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Association of digital ethics as a civic virtue on ChatGPT misuse behavior among high school students

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Abstract

The development of artificial intelligence technology, such as ChatGPT, has had a significant impact on education worldwide, including in Ambon City. However, its use often raises the risk of misuse, especially in cases of plagiarism, task manipulation, or the instant completion of academic assignments. The research method used is a descriptive, non-experimental, quantitative approach, with 120 high school students in Ambon City as respondents. This research aims to analyse the association between digital ethics as a civic virtue and ChatGPT misuse, and to identify the relationship between indicators in both variables. The research instrument consisted of 15 indicators of digital ethics and 15 indicators of ChatGPT misuse. The results showed that the digital ethics instrument had very good reliability (Cronbach's Alpha = 0.867), and ChatGPT misuse behaviour also had very high reliability (Cronbach's Alpha = 0.932). Fourteen of the 15 indicators of digital ethics and all indicators of ChatGPT misuse were declared valid. This research also showed a positive and significant influence between digital ethics and ChatGPT misuse behaviour ($r = 0.203$, $p = 0.027$). Although the correlation is weak, a p-value <0.05 indicates that the relationship remains significant. This relationship suggests that students who have knowledge of digital ethics do not always practice ethical behaviour when using ChatGPT. This finding provides new insights into the complexity of students' digital behaviour, suggesting that an understanding of digital ethics does not always guarantee ethical behaviour in the digital realm, necessitating the need for more effective digital citizenship education strategies.

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Introduction

New advances in artificial intelligence (AI), such as ChatGPT, have transformed the way students search, process, and utilise information for their learning needs. ChatGPT has become widely known as an AI assistant for students, capable of generating text, writing summaries, providing answers, and completing school assignments quickly (Vieriu & Petrea, 2025). While ChatGPT can enhance creativity, reading and writing skills, and effective research practices, concerns have been raised about its misuse, such as plagiarism, haphazard responses, and over-reliance on instant information without critical thinking (Elstad, 2024).

In Ambon City itself, a growing number of students are using ChatGPT. Although students living in Ambon City are highly tech-savvy and possess a basic understanding of right and

wrong, they often fail to act ethically in their daily lives, particularly when it comes to completing schoolwork honestly. Several factors contribute to this problem, including a lack of understanding of digital ethics, poor student self-control, heavy schoolwork, and unclear rules regarding the use of AI in schools (Fauziddin et al., 2025). Furthermore, many students perceive ChatGPT as a good way to complete assignments more quickly, but they fail to consider the ethical and academic issues that accompany it (Yang et al., 2024). This raises the question: How significant is the relationship between students' digital ethical behaviour as a civic virtue and the appropriate use of ChatGPT?

Civic virtue, seen as a key moral characteristic of society, originates in Aristotle's theory of virtue, which emphasises honesty, responsibility, justice, and self-control (Aristotle, 2009). These ideas are adapted to the online environment through the concept of Digital Citizenship, which emphasises the importance of moral behaviour when using electronic devices (Ribble, 2011). Therefore, this research is very important for investigating how students behave and demonstrate ethical behaviour in the use of artificial intelligence in academic settings, particularly in a developing city like Ambon, which has not been widely studied in school research, locally or globally. Previous research has shown that simply learning digital ethics does not guarantee that individuals will consistently engage in ethical behaviour in the digital world (Floridi, 2020; Kimmons, 2023). Studies from various countries also indicate that students are more likely to misuse AI due to school-related stress, perceived speed, and a lack of clear guidelines on AI use in schools (Zhang et al., 2024). However, most of this research has been conducted in developed countries or large cities, while the local cultural educational context in Ambon has received less attention. Furthermore, studies on ChatGPT use in Indonesia have largely focused on university students rather than high school students.

According to a recent review by Guenduez et al. (2025), digital ethics is about understanding right and wrong in the use of technology, such as being honest, responsible, and aware of potential risks. To use digital ethics effectively, one must possess a combination of skills: technical skills (using technology), critical thinking skills, and emotional/ethical skills (understanding moral implications and adhering to academic norms) to prevent the misuse of digital technology (Yeo, 2023). At the same time, inappropriate uses of ChatGPT include actions that are contrary to honesty in school and digital ethics, such as using machines to cheat, copying content without understanding, and using AI to avoid learning in the right way (Ortiz & Blahopoulou, 2025). According to Triastuti (2019), this technological progress can create a high level of human dependency, and its presence is felt not only in the real world but also in the digital world. This research integrates various ideas from different fields to explain the reasons behind unethical use.

Various theoretical frameworks are required to understand the dynamics of students' ethics and behaviour when using technology in the digital age. This concept is rooted in the Digital Citizenship Theory proposed by Ribble and Bailey (2007), which emphasises that responsible use of technology must be consistent with a code of ethics. Ribble (2015) identified nine key components of digital citizenship, including digital etiquette, which serves as an individual's moral standard for online interaction. This understanding aligns with the evolution of Digital Literacy Theory. Digital literacy is no longer merely the ability to search for and evaluate information; it also encompasses the capacity for ethical behaviour, such as students' ability to determine when to use artificial intelligence (AI) and to provide proper attribution (Balalle & Pannilage, 2025). Furthermore, through critical literacy, students are equipped with essential skills to analyse social issues and take practical, solution-oriented actions, both in the real world and on digital platforms (Nurjanah et al., 2024).

In an educational context, Bretag's (2016),Academic Integrity and Normativity Theory asserts that adherence to integrity goes beyond mere rule-following; it represents a principle of personal ethics. Easy access to technology often triggers violations such as plagiarism and cheating under pressure (Zanetti & Butera, 2023), underscoring the need to reinforce intrinsic moral responsibility (Sozon et al., 2024). This behaviour can also be explained by social

learning theory (Bandura, 1977), in which the misuse of tools such as ChatGPT can become widespread when students observe and imitate their peers. Furthermore, Ajzen's (1991), theory of planned behaviour explains that students' intentions to use technology ethically—or otherwise—are significantly influenced by their personal attitudes, the subjective norms in their environment, and their perceptions of behavioural control.

Another internal factor is the theory of moral development (Kohlberg, 1981). Students whose moral reasoning is still centred on peer conformity tend to disregard the principle of academic honesty. Therefore, the ability for Self-Regulated Learning (SRL) becomes crucial. According to Zimmerman (2002), students with self-regulation will proactively manage their thoughts and actions to achieve academic goals through perseverance and self-confidence. From a more macro perspective, the Socio-Technical Perspective views the misuse of technology as the result of a complex interaction between technological ease of use, school policies, and a competitive culture that demands multi-layered solutions (Yeung et al., 2025). Finally, the Technology Acceptance Model (TAM) (Venkatesh & Davis, 2000) helps explain that high perceptions of ChatGPT's usefulness and ease of use will increase adoption among students, which, if not accompanied by an ethical understanding, can easily shift into misuse.

This study aims to fill a gap in the literature by critically evaluating previous research on digital ethics and the use of artificial intelligence (AI). Although the theme of digital ethics has been explored by Mahendra (2024) at SMK 4 Semarang, demonstrating the effectiveness of interactive methods in changing online behaviour, the focus of that study remains limited to social media interactions in general and has not yet addressed the specifics of generative AI technologies such as ChatGPT. Demographic and contextual differences also constitute a key distinction of this research. Studies by Amala et al. (2023) and Acosta et al. (2024) provide in-depth insights into ethical perceptions of ChatGPT use, data protection, and academic integrity; however, both focus exclusively on university-level students.

Meanwhile, research at the secondary school level conducted in Padang by Putri Sarah et al. (2025) indicates a moderate level of ChatGPT usage, but has not yet integrated a digital ethics perspective from a citizenship perspective. Furthermore, a review of the works by Thong et al. (2023) and Jamalludin and Adriansyah (2025) indicates that the current literature tends to focus solely on general perceptions, concerns regarding plagiarism, or the impact of AI on critical thinking skills. These studies have not comprehensively discussed actual ethical behaviour or concrete examples of the misuse of AI technology in the learning process.

Based on this gap analysis, this research offers novelty through four main contributions. First, indicator integration to conduct an in-depth analysis of correlations and to develop digital ethics indicators specifically linked to the misuse of ChatGPT. Second, a demographic focus, shifting the research focus from the university level to the secondary school level (SMA/SMK), to fill the data gap for this age group in Indonesia. Third, the methodological approach, which combines a psychometric approach with an analysis of real-world behaviour related to ChatGPT misuse, is rare in similar studies. Fourth, local and cultural context, to provide the first empirical evidence mapping the formation of digital ethics and its relationship with the use of AI technology within the specific cultural context of the Maluku Islands, particularly among students in Ambon City.

Based on these gaps, this research aims to analyse the validity, reliability, and correlation structure to measure the relationship between digital ethics indicators and ChatGPT misuse, and to explain the influence of both variables on students in Ambon City. The goal is to map relevant digital ethics concepts as civic virtues to understand the causes, forms, and impacts of ChatGPT misuse in the educational context. Civic virtue, a core ethical aspect of citizenship, is redefined in the digital world using principles of digital ethics that emphasise qualities such as integrity, accountability, concern for others, fairness, and self-discipline. These principles are then translated into measurable indicators of ethical behaviour in the digital space, including

proper citation practices, the use of appropriate technological tools, and the avoidance of technology-facilitated academic dishonesty.

Method

This research uses a descriptive non-experimental quantitative approach with a correlational and psychometric analysis design. This approach was used to test the validity, reliability, and correlations, and to conduct regression analyses, between digital ethics variables and ChatGPT misuse. Through this design, the researcher aimed to analyse the relationship between these two variables among high school students in Ambon City. The selection of this research design was based on its ability to provide an objective, systematic, and measurable empirical picture of students' digital ethical behaviour in the context of AI technology misuse.

The research was conducted at several high schools in Ambon City, namely SMA Negeri 1 Ambon, SMA Negeri 12 Ambon, SMA Maria Mediatrix Ambon, and SMA Muhammadiyah Ambon, with a total of 120 students as respondents. Respondents were obtained using a purposive sampling technique. Ambon City was chosen as the research location because it is the educational centre of the Maluku Islands region, which is experiencing an increase in the use of digital technology in learning.

This research involves two main variables: 1) Student Digital Ethics as civic virtue (Variable X) to measure students' understanding, attitudes, and awareness of rules, moral values, and responsibilities in using digital technology. 2) Misuse of ChatGPT by Students (Variable Y) to measure students' behaviour in using ChatGPT unethically or contrary to academic honesty. The variables in this research use a questionnaire instrument, with each variable having 15 indicators in the form of 15 statements. The independent variable instrument (X) regarding Digital Ethics consists of positive statements measured using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). Meanwhile, the dependent variable instrument (Y) regarding ChatGPT misuse consists of negative statements measured using a 5-point Likert scale (1 = strongly agree to 5 = strongly disagree).

Table 1.

Independent Variable Statement: "Digital Ethics as a Civic Virtue"

No	Statement	Assessment Criteria				
		SS	S	RR	TS	STS
1	I know the difference between using ChatGPT as a tool and plagiarizing the results.					
2	I understand that copying answers from ChatGPT for assignments or exams is an ethical violation.					
3	I understand that excessive use of ChatGPT in academic assignments can be categorized as misuse.					
4	I double-checked the accuracy of the information provided by ChatGPT when searching for answers.					
5	I believe that copying answers from ChatGPT without correcting the content is unethical.					
6	Academic integrity remains important even with technologies like ChatGPT that make tasks easier.					
7	I am aware that using ChatGPT without understanding can negatively impact the learning process.					
8	I have considered the negative impact of overusing ChatGPT.					
9	I strive to use ChatGPT to enhance ideas, not to replace my thought process.					

10	I use ChatGPT as a reference, not to copy direct answers.
11	I have been able to resist the temptation to cheat with the help of ChatGPT.
12	I understand that excessive use of ChatGPT can diminish learning discipline.
13	I believe it is crucial to maintain academic honesty when using ChatGPT.
14	I am interested in learning how to ethically use ChatGPT in academic activities.
15	I have familiarized myself with the guidelines or rules of ethics for using AI technologies like ChatGPT in educational settings.

Table 2.

Dependent Variable Statement: "ChatGPT Misuse"

No	Statement	Assessment Criteria				
		STS	TS	RR	S	SS
1	I often use ChatGPT to complete tasks without rereading or editing the results.					
2	I submit tasks created by ChatGPT as if they were the result of my own work.					
3	I find it easier to use ChatGPT than to think.					
4	I don't see any problems in using ChatGPT to work on exams or individual assignments.					
5	I know that overusing ChatGPT in academic assignments can be categorized as misuse, but I do it anyway.					
6	I rarely check the accuracy of the information ChatGPT provides when copying answers.					
7	I prefer to rely on ChatGPT rather than looking for references from books or journals.					
8	I consider the use of ChatGPT to be okay as long as the grades or results are good.					
9	I felt that my critical thinking skills were diminished because I used ChatGPT too much, but I did it anyway.					
10	I feel like I don't need to bother learning independently because I can easily get answers through ChatGPT.					
11	I feel like ChatGPT often makes me put in less effort in understanding the subject matter.					
12	I once got high marks from assignments that were entirely created by ChatGPT.					
13	I feel that the misuse of ChatGPT is not a serious violation.					
14	I didn't know that copying answers from ChatGPT for an assignment or during an exam was an ethical violation.					
15	I'm more motivated to complete tasks quickly than to learn from the process.					

The research instruments for the independent and dependent variables were developed through a series of systematic steps. The first step began with initial observations at the schools being studied, focusing on the extent to which AI, specifically ChatGPT, was integrated into students' academic activities. This was done to ensure that the questionnaire statements aligned with the actual situation. The second step involved a literature review to identify the concept of digital ethics as a civic virtue and the inappropriate misuse of AI, specifically ChatGPT, among high school students. Based on this review, research indicators were established and presented as questionnaire items using a Likert scale. The third step involved expert judgment to verify the instrument's suitability for evaluating the subject. The assessment was carried out by senior colleagues.

This study used a self-report system, which may introduce distortions related to self-perception, particularly social desirability bias, in which people tend to present themselves in ways that are considered socially acceptable (Paulhus, 1991). Because the topics discussed relate to digital ethics and academic integrity, which are inherently normative, the results of this study may reflect participants' desired attitudes rather than their actual behaviour (Creswell, 2014). Therefore, the findings obtained from this study should be interpreted with caution.

The data collection technique used was an online questionnaire (Google Forms) to facilitate respondent access and transparency, and to coordinate with homeroom teachers to ensure proper distribution. Before completing the questionnaire, respondents received written consent explaining the purpose of the research and how to complete it. Data analysis used SPSS software, including validity and reliability testing procedures, as well as correlation and regression analyses.

Results and Discussion

This section comprehensively discusses the research findings to answer the research problem formulation and objectives: (1) analysing the validity and reliability of digital ethics and ChatGPT misuse instruments; (2) understanding the correlation patterns between indicators; (3) explaining the relationship between digital ethics and ChatGPT misuse; and (4) the influence of digital ethics on ChatGPT misuse by students in Ambon City. The discussion focuses on how and why these findings emerged, as well as their implications for the broader context.

Validity and Reliability of the Digital Ethics as a Civic Virtue and ChatGPT Misuse Instrument

The validity test results indicate that almost all indicators for the Digital Ethics (X) and ChatGPT Abuse (Y) variables meet the statistical validity criteria. Fourteen of the 15 X indicators had a Corrected Item–Total Correlation value ≥ 0.30. Only one indicator, X1, had a value of 0.135 (below the standard). All 15 Y indicators were declared valid, with a Corrected Item–Total Correlation value ≥ 0.47, so no items needed to be eliminated. This demonstrates that each indicator consistently measures the fundamental aspects of each variable. The instrument's reliability was also very high, with α values of 0.867 for the Digital Ethics variable and 0.932 for the ChatGPT Misuse variable. These findings indicate that ethical behaviour and ChatGPT misuse among students can be measured reliably using the instrument. These results align with several previous studies that confirmed that students' digital behaviour can be reliably mapped using specific indicators (Floridi, 2020; Ribble, 2011). Assuming strong validity and reliability, this means we can measure ethical and unethical behaviour in technology, rather than viewing them solely as theoretical concepts. The results show that both variables exhibit consistent psychological properties, making them suitable for assessing how students respond to digital technology. The stability of this instrument suggests that students in Ambon City have integrated the notion of digital ethics and inappropriate use of ChatGPT into their digital activities. In a real-world context, this instrument could serve as a tool for identifying the digital skills schools need to develop, especially in regions like Ambon, where artificial intelligence is being integrated into education at an increasingly rapid pace. This

situation aligns with the increasing reliance on the internet and social media, which has led students to develop consistent patterns of digital behaviour.

Correlation Patterns between Digital Ethics Indicators and ChatGPT Misuse

The correlation analysis between indicators revealed a strong, significant relationship across most indicators in both the X and Y variables. For the Digital Ethics variable, indicators X11 ($r = 0.724$), X10 ($r = 0.680$), X13 ($r = 0.676$), and X6 ($r = 0.675$) demonstrated the strongest relationships with the total score. These indicators relate to aspects of digital moral awareness, caution, integrity, and the ability to assess risks in technology use. This finding supports the argument that students generally understand the basic principles of digital ethics, such as honesty, responsibility, and caution. However, this understanding does not always translate into actual behaviour, especially when faced with generative technologies like ChatGPT, which offer convenience and efficiency in completing academic assignments.

This phenomenon is consistent with Bandura's (1999) theory of moral disengagement, which explains that individuals can understand moral values but choose to suspend these principles when certain incentives are present, such as academic pressure or the need to complete tasks quickly. Meanwhile, in the ChatGPT Misuse variable, indicators Y3 ($r = 0.830$), Y2 ($r = 0.823$), Y7 ($r = 0.811$), and Y12 ($r = 0.762$) contributed the most. These indicators reflect students' tendency to use ChatGPT to complete assignments instantly, engage in AI-based plagiarism, and dependency on ChatGPT. This is consistent with the findings of Wang & Fan (2025) research, which reported an increase in AI-assisted plagiarism among students due to the perception that AI technology can "replace the thinking process". Among students in Ambon City, factors such as limited school facilities, pressure to complete assignments, and weak digital ethics education at the educational unit level reinforce the tendency to use ChatGPT unethically. The valid ChatGPT misuse instrument used in this research indicates that the phenomenon of ChatGPT misuse is no longer merely a global issue, but also occurs significantly in island regions such as Ambon. In practice, these findings demonstrate the need for schools not only to teach ethics conceptually but also to develop self-control skills and practices for responsible AI use.

The convergence of structural and pedagogical limitations amplifies the risk of unethical AI utilisation among students. In contexts where access to learning resources is uneven and instructional guidance on digital ethics remains minimal, students are more likely to perceive tools such as ChatGPT as shortcuts rather than as complementary learning aids. This instrumentalist perception is further reinforced by academic pressures that prioritise task completion over process-oriented learning. Empirical studies by Balalle and Pannilage (2025) indicate that the rapid integration of generative AI has significantly challenged academic integrity, underscoring the need for a balanced approach to technology use and ethical standards in education (Dwivedi et al., 2023). Consequently, the absence of integrative digital ethics frameworks within classroom practices contributes to a normalisation of misuse behaviours, particularly in peripheral regions where systemic educational disparities persist (Zawacki-Richter et al., 2019; Holmes et al., 2022).

These conditions underscore the urgency of reorienting educational strategies toward a more holistic and preventive approach. Recent literature emphasises that reliance on detection-based mechanisms alone is insufficient; instead, institutions must adopt ethically grounded and pedagogically driven frameworks for AI use (Leaton et al., 2025). Schools must move beyond normative instruction of ethical principles and instead embed responsible AI practices into everyday learning activities through contextualised pedagogy. This includes fostering critical digital literacy, strengthening students' metacognitive awareness, and cultivating accountability in technology use. Supporting this, research indicates that irresponsible AI use among students is a growing global concern, reinforcing the need for structured ethical guidance and policy integration within educational systems (Amigud & Pell, 2025).

The Relationship between Digital Ethics and ChatGPT Misuse

The main finding of this research is a significant positive relationship between Digital Ethics and ChatGPT Misuse ($r = 0.203$, $p = 0.027$). Although the correlation is weak, a p-value < 0.05 indicates that the relationship remains significant. This relationship suggests that students with knowledge of digital ethics do not necessarily practice ethical behaviour when using ChatGPT. Theoretically, high levels of digital ethics should decrease technology misuse. However, the positive relationship suggests that students with a strong understanding of digital ethics tend to be more active in using ChatGPT. This pattern aligns with the concept of digital affordances, which explains that the higher a person's digital literacy, the more actively they explore technological features, including their potential for misuse. In other words, students with high digital ethics don't necessarily avoid using ChatGPT; in fact, they interact with technology more frequently, increasing the likelihood of misuse when there is insufficient guidance or self-control (Stahl & Eke, 2024). Several reasons can explain the phenomena in this research:

1. Knowledge does not always contribute to ethical behaviour

   Many students know what is ethically correct, but still choose actions that are practical or immediately beneficial. This aligns with Kimmons's (2023) research, which found that students' digital literacy does not automatically prevent misuse of AI without moral motivation and oversight.

2. ChatGPT is highly accessible and provides fast results

   The speed and completeness of ChatGPT's answers make students prefer it even though they understand the prohibition on plagiarism. High accessibility often trumps moral standards, especially under assignment pressure.

3. Lack of guidelines for AI use in schools

   Many schools lack clear rules regarding the use of ChatGPT. In this context, students rely on personal standards, which often do not align with academic ethics.

4. Students' digital ethics remain cognitively focused

   The instrument results show that students' digital ethics are stronger in terms of knowledge than in habits and attitudes. This creates an ethical intention gap between what is known and what is done. Thus, although digital ethics has a significant influence, its contribution to misuse behaviour is relatively small because students' attitudes toward AI technology are more influenced by contextual and psychological factors than by ethical understanding alone (Shaayesteh et al., 2025).

The outcome aligns with numerous Indonesian research efforts, such as Agustin et al. (2024), which found that proficiency in digital skills does not always translate into digital morality, especially among secondary school pupils. Furthermore, within Maluku's collectivist cultural framework, group standards often have a stronger influence on shaping students' actions than an individual's understanding of ethical principles. This reinforces the assertion that the success of teaching ethics in the digital world hinges not solely on moral understanding but equally on a supportive educational setting that cultivates academic integrity.

In practical terms, this research offers significant implications for educational institutions and instructors. *Firstly*, digital ethics instruction should be integrated into the educational curriculum in a practical way rather than focusing solely on rules and standards. Students should be trained to navigate real-life scenarios involving ChatGPT, including examples of its appropriate and inappropriate use.

Secondly, educational institutions should establish guidelines and protocols for the use of AI in education to ensure students understand the boundaries of acceptable behaviour. According to Triyanto (2020), the main challenge in education today is how to teach students

to navigate ethical issues in the digital age, including addressing dangers such as academic dishonesty. Therefore, it is crucial for educational policymakers to create effective, systematic, and comprehensive plans to develop digital ethics and shape students' digital character (Acosta-Ponce et al., 2024; Mahendra, 2024; Amala et al., 2023). *Thirdly,* instructors should promote a culture of academic integrity, as highlighted in the digital citizenship model. *Lastly,* parents should monitor the use of AI technology at home, especially during school assignments (Cotton et al., 2023; Kasneci et al., 2023).

In theory, this research enhances our understanding of how students engage with digital tools and platforms in the age of artificial intelligence, particularly in the Indonesian context. The research also shows that adherence to digital ethical standards is not the only factor affecting technology misuse; therefore, further research is needed to incorporate additional factors, such as self-management, peer influence, and school-related stress. Additionally, the results of this research pave the way for the development of new frameworks that better reflect how Indonesian students behave in the digital world. Consequently, this research demonstrates that misuse of ChatGPT still occurs due to situational and environmental factors, despite students' good understanding of digital ethics. Therefore, the proposed solutions not only focus on improving digital ethics but also on establishing a learning environment based on integrity, strengthening school rules, and promoting responsible use of artificial intelligence.

The Influence of Digital Ethics on ChatGPT Misuse

Regression analysis of both variables indicates a relationship between Student Digital Ethics (X) and ChatGPT Misuse by Students (Y). The results of the Regression Coefficient Model Test are as follows.

Table 3.
Model Coefficients

Variable	B	t	Sig
Constant	29.302	3.543	.001
Digital Ethics Student	0.304	2.246	.027

These results indicate that Student Digital Ethics has a significant positive influence on ChatGPT Misuse. This positive influence does not necessarily imply that digital ethics encourages misuse. Rather, these results illustrate:

1. Students with better digital literacy tend to use ChatGPT more frequently, increasing the likelihood of misuse.
2. High frequency of use is not always accompanied by strong ethical oversight, especially under academic pressure.
3. Digital ethics has not yet become a behavioural filter; it is merely a cognitive understanding, not yet a habit or character trait.

The findings presented here align with the research conducted by Memarian & Doleck (2023), which demonstrated that learners tend to use ChatGPT as a shortcut to academic success rather than engaging in deeper learning through investigation. This behaviour is influenced by the ease of access, the quick delivery of answers, and the perception that AI can replace the cognitive effort required for schoolwork (Nguyen et al., 2024). This could have significant implications, particularly for maintaining educational standards. These concerns could also develop into issues related to students' intellectual abilities or critical thinking skills as artificial intelligence, such as ChatGPT, becomes more widespread. These tools have the potential to impact students' honesty in completing schoolwork (Cathrin et al., 2024). In conclusion, this phenomenon highlights that the misuse of AI tools by students is not solely attributed to the technology itself but also to a lack of understanding of the importance of academic integrity and online responsibility. This aligns with the literature on techno-moral behaviour, which holds that digital ethics must be grounded in practical awareness rather than

theoretical knowledge (Floridi, 2022). Therefore, it is very important to integrate Pancasila values as citizen virtues into digital learning so that it is more relevant to the daily lives of Generation Z. This ensures that not only do they have technical skills that can be applied in the digital world, but they can also behave as responsible and wise individuals in carrying out digital activities (Muhajir et al., 2025).

The significant influence of Digital Ethics (X) on ChatGPT Misuse (Y) is evident in the model summary variable explanation level:

R = 0.203

R Square = 0.041 (4.1%)

This indicates that Student Digital Ethics accounts for only 4.1% of the variation in ChatGPT misuse. Therefore, 95.9% of the variance is attributed to other factors that significantly influence ChatGPT misuse, such as:

1. student self-control,
2. perceived benefits of ChatGPT,
3. task pressure,
4. digital literacy skills,
5. school regulations,
6. social and cultural factors in learning.

Models with small R-squares like this are common in social research, especially when examining student behaviour.

Based on the research findings and discussion, students have not fully integrated digital ethics into their academic behaviour, suggesting that these ethical rules have not been ingrained in their habits. According to virtue ethics, strong moral character is developed not only by understanding concepts but through consistent patterns of behaviour (Aristotle, 2009). In line with MacIntyre (2007), moral guidelines only influence behaviour when viewed as personal attributes shaped by community interactions. Therefore, digital ethics, which is currently limited to a theoretical level, cannot yet provide guidance for everyday actions in the school environment.

Conclusion

This research demonstrates that the digital ethics and misuse of ChatGPT by students in Ambon City have strong psychometric qualities, characterised by high item validity across almost all indicators and excellent internal reliability. Therefore, this instrument can be consistently used to measure students' digital behaviour in the era of artificial intelligence. Correlation analysis shows that indicators within each variable are significantly interrelated, while the relationship between digital ethics and ChatGPT misuse is positive but weak. This suggests that although students understand the values of digital ethics, this understanding does not completely prevent the misuse of generative AI. The scientific contribution of this research lies in strengthening the empirical basis for the relationship between digital ethics and misuse of AI technology among students. It also contributes to the development of a standardised instrument for further studies on AI literacy, academic integrity, and digital citizenship. Furthermore, this research provides a new perspective on the research of digital behaviour in Indonesia, particularly in the context of an archipelagic nation like Ambon City, which remains underexplored in the literature. This opens up opportunities to develop educational theories and interventions that are more relevant to the dynamics of AI technology use among the younger generation.

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Ethics Approval

This is an observational study, and the research has been approved by the Ambon City government, so no ethical approval is required.

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