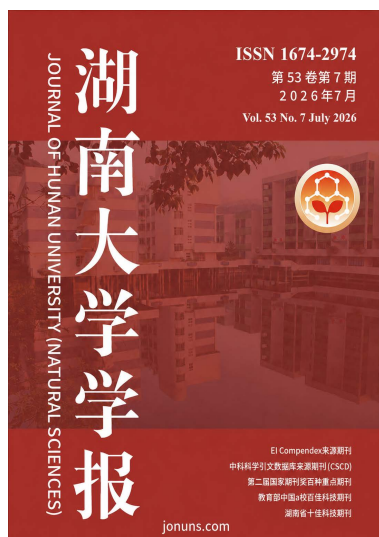




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Strengthening Students' Digital Ethics through Kampung Pancasila-Based Democratic Citizenship Education

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Abstract: The increasing use of digital technology has created growing challenges related to students' digital ethics, including misinformation, hate speech, cyberbullying, and irresponsible online participation. This study examined how a Kampung Pancasila-based democratic citizenship education model contributed to the development of digital ethics among senior high school students. An action research design was implemented through two iterative cycles of planning, action, observation, and reflection in three senior high schools representing urban, semi-urban, and rural contexts in Central Java, Indonesia. The study involved 120 students, with the participation of Citizenship Education teachers, school principals, and members of Kampung Pancasila communities. Data were collected through digital ethics assessments, observations, interviews, focus group discussions, field notes, and reflective records. The findings showed that the mean digital ethics score increased from 64.28 in Cycle 1 to 83.47 in Cycle 2, representing an increase of 19.19 points. The proportion of students meeting the Minimum Mastery Criterion (MMC) of 70 increased from 68.3% to 87.5%, exceeding the predetermined success criterion of 85%. A paired-samples t-test indicated a statistically significant improvement, $t(119) = 18.72$, $p < .001$, with a large effect size (Cohen's $d = 1.71$). The normalized gain (N-gain) score of 0.54 indicated a moderate improvement. The qualitative findings further demonstrated increased student participation, more responsible digital communication, critical evaluation of online information, digital empathy, and ethical



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online engagement. This study contributes to Citizenship Education and digital citizenship research by integrating Pancasila values, community-based democratic learning, digital ethics, and iterative action research across diverse school contexts. The findings suggest that the Kampung Pancasila-based democratic citizenship education model was associated with improvements in students’ digital ethics within the action research context; however, the absence of a control group limits causal interpretation.

Keywords: digital citizenship; digital ethics; Citizenship Education; Kampung Pancasila; democratic citizenship education; action research; Pancasila values.

通过基于“潘查希拉村”（Kampung Pancasila）的民主公民教育强化学生数字伦理

摘要：数字技术的日益广泛应用给学生数字伦理带来了越来越多的挑战，包括虚假信息、仇恨言论、网络欺凌以及不负责任的网络参与。本研究考察了基于“潘查希拉村”（Kampung Pancasila）的民主公民教育模式如何促进高中生数字伦理的发展。研究采用行动研究设计，在印度尼西亚中爪哇省三所分别代表城市、半城市和农村情境的高中开展了两个迭代周期，每个周期均包括计划、行动、观察和反思四个阶段。研究对象为120名学生，公民教育教师、学校校长以及Kampung Pancasila社区成员共同参与研究。数据通过数字伦理测评、观察、访谈、焦点小组讨论、田野笔记和反思记录收集。研究结果表明，学生数字伦理平均得分由第一周期的64.28分提高至第二周期的83.47分，提升了19.19分。达到最低掌握标准（MMC）70分的学生比例由68.3%提高至87.5%，超过了预先设定的85%成功标准。配对样本t检验显示，学生的数字伦理水平得到显著提高， $t(119) = 18.72, p < .001$ ，且效应量较大（Cohen’s $d = 1.71$ ）。标准化增益（N-gain）得分为0.54，表明改进程度处于中等水平。定性研究结果进一步表明，学生参与度、负责的数字沟通、对网络信息的批判性评价、数字同理心以及合乎伦理的网络参与均有所提高。本研究通过将潘查希拉价值观、社区参与式民主学习、数字伦理和跨不同学校情境的迭代行动研究相结合，为公民教育和数字公民研究作出了贡献。研究结果表明，在行动研究情境下，基于Kampung Pancasila的民主公民教育模式与学生数字伦理水平的提高存在关联；然而，由于缺乏对照组，研究无法作出明确的因果推断。

关键词：数字公民；数字伦理；公民教育；Kampung Pancasila；民主公民教育；行动研究；潘查希拉价值观。

1. Introduction

The rapid expansion of digital technology has transformed how young people communicate, participate, and interact in democratic society. In Indonesia, digital transformation has expanded opportunities for civic participation, digital engagement, and democratic communication, particularly among students. However, increased digital connectivity has also intensified ethical challenges, including misinformation, hate speech, cyberbullying, privacy violations, and irresponsible online behavior [1,2]. The 2024 National Digital Literacy Index further indicates that digital ethics and digital culture remain among the weaker dimensions of

Indonesian digital literacy. These conditions indicate that the central challenge of digital transformation is not merely access to technology, but the development of students' capacity to use digital spaces critically, responsibly, empathetically, and ethically.

Within this context, digital ethics has become an increasingly important dimension of Citizenship Education. Citizenship Education (Pendidikan Kewarganegaraan/PKn) has a strategic role in developing digital citizenship competencies, including critical thinking, responsible participation, respect for others, and ethical online behavior [3,4]. Nevertheless, Citizenship Education learning in Indonesia remains predominantly normative and, in many contexts, remains insufficiently connected to students' actual digital experiences [5,6]. Democratic values and Pancasila principles are often taught conceptually, while their application to contemporary digital interactions remains limited. Consequently, students may understand civic concepts theoretically but still experience difficulties in evaluating online information, communicating responsibly, responding to disagreement, and demonstrating ethical behavior in digital environments.

In this context, Kampung Pancasila offers a promising community-based approach to democratic learning. Kampung Pancasila refers to grassroots communities in which values such as tolerance, mutual cooperation (*gotong royong*), deliberation (*musyawarah*), and social solidarity are practiced in everyday life [7,8]. Rather than treating Pancasila values as abstract civic principles, Kampung Pancasila provides an authentic social environment in which students can observe, experience, and reflect on democratic and ethical practices. As living laboratories of democracy, these communities can provide meaningful opportunities for students to connect face-to-face social values with responsible participation in digital spaces.

Despite the growing importance of digital citizenship education, existing studies in Indonesia have largely examined digital literacy from a technical or competency-oriented perspective, while the ethical, democratic, and community-based dimensions of digital citizenship remain less developed [9,10]. Previous research has also rarely examined how Pancasila values and community participation can be systematically integrated into digital ethics learning through a democratic pedagogical model. Moreover, limited research has used an iterative action research approach to develop and refine such a model across different school contexts, particularly urban, semi-urban, and rural settings. This gap is important because students' digital experiences and opportunities for community-based learning may vary considerably across these contexts.

To address this gap, this study aims to develop and

evaluate a Kampung Pancasila-based democratic learning model for strengthening senior high school students' digital ethics. Using an iterative action research design, the study examines how the model can be developed, implemented, observed, and refined across urban, semi-urban, and rural school contexts. The study specifically focuses on students' responsible digital communication, digital empathy, critical evaluation of online information, and ethical digital participation.

The novelty of this study lies in the integration of four elements that have rarely been examined within a single educational framework: Pancasila values, digital ethics, democratic learning, and community-based participation. First, the study integrates Pancasila values with digital ethics by connecting locally practiced democratic principles such as tolerance, cooperation, deliberation, and social solidarity to students' behavior in digital environments. Second, it positions Kampung Pancasila not merely as a community program or cultural context, but as an active pedagogical space for developing digital citizenship and ethical participation. Third, the study employs an iterative action research process in which findings from the first cycle are used to refine the learning model in the second cycle. Fourth, the multisite design examines the implementation of this integrated model across urban, semi-urban, and rural school contexts, thereby providing a more context-responsive understanding of community-based digital ethics. Accordingly, this study contributes theoretically by extending digital citizenship education through a Pancasila-based and communitarian democratic perspective from the Global South, and practically by offering an adaptable learning model for Citizenship Education teachers and policymakers seeking to strengthen students' ethical participation in contemporary digital society.

2. Methods

2.1 Research Design and Participants

This study employed an Action Research design based on the cyclical and participatory principles of action research [11,12]. The design consisted of two iterative cycles of planning, action, observation, and reflection. Action research was selected because it enables researchers and practitioners to collaboratively identify learning problems, implement improvements, evaluate outcomes, and refine educational practices through continuous reflection [11,12]. This approach was particularly appropriate for the present study because the development of digital ethics requires not only knowledge of appropriate online behavior but also critical reflection on the social and moral consequences of digital participation [13]. The study was also situated within the broader context of Society 5.0, in which digital technologies increasingly shape

communication, participation, and social interaction while maintaining the importance of human-centered development [14,15].

The study was conducted from January to June 2025 in three senior high schools in Central Java, Indonesia. The schools were purposively selected to represent urban, semi-urban, and rural contexts, enabling the study to consider differences in socio-cultural environments, community participation, and access to digital technology. The participants consisted of 120 students, six Citizenship Education teachers, three school principals, and nine Kampung Pancasila community members. The same 120 students participated in both action research cycles. Teachers acted as practitioner-researchers and learning facilitators, principals supported institutional coordination, and community members contributed contextual perspectives and participated in community-based learning activities.

Participation was voluntary, institutional permission was obtained from the participating schools, informed consent was obtained from adult participants, and parental or guardian consent was obtained for student participants where required. Participant identities were kept confidential.

2.2 Participants

The study involved 120 senior high school students from three schools, comprising 40 students from an urban school, 40 from a semi-urban school, and 40 from a rural school. Additional participants included six Citizenship Education teachers, three school principals, and nine Kampung Pancasila community members.

The six teachers served as practitioner-researchers, collaborating in planning, implementing, observing, and reflecting on the learning intervention. The school principals provided institutional support and facilitated access to the research sites. Nine community members (three from each Kampung Pancasila community) participated as learning partners by sharing experiences of democratic practices, tolerance, and cooperation, and by engaging in discussions and reflection activities. Their involvement helped students connect Kampung Pancasila values with responsible communication, empathy, critical information evaluation, and ethical digital participation.

Data were collected through 18 semi-structured interviews (six teachers, three principals, six students, and three community members) and six FGDs, consisting of three student FGDs and three teacher-community FGDs. Each student FGD involved eight students representing the three school contexts, while each teacher-community FGD included teachers and Kampung Pancasila community representatives.

Table 1. Participant Distribution

Participant Group		Urban	Semi-Urban	Rural	Total
Students		40	40	40	120
Citizenship Education Teachers		2	2	2	6
School Principals		1	1	1	3
Kampung Pancasila Community Members		3	3	3	9
Total		46	46	46	138

2.3 Action Research Procedure

Each cycle followed the stages of planning, action, observation, and reflection. During the planning stage, the researcher and teachers prepared digital ethics materials, case-based activities, observation and assessment instruments, interview protocols, and FGD guidelines. The learning model integrated four dimensions of digital ethics: responsible digital communication, digital empathy, critical evaluation of online information, and ethical digital participation. These dimensions were connected with Pancasila values such as tolerance, mutual cooperation, deliberation, and social solidarity. This integration was informed by the understanding that digital literacy and citizenship education should encompass not only technical competencies but also ethical awareness, moral responsibility, and critical participation in digital society [13,16].

During the action stage, students engaged in case analysis, group discussion, collaborative problem-solving, democratic decision-making, information verification, ethical dilemma activities, peer learning, and contextual reflection. Cycle 1 implemented the initial learning model, while Cycle 2 incorporated improvements based on Cycle 1 findings, including more structured information verification, case-based tasks, peer teaching, ethical dilemma activities, and stronger community-based reflection.

Observation was conducted throughout both cycles to examine learning engagement, digital ethics behavior, critical thinking, collaboration, communication, democratic participation, learning experience, motivation, community integration, and model effectiveness. The same core observation indicators and scoring criteria were used across both cycles. At the end of each cycle, the researcher and teachers collaboratively reviewed the findings and identified areas for improvement. This iterative process enabled the learning model to be continuously refined in response to evidence generated during implementation [11,12].

Table 2. Observation Indicators

No.	Indicator	Key Focus	Respondents
1	Learning Engagement	Participation and involvement in learning	Teachers and students
2	Digital Ethics Behavior	Responsible and ethical digital conduct	Teachers and students
3	Critical Thinking	Analysis and evaluation of information	Teachers and students
4	Collaboration Skills	Teamwork in class and community activities	Teachers and students
5	Communication Skills	Clarity and respect in communication	Teachers
6	Democratic Participation	Discussion and decision-making	Students
7	Learning Experience	Perception of the learning model	Teachers and students
8	Model Effectiveness	Strengths and weaknesses of implementation	Teachers and students
9	Engagement and Motivation	Motivation and learning involvement	Teachers and students
10	Community Integration	Role of Kampung Pancasila in learning	Teachers and students
11	Improvement Feedback	Suggestions for model refinement	Teachers and students

2.4 Data Collection and Instrument Quality

Data were collected through digital ethics assessments, observation sheets, semi-structured interviews, FGDs, field notes, and reflective records. The digital ethics assessment measured responsible digital communication, digital empathy, critical evaluation of online information, and ethical digital participation.

The assessment and observation instruments were developed from relevant digital citizenship and digital ethics constructs and reviewed by three experts in Citizenship Education, digital citizenship, and educational assessment. The instruments were revised based on expert feedback and pilot-tested with students outside the research sample to examine clarity and

internal consistency. The assessment demonstrated acceptable reliability, while the observation instrument was discussed with participating teachers to promote consistent interpretation of indicators. The same core assessment dimensions and scoring criteria were used in both cycles.

Six semi-structured interviews were conducted with Citizenship Education teachers, three interviews with school principals, and nine interviews with Kampung Pancasila community members. In addition, six student FGDs were conducted across the three schools. Interviews and FGDs explored participants’ experiences, perceptions, challenges, and responses to the learning model.

2.5 Data Analysis

Quantitative and qualitative data were analyzed through an integrated approach. Quantitative analysis compared the digital ethics scores of the same 120 students across the two measurement points using a paired-samples t-test. The appropriateness of the analysis was examined through preliminary data assessment. Cohen’s *d* was used to determine the magnitude of the difference, while learning improvement was examined using the normalized gain (N-Gain) score.

The N-Gain score was calculated by dividing the difference between the post-test and pre-test scores by the maximum possible improvement, using the formula: $N\text{-Gain} = (\text{Post-test} - \text{Pre-test}) / (\text{Maximum Score} - \text{Pre-test})$. Based on the mean scores of 64.28 in Cycle 1 and 83.47 in Cycle 2, the N-Gain score was calculated as $(83.47 - 64.28) / (100 - 64.28) = 0.537$, which was rounded to 0.54 and interpreted as indicating moderate improvement.

The Minimum Mastery Criteria (MMC) was set at 70. The action research was considered successful when at least 85% of the students achieved a score of 70 or higher and demonstrated improvement in digital ethics-related learning behavior across the action research cycles.

Qualitative data from interviews, Focus Group Discussions (FGDs), observations, field notes, and reflective records were analyzed thematically through data familiarization, coding, categorization, theme development, comparison across data sources, and interpretation. The qualitative findings were integrated with the quantitative results to explain changes in students’ digital ethics across the two cycles. Data credibility was strengthened through methodological triangulation, persistent observation, peer debriefing, and collaborative reflection involving the researcher and participating teachers.

2.6 Ethical Considerations

This study was conducted in accordance with ethical principles for educational research involving

human participants. Institutional permission was obtained from the participating senior high schools before data collection began. Permission was also obtained from the relevant school authorities, including school principals and participating Citizenship Education teachers. Because the study involved senior high school students, informed consent was obtained from the students and parental or guardian consent was obtained where required by the participating institutions and applicable research procedures.

Participation in the study was voluntary. Participants were informed about the purpose and procedures of the research, the types of data collected, and their right to decline participation or withdraw from the study without academic penalty. The identities of students, teachers, school principals, and community members were kept confidential. No personally identifying information was disclosed in the manuscript, and the data were reported in aggregated form or using anonymized descriptions. All research data were used solely for academic and research purposes.

3. Results

This study examined the implementation and refinement of a Kampung Pancasila-based democratic learning model to strengthen students’ digital ethics through two action research cycles. The study involved the same 120 senior high school students from three schools representing urban, semi-urban, and rural contexts. The results were derived from digital ethics assessments, classroom observations, student activity records, interviews, Focus Group Discussions (FGDs), field notes, and reflective records. The findings are presented according to the stages of the two action research cycles and the comparative development of students’ digital ethics competencies.

3.1 Result Cycle 1

3.1.1 Planning Stage

The first cycle began with collaborative planning between the researcher and Citizenship Education teachers. The learning activities were designed to integrate digital ethics with democratic learning and the values of Kampung Pancasila. The preparation included lesson plans, case-based learning activities, student worksheets, digital ethics assessment instruments, observation sheets, interview protocols, FGD guidelines, and reflection procedures.

The learning activities focused on responsible digital communication, digital empathy, critical evaluation of online information, and ethical digital participation. These competencies were connected to Pancasila values practiced in Kampung Pancasila communities, including tolerance, mutual cooperation, deliberation, and social responsibility. The learning design also incorporated real-life digital issues,

including misinformation, hate speech, cyberbullying, and irresponsible online behavior.

3.1.2 Action Stage

Cycle 1 was implemented in three senior high schools representing urban, semi-urban, and rural contexts. The same 120 students participated in both action research cycles. The implementation was supported by six Citizenship Education teachers, three school principals, and nine Kampung Pancasila community members.

The learning activities included the exploration of digital ethics issues, group discussion, analysis of case-based scenarios, identification of ethical and unethical digital behavior, and reflection on the relationship between Pancasila values and digital participation. Students were encouraged to discuss digital ethical dilemmas and relate them to their own experiences in online environments. Teachers acted as facilitators, while the researcher observed the learning process and documented student participation and behavioral responses.

3.1.3 Observation Stage

Observation focused on teacher implementation, student engagement, digital ethics behavior, critical thinking, collaboration, communication, democratic participation, and the integration of Kampung Pancasila values into learning.

Table 3. Teacher Implementation in Cycle 1

Observed Aspect	Mean Score
Introduction and learning preparation	2.2
Core learning activities	2.7
Closing activities and reflection	2.6
Time management	2.0
Class engagement	2.3

The results indicate that the strongest aspect of teacher implementation was the core learning activity, particularly in facilitating case analysis and discussion. However, weaknesses remained in time management, student motivation, and classroom engagement.

Table 4. Student Learning Activities in Cycle 1

Activity	Frequency	Percentage
Participation in digital ethics discussion	86	43.0%
Completing case-based worksheets	26	13.0%
Peer discussion and collaboration	25	12.5%
Asking the teacher for	33	16.5%

Activity	Frequency Percentage	
clarification		
Irrelevant or off-task behavior	30	15.0%
Total	200	100%

The results indicate that participation in digital ethics discussions was the most frequently observed activity, accounting for 43.0% of the recorded activities. However, 15.0% of the observed activities involved irrelevant or off-task behavior, indicating that student engagement had not yet reached the expected level.

3.1.4 Digital Ethics Learning Outcomes

The digital ethics assessment conducted in Cycle 1 produced a mean score of 64.28. Based on the Minimum Mastery Criteria (MMC) of 70, 82 of the 120 students (68.3%) achieved the minimum standard, while 38 students (31.7%) remained below the MMC. Therefore, the predetermined success criterion of at least 85% of students achieving the MMC had not yet been reached.

The Cycle 1 findings indicated that students had begun to recognize examples of unethical digital behavior but still experienced difficulties in critically evaluating online information, explaining the consequences of digital actions, and consistently applying Pancasila values to digital behavior.

3.1.5 Reflection and Improvement Plan

The reflection stage identified several weaknesses in the initial implementation. Students' critical evaluation of online information remained limited, and some students tended to accept online information without sufficient verification. Participation was also uneven, with some students remaining passive during group discussions. In addition, the integration of Kampung Pancasila values into digital ethics activities was not yet consistently emphasized.

The quantitative findings supported these observations. The mean digital ethics score of 64.28 remained below the MMC of 70, and only 68.3% of students achieved the minimum standard, below the predetermined success criterion of 85%. Off-task behavior also remained relatively high at 15.0%.

Based on these findings, the learning model was refined for Cycle 2. The improvements included more structured information verification activities, additional case-based problem-solving tasks, peer teaching, ethical dilemma simulations, stronger student-centered learning strategies, and deeper integration of Kampung Pancasila community perspectives into the learning process.

3.1.6 Qualitative Findings in Cycle 1

The qualitative findings from Cycle 1 revealed several challenges in students' digital ethics and the implementation of the learning model. Interviews with Citizenship Education teachers indicated that students were generally familiar with social media and digital communication but did not consistently evaluate the credibility of online information before sharing it. One teacher explained:

Students are very active in using social media, but they do not always check whether the information they receive is accurate before sharing it. *(Teacher Interview, Cycle 1)*

Students also reported that they were more familiar with the technical use of digital platforms than with the ethical responsibilities associated with online participation. As one student stated:

We often use social media every day, but we have not really discussed how to respond responsibly when we receive information or disagree with other people online. *(Student Interview, Cycle 1)*

The Focus Group Discussions further indicated that students tended to understand Pancasila values primarily in relation to face-to-face social interactions and had difficulty connecting these values to digital communication. Community members similarly observed that students needed greater awareness of how online behavior could affect social relationships beyond the digital environment. These findings became the basis for refining the learning model in Cycle 2 by introducing more structured activities on information verification, ethical digital communication, critical discussion of online cases, and stronger integration of Kampung Pancasila community experiences.

3.2 Cycle 2

3.2.1 Planning Stage

The planning stage of Cycle 2 was based on the results of the Cycle 1 reflection. The researcher and Citizenship Education teachers revised the learning activities to increase student participation, strengthen critical evaluation of online information, and improve the connection between Pancasila values and digital ethics.

The revised learning design included structured digital ethics tasks, guided information verification, peer teaching, collaborative problem-solving, ethical dilemma simulations, and contextual reflection involving Kampung Pancasila community members. The revised design also placed greater emphasis on teacher facilitation and student autonomy.

3.2.2 Action Stage

Cycle 2 was implemented with the same 120 students, six Citizenship Education teachers, three school principals, and nine Kampung Pancasila community members. The learning activities focused on the analysis of real-life digital ethics cases,

verification of online information, collaborative decision-making, peer teaching, ethical dilemma simulations, and reflection on responsible digital participation.

Students were encouraged to justify their decisions, evaluate the credibility of information, and connect digital behavior with Pancasila values. Teachers acted primarily as facilitators, while community members contributed contextual perspectives on tolerance, mutual cooperation, deliberation, and social responsibility.

3.2.3 Observation Stage

Table 5. Teacher Implementation in Cycle 2

Observed Aspect	Mean Score
Introduction and learning preparation	2.6
Core learning activities	3.1
Closing activities and reflection	3.0
Time management	2.7
Class engagement	3.2

Compared with Cycle 1, teacher implementation improved across all observed aspects. The greatest improvement was observed in class engagement and the implementation of core learning activities. The results indicate that the revised learning design supported more effective facilitation of student-centered activities.

Table 6. Student Learning Activities in Cycle 2

Activity	Frequency	Percentage
Active participation in digital ethics discussion	110	55.0 %
Completing structured case-based tasks	40	20.0 %
Peer teaching and collaboration	28	14.0 %
Asking the teacher for clarification	12	6.0 %
Irrelevant or off-task behavior	10	5.0 %
Total	200	100 %

The results demonstrate increased student engagement in Cycle 2. Active participation in digital ethics discussions increased to 55.0%, while off-task behavior decreased to 5.0%. Students also demonstrated greater involvement in structured case-based activities, peer teaching, and collaborative learning.

3.2.4 Digital Ethics Learning Outcomes

The digital ethics assessment demonstrated substantial improvement between the two cycles. The

mean score increased from 64.28 in Cycle 1 to 83.47 in Cycle 2, representing an improvement of 19.19 points.

The number of students achieving the MMC also increased. In Cycle 2, 105 of the 120 students (87.5%) achieved a score of 70 or higher, while 15 students (12.5%) remained below the MMC. Thus, the predetermined success criterion of at least 85% of students achieving the MMC was achieved.

A paired-samples *t*-test was conducted because the same 120 students participated in both measurement points. The results indicated a statistically significant improvement in students’ digital ethics scores, $t(119) = 18.72, p < .001$. The effect size was large, with Cohen’s $d = 1.71$.

The magnitude of improvement was further examined using the normalized gain score. Based on the mean scores of 64.28 in Cycle 1 and 83.47 in Cycle 2, the N-Gain was calculated as follows: $N\text{-Gain} = (83.47 - 64.28) / (100 - 64.28) = 0.537$, which was rounded to 0.54. The N-Gain score of 0.54 indicated a moderate level of improvement in students’ digital ethics competencies.

3.2.5 Qualitative Findings

The qualitative findings provided further explanation of the quantitative improvement. Observations indicated that students became more active in discussing digital ethical issues and more willing to explain the reasoning behind their decisions. Students also demonstrated greater awareness of the consequences of sharing unverified information and engaging in disrespectful online communication.

Teacher interviews indicated that structured case-based learning and peer teaching created more opportunities for students to participate actively and develop greater autonomy. Teachers also reported that students became more willing to verify information and discuss the ethical consequences of digital behavior.

Qualitative findings further supported the quantitative improvement in students’ digital ethics. Teachers observed that students became more careful when evaluating online information and more aware of the consequences of their digital communication. One Citizenship Education teacher explained: Students no longer immediately believe or share information they find online. They now ask where the information comes from and discuss whether it is reliable. (*Teacher Interview, Cycle 2*)

Students also reported that the learning activities helped them connect Pancasila values with their everyday digital behavior. One student stated: Before this activity, I thought Pancasila values were mainly applied in everyday life. Now I understand that respecting others and being responsible also applies when we communicate on social media. (*Student Interview, Cycle 2*)

The involvement of the Kampung Pancasila community also strengthened the connection between civic values and digital ethics. A community member emphasized:
Students need to understand that what they do online can affect other people in the community. Mutual respect and responsibility should also be practiced in the digital environment. (*Community Member Interview, Cycle 2*)

These accounts complement the quantitative findings by indicating that the improvement in digital ethics was accompanied by changes in students' awareness of information credibility, responsible communication, and the relevance of Pancasila values to online participation. The involvement of Kampung Pancasila community members helped connect abstract Pancasila values with students' everyday experiences. Through contextual examples of tolerance, mutual cooperation, deliberation, and social responsibility, students were encouraged to understand that ethical behavior in digital spaces is connected to broader responsibilities as members of a democratic society.

3.3 Comparative Results between Cycle 1 and Cycle 2

The comparison of the two action research cycles demonstrates improvement in both the learning process and students' digital ethics competencies.

Table 7. Comparison of Action Research Findings between Cycle 1 and Cycle 2

Indicator	Cycle 1	Cycle 2	Change
Number of students	120	120	—
Mean digital ethics score	64.28	83.47	+19.19
Students achieving MMC ≥70	82 (68.3%)	105 (87.5%)	+19.2 percentage points
Students below MMC	38 (31.7%)	15 (12.5%)	-19.2 percentage points
Active participation in discussion	43.0%	55.0%	+12.0 percentage points
Off-task behavior	15.0%	5.0%	-10.0 percentage points
Paired-samples t-test	-	$t(119) = 18.72$	Significant
Significance	-	$p < .001$	Significant
Cohen's d	-	1.71	Large effect
N-Gain	-	0.54	Moderate improvement

Overall, the findings demonstrate improvement in students' digital ethics competencies and classroom engagement across the two action research cycles. The average digital ethics score increased by 19.19 points, while the proportion of students achieving the MMC increased from 68.3% to 87.5%. Student participation in digital ethics discussions also increased, while off-task behavior decreased.

The quantitative findings were supported by qualitative evidence from observations, interviews, FGDs, and reflective records. The findings indicated improvements in students' responsible digital communication, critical evaluation of online information, digital empathy, and ethical participation. The integration of Kampung Pancasila values provided a contextual framework through which students could connect democratic and social values with their behavior in digital environments.

However, because the study did not include a control group, the findings should be interpreted cautiously. The results indicate improvement associated with the implementation and refinement of the Kampung Pancasila-based democratic learning model within the action research context, but they do not establish that the model alone caused the observed changes. As shown in Figure 1, the comparison between Cycle 1 and Cycle 2 indicates improvement in students' digital ethics mean scores, the proportion of students achieving the MMC, and active discussion participation, while off-task behavior decreased.

4. Discussion

The findings of this study indicate that the implementation and refinement of a Kampung Pancasila-based democratic learning model were associated with meaningful improvements in students' digital ethics within the action research context. Across two iterative cycles, the mean digital ethics score increased from 64.28 to 83.47, while the proportion of students achieving the Minimum Mastery Criteria (MMC) of 70 increased from 68.3% to 87.5%. The paired-samples t-test also indicated a statistically significant difference between the two measurement points, with a large effect size (Cohen's $d = 1.71$). However, because the study did not employ a control group, these findings should be interpreted as evidence of improvement associated with the implementation and refinement of the learning model rather than as definitive evidence that the model alone caused the observed changes.

The improvement can be understood in relation to the limitations of conventional Citizenship Education in addressing contemporary digital ethical challenges. Digital citizenship is not limited to access to technology or technical digital literacy; it also involves responsible participation, ethical communication, critical engagement with information,

and awareness of the social consequences of digital behavior [3,4,9,10]. Digital literacy and citizenship education therefore require an ethical and moral dimension that enables students to critically evaluate information and understand the consequences of their actions in digital environments [13,16]. The improvement in students' digital ethics suggests that learning activities that directly engage students with real digital problems may be more meaningful than approaches that present civic and ethical principles primarily as abstract concepts. Through the analysis of misinformation, hate speech, cyberbullying, and irresponsible online participation, students were encouraged to examine how their digital actions affect others and the broader democratic community [1,2].

The findings also suggest that the democratic learning dimension of the model played an important role in supporting the development of digital ethics. Rather than positioning students as passive recipients of moral rules, the learning activities encouraged discussion, argumentation, collaborative problem-solving, information evaluation, and decision-making. This approach is consistent with research emphasizing the importance of guided classroom discussion for democratic citizenship education, particularly in developing students' ability to consider different perspectives, justify positions, and engage in deliberative interaction [18]. The increase in active participation in digital ethics discussions from 43.0% in Cycle 1 to 55.0% in Cycle 2, accompanied by a decrease in off-task behavior from 15.0% to 5.0%,

indicates improvement in students' engagement with the learning process. These changes are important because ethical digital behavior requires not only knowledge of appropriate conduct but also the ability to deliberate, evaluate consequences, listen to different perspectives, and make responsible decisions [3,18]. In this regard, democratic citizenship education must move beyond the transmission of civic knowledge and provide opportunities for students to experience democratic practices through learning [19,20].

The integration of Kampung Pancasila provided a distinctive contextual dimension to the development of digital ethics. The findings indicate that Pancasila values such as tolerance, mutual cooperation, deliberation, and social responsibility became more meaningful when connected to students' digital experiences. In this model, Kampung Pancasila functioned as a community-based pedagogical context rather than merely as a symbolic representation of national ideology [7,8]. The involvement of community members enabled students to connect civic values practiced in everyday social life with ethical behavior in digital environments. This finding is consistent with the broader potential of grassroots communities to develop social responsibility, inclusion, and civic competence through contextual social practices [17]. Consequently, digital ethics was framed not only as a matter of individual online conduct but also as part of students' broader responsibilities as members of a democratic society.

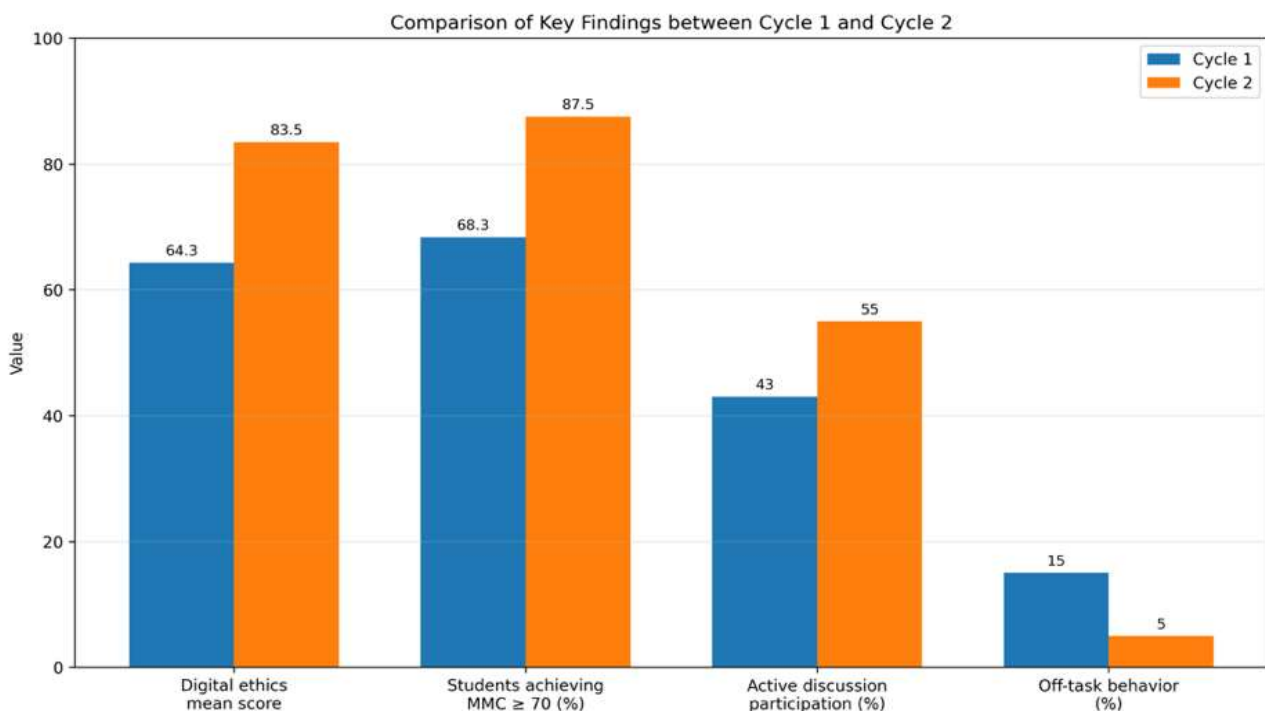


Figure 1. The comparison between Cycle 1 and Cycle 2

This finding contributes to the discussion of Pancasila-based civic learning by demonstrating the potential of community-based learning to bridge the gap between civic knowledge and civic practice. Traditional Citizenship Education may provide students with knowledge of democratic principles, but knowledge alone does not necessarily ensure that students will apply those principles in online interactions [5,6,10]. The Kampung Pancasila-based approach addressed this problem by creating opportunities for students to interpret and apply civic values through concrete ethical dilemmas. For example, tolerance could be connected to respectful online communication, mutual cooperation to collaborative digital participation, deliberation to evaluating different perspectives, and social responsibility to the consequences of sharing information online. This approach is particularly relevant in contemporary citizenship education, where democratic values must be connected to social, cultural, and moral dimensions rather than treated solely as formal political knowledge [19,20,23].

The improvement across cycles also demonstrates the value of the action research process itself. The first cycle revealed weaknesses in students' critical evaluation of online information, uneven participation, and insufficiently explicit connections between Pancasila values and digital ethics. These findings informed the refinement of the second cycle through more structured information-verification activities, case-based problem-solving, peer teaching, ethical dilemma activities, and deeper community integration. The improvement observed in Cycle 2 therefore reflects not simply the repetition of the same intervention but an iterative process in which evidence from classroom practice was used to revise the learning model. This finding supports the relevance of action research for Citizenship Education because the approach enables teachers and researchers to respond to contextual learning problems while simultaneously generating empirical knowledge [11,12]. The iterative process also reflects the broader need for democratic education to remain responsive to changing social conditions and contemporary challenges to civic life [19,21,22].

The multisite design further indicates that the model has potential relevance across different school contexts. By involving urban, semi-urban, and rural schools, the study recognizes that students' digital experiences are shaped by differences in social environments, access, patterns of technology use, and community relationships. A community-based approach such as Kampung Pancasila may therefore provide a flexible framework for connecting digital citizenship with local social realities. This contextual orientation is important because citizenship education is shaped by diverse social, cultural, and political

environments, and democratic learning cannot necessarily be transferred uniformly across contexts [20,22,23]. Nevertheless, the present study does not establish that the model operates identically across the three contexts, and further comparative analysis is needed to examine context-specific differences in implementation and outcomes.

The qualitative findings complement the quantitative results by suggesting how the observed improvement occurred. Students became more engaged in discussing digital ethical issues, evaluating the consequences of online actions, and considering the credibility of information. Teachers also reported that structured activities and peer learning created greater opportunities for student participation and autonomy. The involvement of community members further helped students understand that ethical digital participation is connected to broader principles of social responsibility. These findings indicate that the development of digital ethics may be strengthened when students are given opportunities to discuss, practice, and reflect on ethical decision-making rather than simply memorize rules of online behavior [13,16,18]. Such an approach also corresponds with the broader understanding of citizenship education as a process involving social, political, cultural, and moral development [23].

Overall, the findings extend existing discussions of digital citizenship by positioning digital ethics within a culturally grounded and community-based Citizenship Education framework. The contribution of this study lies in demonstrating how Pancasila values, democratic learning, community participation, and iterative action research can be integrated to address digital ethical challenges among senior high school students. The results suggest that the Kampung Pancasila-based learning model can support the development of students' digital ethics, particularly when learning is participatory, contextual, reflective, and connected to authentic community experiences. However, the findings should be interpreted within the boundaries of the action research design, and future studies using control or comparison groups are needed to examine the relative contribution of the model more rigorously.

5. Limitations

Several limitations should be acknowledged when interpreting the findings of this study. First, the action research design did not include a control or comparison group. Therefore, although the improvement in students' digital ethics between Cycle 1 and Cycle 2 was statistically significant, the findings cannot establish that the Kampung Pancasila-based learning model alone caused the observed improvement. Other factors, including repeated assessment, teacher development, classroom

interaction, and students' increasing familiarity with the learning activities, may also have contributed to the changes.

Second, the study was conducted in only three senior high schools representing urban, semi-urban, and rural contexts in Central Java, Indonesia. Although the multisite design provided contextual variation, the limited number of schools restricts the generalizability of the findings to other regions, school types, and educational contexts. The implementation of the model may also be influenced by differences in school resources, teacher competence, community participation, and students' digital access.

Third, the study involved the researcher and participating teachers in the implementation and evaluation of the action research. This collaborative arrangement may have introduced researcher and teacher-researcher bias, particularly during observations, reflections, and the interpretation of qualitative data. Although methodological triangulation, peer debriefing, persistent observation, and collaborative reflection were used to strengthen data credibility, the possibility of interpretive bias cannot be completely eliminated.

Fourth, the study focused on changes observed across two action research cycles and did not include extensive long-term follow-up. Consequently, the study cannot determine whether the improvement in students' digital ethics was sustained after the intervention ended. Future research should include longitudinal assessment to examine whether students continue to demonstrate responsible communication, critical information evaluation, digital empathy, and ethical online participation over time.

Finally, although the study combined quantitative and qualitative data, the digital ethics assessment primarily measured students' learning outcomes within the research context. Self-reported and classroom-based evidence may not fully represent students' actual behavior across all digital platforms and everyday online environments. Future studies should therefore consider combining learning assessments with longitudinal behavioral evidence, digital activity analysis where ethically appropriate, and comparative research designs to provide stronger evidence regarding the development and sustainability of students' digital ethics.

6. Conclusion and Recommendations

This study found that the implementation and refinement of a Kampung Pancasila-based democratic learning model were associated with improved students' digital ethics in Citizenship Education. Across two action research cycles involving 120 senior high school students from urban, semi-urban, and rural contexts, the mean digital ethics score increased from 64.28 to 83.47, while the proportion of students

achieving the Minimum Mastery Criteria (MMC) of 70 increased from 68.3% to 87.5%. The improvement was statistically significant, with a large effect size (Cohen's $d = 1.71$) and a moderate N-Gain score of 0.54.

The findings suggest that integrating Pancasila values, democratic participation, and community-based learning can support the development of students' responsible communication, digital empathy, critical evaluation of online information, and ethical digital participation. The study contributes a culturally grounded approach to digital citizenship education by positioning Kampung Pancasila as a contextual learning space for connecting civic values with digital ethics. However, because the study did not include a control group, the findings indicate improvement associated with the intervention rather than definitive causal evidence.

Based on the findings, Citizenship Education teachers are encouraged to integrate digital ethics with contextual, participatory, and community-based learning activities that connect Pancasila values with students' actual digital experiences. Kampung Pancasila can be utilized as a contextual learning environment to develop students' responsible communication, digital empathy, critical evaluation of online information, and ethical digital participation.

Schools and education policymakers may consider supporting collaboration between schools and local communities to strengthen digital citizenship education through culturally relevant learning models. Future research should employ comparative or quasi-experimental designs to provide stronger evidence regarding the effectiveness of the Kampung Pancasila-based learning model. Longitudinal studies are also recommended to examine whether improvements in students' digital ethics are sustained over time and how the model can be adapted to broader educational and regional contexts.

Author Contributions

Isra Nur Hanifah conceptualized the study, developed the research design, coordinated the action research implementation, collected and analyzed the data, and prepared the initial manuscript. Eny Kusdarini contributed to the development of the Citizenship Education framework, research methodology, and critical revision of the manuscript. Aman Aman contributed to the theoretical framework, interpretation of the findings, and critical review of the manuscript. Linda Oktaviani contributed to the research design, data interpretation, manuscript revision, and critical review of the final version. All authors reviewed and approved the final version of the manuscript.

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Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this manuscript.

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