Indonesian[1,2,3,4]
Email: pitrias@upi.edu[1] nisrina.n.i@upi.edu[2] diana.anggraini@upi.edu[3]
aurasabrina25@upi.edu[4]

Abstract
Today, the behavior of the younger generation is characterized by a tendency to ignore problems that make a lack of critical thinking, problem solving, and lack of relevant digital skills such as media literacy, critical evaluation of information and productive use of technology which causes a lack of student skills in adapting. This problem of behavioral and character degradation is a challenge for Civics learning. Civics learning needs a new nuance to emphasize limited material but there needs to be material and learning that is sustainable throughout life. So, there needs to be civic skill development through digital learning with a touch of SDGs values. This research aims to develop sustainable digital learning with perceived outcomes can improve students' Civic Skills... The research approach used is a quantitative approach with a correlational method with a sample of FTV students who contract Civic Education courses at the Indonesian Education University. Data collection techniques with questionnaires, observation, and documentation. The results showed that the Sustainability Digital Learning Model in Civics Learning can improve civic skills, such as intellectual skills and participation skills.
Keywords: Sustainability digital learning: Civics learning: Civic skill.

INTRODUCTION

Technological advances have become an integral part of human life, bringing positive impacts and making daily activities easier. Innovations in technology provide great benefits, including in education, technology helps students and students in applying knowledge and making it easier to complete tasks. Skills relevant to technological developments are important for students to master (Ngafifi, 2014; Maritsa et al., 2021). Technological developments offer great opportunities for education through online learning, digital libraries, and online discussions. Technology can optimize teaching strategies, but requires competent lecturers who are able to design technology-based learning (Purnasari & Sadewo, 2020).

However, this development also makes it difficult for students to understand and consider the perspectives of others, which in turn causes them to be unable to work together in teams and communicate clearly personally and in groups. This is a problem for today's young generation (Kegan & Lahey, 2009) (Ravitch, 2010). The development of civic skills in Civics learning includes communication skills, decision-making, critical thinking, and digital skills (Prensky, 2001). Civic skills help individuals use knowledge to face challenges in the life of society and the state (Pratama, Adha, Rohman, 2023). Branson (1999) divides civic skills into intellectual and participation skills. Intellectual skills, according to the National Assessment of Educational Progress (NAEP), include critical thinking skills, which include the ability to identify, describe, explain, analyze, evaluate, determine, and defend opinions about public issues. In addition, participation skills include the ability to interact, see, and impact on others.

Civic skills in Civics learning are very important to achieve the goals of SDGs 2030, namely improving relevant skills. Sustainability includes knowledge, skills, values, and attitudes to

manage information, make responsible decisions, and maintain environmental, economic, and social justice. According to Basiago (1998), sustainability is the ability to maintain the integrity of an entity over time. Forgan, Sauvage, and Stoddart (2011) emphasize the importance of efficient resource distribution between generations, while Cerin (2006) adds that sustainable development must maintain natural systems that provide essential resources.

In improving civic skills, sustainable digital learning is needed for students to grow civic skills, especially for themselves. Learning becomes one of the most effective ways to contribute to the implementation of sustainability with digital competency as a necessity. Digital learning is able to innovatively combine modern technology and digital tools to support and strengthen high-quality teaching and learning activities, both virtually and directly, to improve student skills (Lobel, et.al, 2019) (Hockly, et.al, 2017) (Picon, et.al, 2019). Digital learning serves as an intermediary between lecturers and students in conveying ideas and transferring knowledge to expand knowledge, change attitudes, and instill skills through audio and visual-based software that is presented contextually, interestingly, and interactively. The three main potentials of digital learning are as a communication tool, information access, and educational tool. Digital learning creates an active and interesting learning environment, encourages student exploration, assists in solving problems, and develops students' critical and creative thinking skills (Alifah, et.al, 2023).

Sustainable digital learning is needed to improve students' civic skills as part of the goal of sustainable education and to prepare them to contribute to society according to the needs of the times. The phenomenon of low Civic Skills in students, including communication, decision-making, critical thinking, and digital skills, demands a problem-solving approach that integrates Civics learning with the concept of Sustainable Development Goals (SDGs) and digitalization. The integration of information and communication technology (ICT) with learning will have a significant impact on the development of 21st century skills, which is one of the goals of sustainable education in the SDGs agenda. Based on the background of these problems, the general problem to be studied is how to develop a Sustainability Digital Learning Model in Civics learning to improve Student Civic Skills.

RESEARCH METHODS

The method used in this research is quantitative correlation with data collection through a questionnaire. According to Sugiyono (2018), correlational quantitative research aims to reveal whether there is a relationship between variables. The research stages include:

1. Planning: Includes formulation of problems, hypotheses, variables, methods, and instruments.
2. Implementation: The process of collecting data, analyzing data, and drawing conclusions.
3. Report making: reporting in the form of submitting research results presented in the form of descriptions along with editing activities.

The population of this research is UPI students, with a sample of FTV Study Program students who take Civic Education courses. The data collection instrument is a Likert questionnaire. Data were analyzed using simple regression with SPSS.

RESEARCH RESULTS AND DISCUSSION
Planning of Sustainability Digital Learning Model in Civics Learning

Planning the Sustainability Digital Learning model in Civics learning involves components such as materials, methods, media/resources, and assessment (Bararah, 2017). The Civic Education (Civics) course covers concepts, principles, and theories related to the development

of civic attitudes and knowledge. The material includes the study of the constitution, human rights, national insight, national resilience, national identity and integration, as well as the application of democratic values and law in education and national life. The study materials for the Civics course are specifically as follows.

Table 1. Mapping of Civics Course Study Materials

Meeting to -	Study Materials
1	Rationale and urgency of Civics, Historical, juridical, and sociological basis of Civics, Dynamics and challenges of Civics
2	**Concept of National Identity, Urgency of National Identity**
3	Elements, dynamics and challenges of national identity
4	Concept and Urgency of National Integration
5	Historical, juridical, sociological basis, dynamics and challenges of national integration
6	The concept and urgency of the constitution, as well as the historical, sociological and political sources of the constitution in the life of the Indonesian nation and state
7	Dynamics and challenges of the constitution of the Republic of Indonesia
8	Midterm Exam
9	The concept of Human Rights and Rule Of Law, as well as the history of Human Rights and Rule Of Law in general in the world and in Indonesia
10	Harmony of obligations and rights of citizens in the dynamics of human rights in Indonesia and anti-corruption learning
11	The concept and urgency of democracy, Pancasila Democracy and the dynamics of its implementation in Indonesia
12	The basis and urgency of the Archipelago Concept as a regional insight and national development national development
13	Implementation of Archipelago Concept
14	Concept, urgency, and history of National Resilience and State Defense
15	ASTA GATRA model in National Resilience and the dynamics of National Resilience and State Defense
16	End of Semester Exam

Source: Civics Semester Learning Plan (RPS)

The learning approach in the model emphasizes a contextual approach, meaning learning that links the material learned with the context of everyday life, so that it is applicable and meaningful to the lives of students as individuals, community members, and citizens (Muhartini, Mansur & Bakar, 2023).Learning adopts 21st century principles, such as critical thinking, creative, communicative, and collaborative , through project-based learning. The model also integrates TPACK, which includes knowledge of technology, materials, and learning strategies, essential for teaching effectiveness. TPACK development is part of a continuous process in an effort to improve the control and application of TPACK by teachers, with the aim of optimizing technology integration in the context of education (Rahmadi, 2019). The application of TPACK in the Sustainability Digital Learning Model includes five process areas including: idea development/project design, material synchronization, use of digital resources, and product assessment. Here are some things that can be described to illustrate the syntax of the Sustainability Digital learning Model:

1. The basic principle uses Project learning steps with stages: a) create basic ideas and questions; b) create a design project; c) create a group team schedule; d) evaluate product results, and e) evaluate the learning experience.
2. The second principle relates to the stages of the sustainability digital learning model including: a) determining learning objectives and movie ideas; b) determining the big idea of the movie; c) making movie scenarios; d) making movies; e) evaluating the products produced.

3. Learning methods can be in the form of lectures, inquiry, discussion, practical integrated, and simulation with the help of technology in pedagogics.
4. Integrating TPACK concepts and elements in project learning Sustainability Digital Learning model with several criteria: a) using ICT with learning objectives and creating a film idea as a collaborative project; b) incorporating and synchronizing learning materials in the film and determining a work schedule with the team/group; c) integrating ICT in the use of digital resources with the help of various film editing applications designed beforehand with scenarios, and d) using ICT for film product assessment and assessing the learning experience.

Media and learning resources used in Civics lectures include interactive multimedia and various video editing applications as digital learning resources. Video editing applications function to assist students in creating and editing videos online. Some of the applications used include: capcut, Adobe Premiere Rush for video, inshot, VN video editor & maker, etc. These applications allow users to do movie editing by providing tools, resources, and a simple interface, making the movie editing process easier. The evaluation used in the Sustainability Digital Learning Model in Civics Learning is in the form of authentic assessment which includes process assessment, outcome assessment, and product assessment. In authentic assessment, process assessment is carried out in assessing the process of the stages of the Sustainability Digital Learning Model in Civics Learning with observation sheets and group attitude identification sheets. Outcome assessment is carried out in assessing the final results of a project with output measurements carried out in the form of knowledge, attitude and skills measurements. While group assessment and product assessment are associated with the task of making a film project made in groups. This is done to evaluate the effectiveness of the Sustainability Digital Learning Model in Civics Learning.

Implementation of Sustainability Digital Learning Model in Civics Learning

The implementation of the Sustainability Digital Learning Model in Civics Learning is carried out based on general stages including the following:

Introduction to Lectures

In the first meeting, an introduction to the description of the Civics Course, the delivery of the Semester Learning Plan (RPS), assignments, and the evaluation process was carried out, followed by building a commitment to make a class that has good civic skills through a learning contract.

Delivery of Introductory Material

The next meeting is the provision of introductory material tailored to the RPS with an inquiry approach (exploring and examining) information and knowledge about Civics. The material is delivered using the inquiry method along with discussions between lecturers and students carried out with activity steps including:

1. Students listen to material about Civics by utilizing interactive multimedia with power points in which there are topics such as national identity, national integration, state constitution, human rights, Indonesian democracy, archipelago insight, and national resilience. The material is presented systematically to facilitate student understanding, followed by interactive discussions to analyze the dynamics and challenges faced in applying these concepts in the life of society and the state.

2. Students search and identify the subject matter of Civics in accordance with the theme obtained to be synchronized in the film that will be made.
3. Students are divided into six groups to make a movie
4. Students present the identification of material division
5. Lecturers provide confirmation of the identification results
6. Lecturers and students reflect

Filmmaking through Project Learning
1. Students through project learning and filmmaking have ideas / ideas related to what films will be made. The movie is made by each group with the material previously selected in the inquiry.
2. Students identify learning objectives that will be included in the educational film.
3. Each group makes a movie that includes scenarios that will later be used in filming. An example of a movie that has been made by students is as follows.

SYNOPSIS OF NATIONAL INSIGHT MOVIE

Indonesia, with more than 17,000 islands and 1,340 ethnic groups, is known as a country rich in culture and diversity. Living in peace and harmony, Indonesians uphold the principle of Bhinneka Tunggal Ika, different but still one. However, behind this cultural richness, there are still various challenges that test the unity of the nation, such as ethnic conflicts, racial discrimination, and injustices experienced by some groups. This movie explores the importance of national insight in dealing with differences. Nationalistic insight is not just knowledge about cultural diversity, but also a way of life that teaches us to see differences as strengths, not threats. By understanding that every tribe, race and ethnicity has a unique contribution to the nation, we are invited to love our homeland and respect every citizen regardless of their background.

The story centers on a student who is initially indifferent to the issues of discrimination and violence around him. He felt that there was no need to take action and let the conflict go by. However, as time goes by, the student begins to realize how important it is to implement nationalistic insight in everyday life. This realization motivates him to act and stop the violence and discrimination that occurs in his environment. Through this journey, the film emphasizes that the strength of the nation lies in unity in diversity. True nationalism is not only understood, but also embodied in concrete actions, bringing us towards an inclusive and just society, where every individual has equal opportunities to thrive.

MOVIE SYNOPSIS DEMOCRACY IS LIKE A PIECE OF BREAD

Democracy is often perceived as a complicated and distant concept from everyday life. The movie illustrates democracy by analogizing it to a loaf of bread, depicting the power and decisions that affect our lives. In a non-democratic system, only one person or a small group decides who gets what, often taking the lion's share for themselves. However, in a democracy, everyone is entitled to a share of the loaf, as well as having a say in how it is made and divided. For

---

> example, if the loaf belongs to both of us, and I take a larger share without your consent, then only give you a quarter, that is not democracy. But, if we have a discussion and I say, "Can we split the loaf, but my piece is bigger because I'm hungry?" and you agree, then that's democracy. Democracy allows everyone to reject or agree to something based on deliberation. The film emphasizes that democracy is actually very relevant in everyday life, because its essence is to listen to each other, respect opinions, and find the best middle ground for all parties.

4. Each student explores and uses the game maker application for each of the desired game criteria. Of course, students see the ease and availability of great access before using the application.

Figure 1. National Insight Movie

Figure 2. Dialogue Movie About a Piece of Bread

5. Lecturers monitor and monitor student work from the beginning of the work until the end of the product work.
6. Each student presented their products and tested their products in front of the class. Likewise, other students will respond to each other's products for the assessment process.
7. Lecturers assess student products and conduct expert validation tests on content and user-friendliness.

Research Result
Effect of Sustainability Digital Learning Model in Civics Learning to Improve Students' Civic Skills

An initial data collection/survey was conducted to obtain an overview of the Sustainability Digital Learning Model in Civics Learning, with a sample of students from the FTV department. The survey consisted of 25 questions that measured aspects of the Sustainability Digital Learning Model.

Table 2. Statistical Description of Variable X

	Minimum	Maximum	Sum	Mean	Std. Deviation
X	78	120	974	97.40	12.331
Valid N (listwise)					

Variable X regarding the Sustainability Digital Learning Model in Civics Learning in the table above, the mean value for variable X is 97.4 by classifying categories for 5 answer options from 25 statement items, the following classification is obtained:
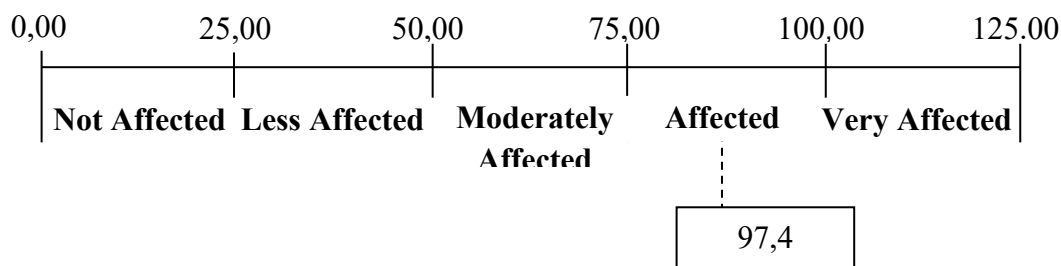

Figure 3. Classification of Variable X

Based on this classification, it can be said that variable X, which is related to students in Civics learning and the Sustainability Digital Learning Model, is in the 'Impacted' category. This shows that students are moderately affected by the implementation of the Sustainability Digital Learning Model. This research reveals that digital learning in Civics learning affects: (1) understanding of Civics concepts, (2) critical thinking, (3) problem-solving skills, and (4) contextual linking. Furthermore, to describe the increase in student Civic Skills, data collection or surveys were conducted on a number of students with a sample population of FTV students at the Indonesian Education University. In the aspect of the general description of increasing Civic Skill, there are twenty-five (25) questions asked. The following are the results of data processing based on these aspects which include: Based on the explanation of the data on each indicator as stated above, a descriptive statistical calculation is carried out to obtain an overview of variable Y. By operating the SPSS 27 program, the following are the results of the calculation:

Table 3. Description of Y Variable Statistics

Descriptive Statistics					
	Minimum	Maximum	Sum	Mean	Std. Deviation
Y	77	109	904	90.40	10.906
Valid N (listwise)					

Referring to the table above, the mean value for the Civic Skill variable is 90.4 by classifying categories for 5 answer options from 25 statement items, the following classification is obtained:
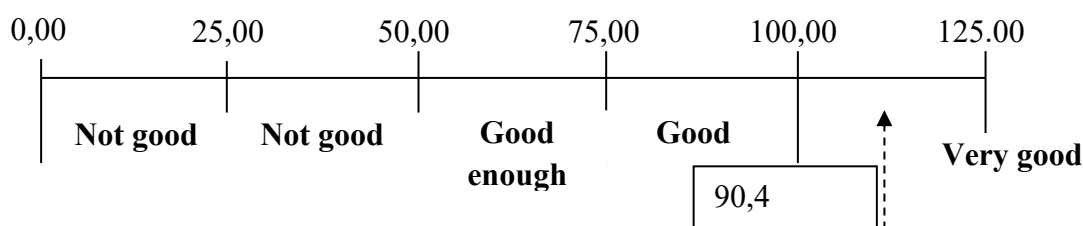

Figure 4: Classification of Y Variables

Based on this classification, it can be said that the Y variable related to the level of student Civic Skill is classified in the 'Very Good' category so that it can be seen that students have good Civic Skills after participating in Civics learning using the Sustainability Digital Learning Model. The implementation of Civics learning in the form of the Sustainability Digital Learning Model can be an effort to support the success of increasing Civic Skills for students with the following correlation.

Table 4. Correlation

		X	Y
	Correlations		
		X	Y
X	Pearson Correlation	1	.784**
	Sig. (2-tailed)		.007
Y	Pearson Correlation	.784**	1
	Sig. (2-tailed)	.007	

From the Correlation table above, it can be seen that the Pearson Product Moment Correlation r = 0.784 and P-value (Sig.) = 0.000. Because the P-Value (Sig,)=0.000 is smaller than α = 0.01, it can be stated that there is a significant linear relationship of 0.784 between the Sustainability Digital Learning Model in Civics with Improved civic skills. If interpreted using Guilford's Emprirical Rule, then the closeness of the relationship is included in the high category. Based on the regression test results, the results are as described in the following table:

Table 5. Regression Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.784ᵃ	.614	.566	7.186
	a. Predictors: (Constant), X			

The value of $R^{(2)}$ (R Square) from the Model Summary Table shows that 61.4% (0.614 x 100%) of the variance of "variable Y" can be explained by changes in variable 'X'. Thus, there is a significant positive effect of the application of the Sustainability Digital Learning Model in Civics Learning on improving student civic skills. The amount of influence is 61.4%, the remaining 38.6% is influenced by other factors not examined in this study.

Discussion

Empirically, the results of this study inform that the Sustainability Digital Learning Model in Civics has a positive and significant effect on improving civic skills. The application of this model contributes as much as 61.4% to the improvement of civic skills, and the remaining percentage indicates that there are other variables not included in this study that successfully affect the results of the application of the Sustainability Digital Learning Model in Civics Learning. In the learning process of filmmaking, it is important to provide alternatives that make learning more interesting, fun, and effective. Therefore, the integration of technology in learning is the right solution to support the achievement of these goals. Along with technological advances, teachers are required to innovate in implementing learning media that are relevant to the times. Some learning media that can be used include audio media, visual media, and audio-visual media (Firmadani, 2020). This is in line with Rere Adianti's research (2023) on the importance of digital literacy training for teachers and infrastructure support. Research by Januar Ivan, et al. (2021) shows that YouTube is effective for learning, especially for Generation Z who likes visual content. Sodik, et al. (2023) found that digital learning received a positive response from students, increasing enthusiasm and learning outcomes.

Digital media also encourages active learning, critical reasoning, and problem solving (Hidayat & Khotimah, 2019; Umam, 2013).

CONCLUSION

This model was successfully implemented through a project learning approach involving the use of information and communication technology (ICT). Students are given the freedom to explore various applications and technologies that support learning sustainability. The learning process focuses on collaboration, creativity, and the development of critical thinking and problem solving skills. The application of the Sustainability Digital Learning Model is proven to have a significant influence on improving students' civic skills. Statistical data shows a strong linear relationship between this learning model and students' civic skills, with a contribution of 61.4%. This indicates that the use of sustainable digital learning not only enriches learning content, but also increases students' active participation in civic discussions, critical thinking skills, and understanding of social issues. This model is considered effective in improving students' learning independence, time efficiency, and information analysis skills related to civic issues. Students feel more motivated to follow the development of social and political issues, and actively participate in discussions and activities related to citizenship. The application of the Sustainability Digital Learning Model in Civics learning successfully answers the problem formulation by having a significant positive impact on improving student civic skills, while supporting the goals of sustainable education in the context of the SDGs.

BIBLIOGRAPHY

Adianti, R. (2023). Problematics of Ppkn Teachers in Utilizing Digital Learning Media. Academy of Education Journal, 14(2), 388-398.

Alifah, H. N., Virgianti, U., Sarin, M. I. Z., Hasan, D. A., Fakhriyah, F., & Ismaya, E. A. (2023). Systematic literature review: The effect of digital learning media on thematic learning on learning outcomes of elementary school students. Scientific Journal and Student Works, 1(3), 103-115.

Bararah, I. (2017). The effectiveness of lesson planning in learning Islamic religious education in schools. Journal of MUDARRISUNA: Media for Islamic Education Studies, 7(1), 131-147.

Basiago, A. D. (1998). Economic, social, and environmental sustainability in development theory and urban planning practice. Environmentalist, 19(2), 145-161.

Branson, M. S. (1999). Learning civic education from America (M. Yasir Alimi, M. Nur Khoirun, Trans.). Yogyakarta: LkiS.

Cerin, P. (2006). Bringing economic opportunity into line with environmental influence: A discussion on the Coase theorem and the Porter and van der Linde hypothesis. Ecological Economics, 56(2), 209-225.

Firmadani, F. (2020). Technology-based learning media as a learning innovation in the era of the industrial revolution 4.0. KoPeN: National Education Conference, 2(1), 93-97.

Forgan, R. S., Sauvage, J. P., & Stoddart, J. F. (2011). Chemical topology: complex molecular knots, links, and entanglements. Chemical Reviews, 111(9), 5434-5464.

Hidayat, N., & Khotimah, H. (2019). Utilization of digital technology in learning activities. JPPGuseda Journal of Education & Teaching

Hockly, N., & Dudeney, G. (2017). Digital learning in 2020. In A. Chapelle & S. Sauro (Eds.), Digital language learning and teaching (pp. 235-245). Routledge.

Ivan, J., Alert, A. E. B., & Jasjfi, E. F. (2021). Design of Learning Material Video Design for Dkv Students in Youtube Digital Media. Journal of Art and Design: Scientific Journal of Master of Design, 3(2), 257-283.

Kegan, R., & Lahey, L. (2009). Immunity to change: How to overcome it and unlock the potential in yourself and your organization. Boston, MA: Harvard University Press.

Lobel, A., Royer, P., Martayan, C., & Laverick, M. (2019). The Belgian repository of fundamental atomic data and stellar spectra (BRASS). Atoms, 7(4), 105. https://doi.org/10.3390/atoms7040105

Maritsa, A., Salsabila, U. H., Wafiq, M., Anindya, P. R., & Ma'shum, M. A. (2021). The influence of technology in education. Al-Mutharahah: Journal of Social and Religious Research and Studies, 18(2), 91-100.

Muhartini, M., Mansur, A., & Bakar, A. (2023). Contextual Learning and Problem Based Learning. Lencana: Journal of Educational Science Innovation, 1(1), 66-77.

Ngafifi, M. (2014). Technological advances and human life patterns in a socio-cultural perspective. Journal of Educational Development: Foundations and Applications, 2(1).

Pratama, Y., & Adha, M. M. (2023). The influence of FKIP UNILA Civic Education Forum (FORDIKA) activities on student civic skill development. Bhineka Tunggal Ika; Review of Theory and Practice of PKN Education, 10(1), 12-22

Prensky, M. (2001). Digital natives, digital immigrants. On the Horizon, 9(5).

Purnasari, P. D., & Sadewo, Y. D. (2020). Utilization of technology in learning as an effort to improve pedagogical competence. Education Publication, 10(3), 189-196.

Rahmadi, I. F. (2019). Technological pedagogical content knowledge (tpack): a 21st century teacher knowledge framework. Journal of Civic Education, 6(1).

Ravitch, D. (2010). The death and life of the great American school system: How testing and choice are undermining education. New York: Basic Books.

Sodik, A. J. F., Rosyid, M. K., Nurlaila, N., Wargadinata, W., & Syukran, S. (2023). Digitalization of Qawâid 'Arabiyyah learning at UIN Fatmawati Sukarno Bengkulu. Lughawiyah: Journal of Arabic Education and Linguistics, 5(1), 83-98.

Sugiyono. (2018). Educational research methods (Quantitative, qualitative, and R&D approaches). Bandung: Alfabeta

U.S. Department of Education. (1989). The civics framework for the 1988 National Assessment of Educational Progress (NAEP). National Assessment Governing Board.

Umam, K. (2013). The application of digital media in learning batik appreciation in class X SMA Negeri 1 Blega. Journal of Fine Arts Education, 1(1), 100-105. https://media.neliti.com/media/publications/246793-penerapan-media-digital-dalam-pembelajar-2cae37c2.pdf