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## The Effect of Implementing Electronic Portfolios Using Google Sites on Students' Citizenship Skills

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### ABSTRACT

This study examines the use of e-portfolios as a supporting tool in lectures to determine whether the implementation of Google Sites-based e-portfolios affects students' citizenship skills. This study uses a quantitative approach using a survey method with a population of 40 students from two classes. Based on the homogeneous characteristics of the population, the researcher applied the Simple Random Sampling technique through a lottery process, resulting in a sample of 29 students. The research variables consist of the independent variable, namely the implementation of Google Sites-based e-portfolios, and the dependent variable, namely students' citizenship skills. Data were analyzed using simple linear regression to examine the influence between variables. The results showed an F value of 13.951 with a significance level of 0.000 (0.000 < 0.05). Therefore, the regression model can be used to predict students' citizenship skills, which indicates that the use of Google Sites-based e-portfolios has a significant influence on students' citizenship skills.

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### INTRODUCTION

The development of education in the 21st century demands a learning system that is not only oriented towards mastering knowledge, but also towards developing the quality of human resources that are adaptive, creative, and able to face global change. 21st-century education emphasizes human development through the integration of critical thinking skills, problem-solving, collaboration, creativity, and information technology literacy in the learning process (Hasbullah, 2016; Wijaya et al. al. , 2016). These changes indicate that education continues to evolve in line with social, cultural, and technological dynamics. Therefore, the learning process in higher education needs to be designed innovatively so that students are able to actively participate in the learning environment and gain authentic learning experiences according to the demands of the 21st century ( Alismail & McGuire , 2015). Mastery of technology is not only related to the

ability to use digital media, but also supports the development of critical thinking skills, creativity, problem solving, decision-making, and independent learning (Suma, 2010). In the context of higher education, the implementation of digital application-based learning is one innovation that can provide a more flexible, interactive, and adaptive learning experience to student needs.

One form of learning innovation that is developing to support these needs is the use of electronic portfolios (e-portfolios) as a medium for technology-based assessment and reflection on learning. Research over the past decade has shown that e- portfolios effectively improve reflective skills, digital literacy , and self-regulation. learning , and 21st-century competencies (Dewi, 2021; Firmansyah et al. , 2019; Taufiq et al. , 2016; Masluhah and Afifah, 2022; Rahmawati et al. , 2023). Several recent studies also confirm that e- portfolios encourage more meaningful, personalized, and authentic learning because they allow students to document their processes, achievements, and ongoing competency development ( Maulani et al. , 2016; Taufiq et al. , 2017). Thus, the use of e-portfolios is a strategic strategy in addressing the challenges of 21st-century education through the integration of technology in learning .

As institutions responsible for developing high-quality human resources, universities are required to effectively integrate digital technology into the learning process. The use of e-portfolios as a technology-based learning medium is one way universities can adapt to the demands of 21st-century education. However, the implementation of e-portfolios in learning is not solely dependent on the use of digital media but is also influenced by students' digital competencies, learning characteristics, and adequate technological infrastructure support (Mulyanah & Andriani, 2021). The need for technology integration in learning has intensified following changes in educational patterns following the COVID-19 pandemic, which have encouraged universities to implement digital learning and distance learning more widely ( Baskoro, et al. , 2021). al ., 2025) . This condition requires lecturers to present innovative, interactive learning strategies that can increase student participation in the learning process. Therefore, the use of digital-based learning media, such as e-portfolios, is a relevant alternative to support flexible, reflective learning that is oriented towards developing student competencies in accordance with the challenges of the digital era.

In this context, Pancasila and Citizenship Education ( PPKn ), as a compulsory subject in higher education, plays a crucial role in preparing students to face the challenges of technological development and social change in the digital era. PPKn is not only oriented towards mastering civic knowledge, but also aims to shape students' character, sense of nationalism, responsibility, and ability to implement Pancasila values in their social, national, and state lives (Rahayu, 2017). In line with the development of learning technology, the PPKn learning process also needs to be supported by digital media that can enhance students' active participation, critical reflection, and thinking skills. Through adaptive and technology-based learning, students are expected to be able to develop citizenship skills . skills ) which include critical thinking, communication, active participation, and social responsibility as stated by Branson (1999). Therefore, the use of Google Sites -based e-portfolios is a relevant learning alternative in supporting the development of students' citizenship skills through a more reflective, interactive, and authentic learning experience-oriented learning process.

In this study, researchers focused on the use of learning instruments, portfolio-based assignments, modified and developed into electronic portfolios (e-portfolios) to increase the effectiveness and attractiveness of student assignments in facing the rapid advancement of information technology. The e-portfolio was designed using the Google Sites platform by providing easy access, flexibility, and user-friendliness for students (Maskar et al. , 2021). Based on the need to reconstruct the previously conventional assignment and administration model, this study developed an e-portfolio design that functions not only as a medium for documenting assignments but also as a reflective, collaborative, and authentic assessment-based learning tool.

Previous research has shown that e-portfolios are more commonly used as a medium for assessment and documentation of learning that is oriented towards improving students' cognitive abilities. Rahmawati et al. ( 2023 ) explained that the e-portfolio assessment instrument is effective in improving students' creative thinking skills through a process of reflection and systematic compilation of learning outcomes. Meanwhile, Sadikin et al. al. (2016) found that portfolio-based learning can improve students' metacognitive abilities and learning motivation because it provides space for students to evaluate their learning progress independently. However, these studies still

focus on the development of thinking skills and learning outcomes, and have not specifically linked e-portfolios to strengthening students' citizenship skills. Unlike previous studies, this study positions Google Sites -based e-portfolios not only as a digital assessment medium but also as a pedagogical strategy for developing students' citizenship skills. Through reflection activities, assignment documentation, discussions, and argumentation in the e-portfolio, students are encouraged to develop critical thinking skills, active participation, social responsibility, and argumentative communication. Thus, this study offers the development of e-portfolios that are not only oriented towards the technical aspects of media use but also on the integration of digital technology in learning to strengthen citizenship. student skills in a measurable and sustainable manner.

## **RESEARCH METHODS**

This study employed a quantitative approach with a survey method and a pre-experimental research design with a simple influence model. The study was conducted at Abdul Muthalib Sangadji State Islamic University, Ambon, in the Islamic Education Management Study Program. The study population consisted of 40 students from two classes. Because the population characteristics were considered homogeneous, the sampling technique used was Simple Randomized Block Model (SRM). Random sampling through a lottery system resulted in a sample of 29 students. The e-portfolio implementation was carried out for one semester by utilizing Google Sites as a medium for storing, documenting, and publishing student assignments. Students were asked to create a personal website as a digital portfolio containing course assignments, learning reflections, activity documentation, discussion results, articles, and project reports related to citizenship learning. During the learning process, students periodically uploaded assignments to Google Sites, made revisions based on lecturer input, and presented the results of their work through a portfolio page that had been created. These activities aimed to train students' critical thinking skills, communication, participation, and responsibility in learning.

The research variables consist of the independent variable, namely the implementation of e-portfolio using Google Sites (X), and the dependent variable, namely students' citizenship skills (Y). Citizenship skills refer to Branson's opinion (1999).

**Table 1. Dimensions of Civic Knowledge**

| No. | Indicator                   | Sub-indicators   |
|-----|-----------------------------|--|
| 1.  | <i>Intellectual Skills</i>  | <ul style="list-style-type: none"> <li>- Ability to Identify</li> <li>- Ability to Describe</li> <li>- Ability to explain</li> <li>- Ability to Evaluate Positions</li> <li>- Ability to take a stance/position</li> <li>- Ability to maintain position</li> </ul>   |
| 2.  | <i>Participatory Skills</i> | <ul style="list-style-type: none"> <li>- The ability to influence policies and decisions by collaborating with others.</li> <li>- Clearly articulate important issues to bring them to the attention of policy and decision makers.</li> <li>- Peace building, negotiation, compromise and consensus building.</li> <li>- -Conflict management.</li> </ul> |

Data collection was conducted through questionnaires, observation, and documentation. The main research instrument was a questionnaire distributed to 29 students. The questionnaire consisted of 20 statements, with 10 statements for intellectual indicators. skills and 10 statements for participatory skill indicators. The questionnaire instrument used a 5-point Likert scale : strongly agree, agree, undecided, disagree, and strongly disagree. The instrument's validity was tested through content validity, involving two experts in education and learning evaluation. The validation results showed that all statement items were valid and suitable for use in research. Furthermore, the instrument's reliability was tested using Cronbach's Alpha with the help of SPSS 15.0 for Windows. The results of the reliability test show the Cronbach's value Alpha is greater than 0.70 so the instrument is declared reliable.

Data analysis was performed using simple linear regression. Prior to hypothesis testing, the questionnaire data were analyzed and processed using Microsoft Excel and

SPSS 15.0 for Windows. Hypothesis testing was conducted to determine whether the implementation of e-portfolios using Google Sites had an impact on students' citizenship skills. The research hypotheses are as follows:

- Ho : There is none influence e- portfolio implementation with utilization of Google Sites (X) for skills citizenship student (Y).
- Ha: There is an influence of the implementation of e-portfolio with utilization of Google Sites (X) for skills citizenship student (Y).

## RESEARCH RESULT

### Results

The data from this study were analyzed descriptively and inferentially. The results of simple linear regression analysis are then explained in Table 2. The model summary output is as follows.

| Model  | R                 | R Square | Adjusted R Square | Std . Error of the Estimate |
|--|-------------------|----------|-------------------|-----------------------------|
| 1  | .250 <sup>a</sup> | .062     | .028              | 8.39644                     |
| a. Predictors : ( Constant ), Portfolio with Google Site |                   |          |                   |                             |

The table above explains the magnitude of the correlation/relationship (R), which is 0.250. From this output , the coefficient of determination (R Square ) is 0.062, which means that the influence of the independent variable (Portfolio With Google Site ) on the dependent variable (citizenship skills ) is 6.2%. Furthermore, the results are in table 3. The ANOVA output is as follows.

| Model |            | Sum of Squares | Df | Mean Square | F      | Sig .             |
|-------|------------|----------------|----|-------------|--------|-------------------|
| 1     | Regression | 126,492        | 1  | 126,492     | 13,951 | .000 <sup>a</sup> |
|       | Residual   | 1903,508       | 27 | 70,500      |        |                   |

|  |       |          |    |  |  |  |
|--|-------|----------|----|--|--|--|
|  | Total | 2030,000 | 28 |  |  |  |
| a. Predictors : ( Constant ), Portfolio with Google Site |       |          |    |  |  |  |
| b. Dependent Variable : Citizenship Skills               |       |          |    |  |  |  |

From the table above, it is known that the calculated F value = 13.951 with a significance level of 0.000 ( $0.000 < 0.05$ ), so the regression model can be used to predict the citizenship skills variable or in other words, there is an influence of the Portfolio variable with *Google Site*. (X) on the citizenship skills variable (Y). The results are then shown in Table 4. Output *coefficient*.

**Table 4. Output Coefficients**

| Model              | Unstandardized Coefficients |             | Standardized Coefficients | T     | Sig . |
|--------------------|-----------------------------|-------------|---------------------------|-------|-------|
|                    | B                           | Std . Error | Beta                      |       |       |
| 1 ( Constant )     | 8,016                       | 17,253      |                           | -.465 | .646  |
| Citizenship Skills | .796                        | .594        | .250                      | 3,735 | .000  |

a. Dependent Variable : Portfolio With Google Site

In the table above , the Constant value (a) is 8.016, while the citizenship skills value (b/coefficient) is 0.796. From this output, known that calculated F value = 13.951 with level significance of 0.000 ( $0.000 < 0.05$ ). This indicates that the higher the use of Google Sites -based e-portfolios , the greater the increase in students' citizenship skills. This influence is positive and statistically significant. so can concluded that H0 is rejected and Ha is accepted .

## DISCUSSION

Based on simple linear regression test results , e- portfolio application Google Sites based influential positive and significant to skills citizenship students . These results indicated by the value significance of 0.000 ( $<0.05$ ) with coefficient regression of 0.796. Findings the show that the more Good e- portfolio implementation Google Sites based in learning , then the more increase skills citizenship students . Although Thus , the value

coefficient determination (R Square) of 0.062 shows that contribution use of e- portfolio to skills citizenship student by 6.2%, while the rest influenced by other outside factors research , such as environment learning , method learning lecturer , experience organization and motivation Study students . With Thus , the use of e- portfolio No become the only one determining factors skills citizenship students , but play a role as one of the learning strategies that supports strengthening competence the .

Influence positive the happen because of e- portfolio Google Sites based provides room for student For involved in a way active in the learning process through activity documentation assignments , compilation reflection , discussion groups and presentations results learning digitally . Myers (2013) and Herman (2001) explain that e- portfolio allows student storing and organizing various form document learning , such as text , images , audio, and video systematically . In addition , Barrett (2000) emphasized that hypertext system in e- portfolio help student connect material learning with tasks and achievements learning in a way structured . In study This , Google Sites is utilized as a digital medium that makes it easier student compile , manage , and present results task in a way independent and sustainable . Use of e- portfolio in eye Pancasila and citizenship lectures No only functioning as a documentation medium assignments , but also as a pedagogical strategy that supports development of students ' citizenship skills . Through activity compilation assignments and reflections learning , students pushed For develop ability think critical , composing argumentation , as well as evaluate issues relevant nationality with material lectures . Findings This in line with The concept of civic skills proposed by Branson (1999), which includes intellectual skills and participation skills. In the learning process , students No only understand material in a way theoretical , but also practiced For active discuss , work The same in groups , as well as convey opinion in a way argumentative . Activity the help student develop ability intellectual and participatory as part from competence citizenship .

Implementation of e- portfolio Google Sites based in study This done through a number of stages learning . At this stage early , lecturer provide stimulus in the form of introduction materials and issues relevant citizenship For build understanding beginning student to tasks to be done done . Next , students shared to in group For discuss and compile task based project through e- portfolio . Activities discussion group This help

student developing participation skills through Work equal , communication , and responsibility answer in group ( Saputri et al., 2021). In addition , the system assignment based portfolio also helps student develop intellectual skills, especially ability think critical and reflective in finish task learning ( Anugraheni , 2017; Taufiq et al., 2016; Sadikin et al., 2016). Assignment results student Then presented via Google Sites as part from each student's e- portfolio . Activities the digital presentation give chance to student For convey ideas , maintaining argumentation , and obtaining bait come back from lecturer and student others . This process show that use of e- portfolio Google Sites based can create more learning interactive , participatory , and reflective . At this stage end , lecturer give evaluation and reflection to tasks that have been presented . Reflection learning help student understand return material lectures in a way more deep at a time build awareness critical and responsible answer academic as part from the formation of smart and good citizenship ( Sarilan et al., 2020).

Research result This in line with research by Rahmawati et al. (2023) which shows that e- portfolio capable increase ability think creative and reflective student through the documentation and evaluation process learning in a way sustainable . In addition , Sadikin et al. (2016) also found that learning based portfolio can increase ability metacognitive and motivation Study students . However , research This own difference with study previously Because focus use of e- portfolio Google Sites based on development skills citizenship student in learning PPKn . With Thus , research This show that integration digital technology through e- portfolio No only impact on aspects cognitive and technical learning , but also can support strengthening students' citizenship skills in a way gradual and sustainable. Students mature this , it is necessary build appropriate skills with demands of the times as form from a sense of independence in manage information as well as own competent morality . Views Al Aslamiyah (2019) one of the most important factors that students must have is independence in learning, because by having independent learning, students will carry out their learning activities with a full sense of responsibility, strong will and have a high level of discipline so that it will have an impact on increasing learning achievement. Electronic portfolios ( *e-portfolios* ), as part of an innovative portfolio format that is no longer conventional, are a fresh innovation in accelerating the education system to meet the challenges of the times. This research strengthens several previous studies, including ( Barret , 2000; Taufik, et al. al , 2016;

Utami, et al , 2022; Fauzi; 2012). What is different then with the research conducted by the researcher is that the researcher found that quantitatively the contribution of technology in the world of education through electronic portfolios ( *e-portfolios* ) has a significant influence on students' actual skills and morality in citizenship skills, both *intellectually and morally*. both *participatory skills* to students.

Although this study shows that the implementation of electronic Although Google Sites-based e - portfolios significantly influence students' citizenship skills, this study has several limitations. The study was conducted in a single course and at a single institution, so the generalizability of the findings is still limited to similar contexts. Civic measurement Skills focuses more on a quantitative approach, thus not fully exploring the reflective process, internalization of moral values, and the dynamics of student participation during the use of e- portfolios . Furthermore, this study did not conduct comparisons with other digital platforms, so the effectiveness obtained cannot be determined whether it comes from the pedagogical design of the e-portfolio or from the characteristics of Google Sites as the medium used. The limited duration of the study, one semester, also does not allow for measuring the long-term impact on the formation of civic student disposition . Furthermore, factors such as digital literacy , learning motivation, and internet access have not been analyzed as variables that could potentially moderate research results.

## **CONCLUSION**

Based on research findings, the creation of Google Sites -based e-portfolios has a positive and significant impact on students' citizenship. Regression analysis results indicate that the use of e-portfolios can help students develop their citizenship skills, particularly in critical thinking, active participation, argumentative communication, and reflection on learning. Google Sites -based e-portfolios continue to be a relevant digital learning strategy in promoting high-level Civics learning, although their contribution is quite limited. Implementing e-portfolios through discussions, assignment preparation, digital presentations, and learning reflection can create a more interactive, participatory learning process that focuses on developing 21st-century competencies. In this way, integrating digital technology through e-portfolios can be a learning alternative that encourages the development of critical, engaged students with strong citizenship skills.

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