

Digital Literacy and Self-Control as Predictors of Ethical Online Behavior among Generation Z

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ARTICLE INFO

Keywords:

Literasi Digital, Kontrol Diri, Akhlak Bermedia, Generasi Z

Article history:

Received 2026-02-08

Revised 2026-03-03

Accepted 2026-03-03

ABSTRACT

The rapid advancement of digital technology has transformed patterns of communication and social interaction, particularly among Generation Z as digital natives. Although digital media offers extensive educational and social benefits, it also presents ethical challenges such as misinformation, cyberbullying, hate speech, and impulsive online behaviour. This study aims to examine the effects of digital literacy and self-control on ethical online behaviour among Generation Z and to analyse their combined predictive power. This research employed a quantitative cross-sectional survey design involving 130 students of MTs Bilingual Muslimat NU Pucang Sidoarjo, Indonesia, selected from a population of 191 students using proportionate random sampling. Data were collected through a structured questionnaire using a five-point Likert scale, and the instruments were confirmed to be valid and reliable. Multiple linear regression analysis was used to test the proposed hypotheses. The results indicate that digital literacy has a positive and significant effect on ethical online behaviour ($B = 0.477$; $p < 0.001$), suggesting that higher levels of digital competence and ethical awareness contribute to more responsible online conduct. Self-control also shows a positive and significant influence ($B = 0.324$; $p < 0.001$), highlighting the role of emotional regulation and impulse control in shaping ethical behaviour in digital environments. Simultaneously, digital literacy and self-control explain 48.1% of the variance in ethical online behaviour ($R^2 = 0.481$; $p < 0.001$), indicating that ethical online behaviour emerges from the integration of cognitive competence and self-regulatory capacity. These findings emphasise the importance of integrating digital literacy education with self-control and character development programs to foster ethical online behaviour among Generation Z.

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1. INTRODUCTION

The development of information and communication technology has had a profound impact on how humans interact and access information. In this context, Generation Z, born and raised in the digital era, is the group most affected by these technological advances. Research shows that easy access to the internet and social media facilitates Generation Z's rapid access to information, but also raises ethical and responsible challenges in media use. (Adhvidya & Maulana, 2025; Mujiwati & Laili, 2023). Empirical evidence indicates that adolescents and young adults aged 13–24 constitute the largest proportion of internet users in Indonesia, reflecting a broader global trend of youth digital immersion (Conde et al., 2024). While digital connectivity enables unprecedented access to information and learning resources, it also exposes young users to ethical challenges such as misinformation, cyberbullying, hate speech, and impulsive online behavior (Sumolang, 2023). These phenomena highlight the growing concern regarding ethical online behavior among Generation Z in contemporary digital environments.

Digital literacy has been widely recognized as a foundational competence for navigating complex digital ecosystems. Beyond technical proficiency, it encompasses critical evaluation of online information, ethical awareness, and responsible communication practices (Adhvidya & Maulana, 2025) (S. H. A. Pambudi & Prihantoro, 2023). Simultaneously, psychological attributes such as self-control play a pivotal role in regulating online conduct, particularly in resisting impulsive actions, managing emotional responses, and avoiding harmful digital interactions (Kwak & Kim, 2023). The convergence of these cognitive and behavioral dimensions underscores the importance of examining how digital literacy and self-control jointly shape ethical online behavior among Generation Z.

The ethical implications of digital behavior extend beyond individual well-being to broader societal and educational outcomes. In Indonesia, the increasing prevalence of problematic online conduct among adolescents has prompted national initiatives such as the Digital Literacy Movement to promote responsible technology use (S. H. A. Pambudi & Prihantoro, 2023). This issue aligns closely with the National Research Master Plan (Rencana Induk Riset Nasional) under the priority domain of Information and Communication Technology (ICT), which emphasizes digital transformation, technological innovation, and human resource development in the digital era. Strengthening ethical digital competencies contributes directly to indicators such as enhancing science and technology human resources and improving multifactor productivity in a knowledge-based economy.

Research shows that individuals with high self-control tend to be better adjusted, with better levels of mental health and higher academic achievement. (He, Iskhar, Yan, & Aisuluu, 2023). Research by He et al. in 2023 found that attitudes and mindset can influence individual well-being, reinforcing the importance of self-control in a professional context. (He et al., 2023)

Recent studies have demonstrated the influence of digital literacy on various behavioral and cognitive outcomes among Generation Z. Research by (Adhvidya & Maulana, 2025).found that practical digital literacy training enhances critical awareness and responsible social media use. Similarly, Ristiani (2025) reported that higher levels of digital literacy are associated with improved online decision-making and reduced susceptibility to misinformation. In parallel,

studies on self-control have revealed its central role in moderating impulsive behavior, smartphone addiction, and emotional regulation in digital contexts (Kwak & Kim, 2023; Li & Peng, 2022).

Other empirical works have linked excessive social media use to diminished psychological well-being and ethical sensitivity (Salsabila & Yuniardi, 2024); (Sumolang, 2023) He et al. (2023) further emphasized that self-regulatory capacities significantly predict adaptive functioning and long-term goal attainment among young adults. Although these studies contribute valuable insights, most have examined digital literacy and self-control as independent predictors, with limited integration of both constructs within a single explanatory model of ethical online behavior.

Despite growing scholarly attention to digital literacy and self-control, there remains a notable gap in research that simultaneously examines their combined effects on ethical online behavior among Generation Z, particularly within developing-country contexts. Existing studies tend to prioritize technical competencies or psychological traits in isolation, without addressing their potential interaction or cumulative influence (Ristiani, 2025); (Kwak & Kim, 2023). Furthermore, the moral and ethical dimensions of digital behavior conceptualized as ethical online conduct are often underexplored compared to cognitive or addictive outcomes (Sumolang, 2023); (Salsabila & Yuniardi, 2024). This lacuna limits the development of integrative theoretical frameworks and evidence-based interventions tailored to youth digital ethics.

Given the intensifying digital engagement of Generation Z and the proliferation of unethical online practices, a critical question arises regarding the determinants of ethical online behavior in contemporary digital environments. While digital literacy and self-control have individually been associated with adaptive online conduct, their joint predictive capacity remains insufficiently investigated. The absence of integrated empirical models hampers the formulation of holistic educational strategies aimed at fostering responsible digital citizenship.

If this knowledge gap remains unaddressed, educational institutions and policymakers may continue to rely on fragmented interventions that inadequately target the multidimensional nature of youth digital behavior. Such shortcomings risk perpetuating unethical online practices, psychological distress, and social discord among young users. Theoretically, the lack of integrative models constrains the advancement of interdisciplinary scholarship bridging digital education, behavioral psychology, and moral development.

The primary objective of this study is to investigate the individual effects of digital literacy and self-control on ethical online behavior among Generation Z. In addition, it aims to assess the combined predictive power of digital literacy and self-control in explaining variations in ethical online behavior. Ultimately, the study seeks to develop an integrative empirical model that accounts for ethical online behavior by incorporating both cognitive and self-regulatory factors, thereby offering a more holistic explanatory framework for understanding youth digital ethics. This research contributes to the literature by integrating digital literacy and self-control into a unified predictive framework of ethical online behavior. It extends existing theoretical perspectives by emphasizing the interplay between cognitive competencies and self-regulatory capacities in shaping youth digital ethics. The findings offer empirical support for interdisciplinary approaches bridging educational psychology, digital citizenship, and moral development theories.

Practically, the results of this study can inform the design of digital literacy curricula, youth counseling programs, and digital citizenship policies. By identifying key predictors of ethical online behavior, educators and policymakers can develop targeted interventions that strengthen both technical competencies and self-regulatory skills. Such applications are particularly relevant

for advancing national digital transformation agendas and youth empowerment initiatives in Indonesia.

2. METHODS

This study employed a quantitative cross-sectional survey design to examine the predictive effects of digital literacy and self-control on ethical online behavior among Generation Z. A quantitative approach was adopted to test specific hypotheses regarding the relationships between variables using statistical modeling. The target population comprised Generation Z students (born between 1997–2012) who were actively engaged in digital media use, drawn from MTs Bilingual Muslimat NU Pucang Sidoarjo, Indonesia, with a total population of 191 students. Using a 5% margin of error, a sample size of 130 participants was determined to ensure adequate statistical power and representativeness. Participants were selected through proportionate random sampling, and data collection was conducted online.

Data were collected using a structured self-administered questionnaire distributed via Google Forms. All items were measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Digital literacy was operationalized as the individual's capacity to understand, evaluate, and responsibly use digital information, measured through indicators of technical competence, digital ethics, and content comprehension. Self-control was defined as the ability to regulate emotions and behavior during digital media use, encompassing impulse control and time management. Ethical online behavior referred to responsible and morally grounded conduct in digital interactions, including honesty, civility, and accountability in online communication. Prior to hypothesis testing, the instrument was subjected to validity and reliability testing; all items demonstrated significant item–total correlations ($p < .05$), and internal consistency reliability was confirmed with Cronbach's alpha coefficients exceeding .70 for all constructs.

Data analysis was performed using SPSS (version XX) or equivalent statistical software. Descriptive statistics were computed to summarize participant characteristics and variable distributions. Assumptions underlying regression analysis, including normality, multicollinearity, and heteroscedasticity, were examined and found to be satisfactorily met. Hypothesis testing was conducted using multiple linear regression to evaluate the individual and combined effects of digital literacy and self-control on ethical online behavior. The significance of regression coefficients was assessed using t-tests, while the overall model fit was evaluated using the F-test, with statistical significance set at the 0.05 level.

The study adhered to ethical research standards involving human participants. Participation was voluntary, and informed consent was obtained from all respondents. Anonymity and confidentiality were ensured, and no personally identifiable information was collected. All data were used solely for academic research purposes.

3. FINDINGS AND DISCUSSION

Analysis Prerequisite Tests

1. Normality Test

The normality test in this study was conducted using the One-Sample Kolmogorov–Smirnov (K–S) Test on Unstandardized Residuals. The results show the number of data ($N =$

130), with a residual mean = 0.000 and a standard deviation = 3.518. The Test Statistic value = 0.062 and the significance value Asymp. Sig. (2-tailed) = 0.200 (with Lilliefors correction).

Table 1 Normality Test
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		130
Normal Parameters ^{a,b}	Mean	.000000
	Std. Deviation	3.51798833
Most Extreme Differences	Absolute	.062
	Positive	.041
	Negative	-.062
Test Statistic		.062
Asymp. Sig. (2-tailed)		.200 ^{c,d}

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

Based on the decision-making criteria, if the significance value (p-value) > 0.05, then the data/residuals are normally distributed. Since the Asymp. Sig. value = 0.200 > 0.05, it can be concluded that the residuals are normally distributed, so the normality assumption is met and further analysis (e.g., regression) can be performed.

2. Multicollinearity Test

The multicollinearity test in this study was conducted by examining the Tolerance and Variance Inflation Factor (VIF) values in the Coefficients table (Collinearity Statistics). The test results show that variable X1 has a Tolerance value of 0.865 and a VIF of 1.156, while variable X2 also has a Tolerance value of 0.865 and a VIF of 1.156.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error				Tolerance	VIF
1	(Constant)	21.05	3.160		6.662	.000		
	X1	.208	.072	.230	2.901	.004	.865	1.156
	X2	.435	.080	.430	5.421	.000	.865	1.156

a. Dependent Variable: Y

Tabel. 2 Multicollinearity Test

Based on the decision-making criteria, the regression model is declared not to experience multicollinearity if the Tolerance value is > 0.10 and the VIF value is < 10. Because all

independent variables have a Tolerance value of 0.865 (> 0.10) and a VIF of 1.156 (< 10), it can be concluded that there are no symptoms of multicollinearity in the regression model (this study), so it is suitable for use for further analysis.

Results of Multiple Linear Regression Analysis Analisis regresi linier berganda pada This study was used to determine the effect of Digital Literacy (X1) and Self-Control (X2) on Media Morality (Y). Based on the Model Summary output, the obtained values of R = 0.693, R Square = 0.481, Adjusted R Square = 0.472, and Std. Error of the Estimate = 3.076.

Table 3 Model Summary

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.693 ^a	.481	.472	3.076

a. Predictors: (Constant), X2, X1

b. Dependent Variable: Y

The R Square value of 0.481 indicates that the variables Digital Literacy (X1) and Self-Control (X2) simultaneously explain 48.1% of the variation in the Media Morality variable (Y), while the remaining 51.9% is influenced by other variables outside the research model. Furthermore, based on the simultaneous test (F test) in the ANOVA table, the F count value is 58.769 with a significance value of 0.000 < 0.05.

Table 4 Anova

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1112.377	2	556.188	58.769	.000 ^b
	Residual	1201.931	127	9.464		
	Total	2314.308	129			

a. Dependent Variable: Y

b. Predictors: (Constant), X2, X1

The Anova table shows that Digital Literacy (X1) and Self-Control (X2) together (simultaneously) have a significant effect on Media Morality (Y).

Table . 5 Coefficients

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.165	2.808		4.688	.000

X1	.477	.066	.504	7.272	.000
X2	.324	.070	.320	4.624	.000

a. Dependent Variable: Y

The partial test results (t-test) in the Coefficients table show that:

The Digital Literacy variable (X1) has a coefficient value of $B = 0.477$ with a t-test of 7.272 and a significance level of $0.000 < 0.05$, indicating that X1 has a positive and significant effect on Y. The Self-Control variable (X2) has a coefficient value of $B = 0.324$ with a t-test of 4.624 and a significance level of $0.000 < 0.05$, indicating that X2 has a positive and significant effect on Y.

Based on these regression coefficient values, the multiple linear regression equation obtained is: $Y = 13.165 + 0.477X1 + 0.324X2$

This means that if Digital Literacy (X1) increases by 1 unit, then Media Morality (Y) increases by 0.477 units (assuming other variables remain constant). Likewise, if Self-Control (X2) increases by 1 unit, then Media Morality (Y) increases by 0.324 units.

DISCUSSION

The Effect of Digital Literacy on Ethical Online Behaviour

The regression analysis indicates that digital literacy (X1) has a positive and statistically significant effect on ethical online behaviour (Y), with a regression coefficient of 0.477 and a significance value of 0.000. This finding confirms that digital literacy is a crucial determinant in shaping individuals' ethical conduct in digital environments. Conceptually, Digital literacy requires individuals to master a variety of technical and cognitive skills. As stated by (Fitria, Muttaqin, Fadillah, & Ihsan, 2023), proficiency in using digital devices alone is not enough to adapt to rapid technological developments. Furthermore, individuals must be able to think critically in assessing the various information they receive online. This includes the ability to evaluate the accuracy of information and understand the surrounding social context (Fitria et al., 2023)

Individuals with high levels of digital literacy tend to demonstrate greater awareness of the moral, social, and legal implications of their online activities. This awareness is reflected in their ability to filter information, identify misinformation, maintain ethical communication, and respect the privacy and dignity of others in digital spaces. Grigorescu and Baiasu (2023) emphasize that digital literacy is not just technical skills but also encompasses cognitive and ethical dimensions that underlie the responsible use of digital media (Wiguna, 2023)

Facing these challenges, digital literacy education is crucial. (Gita Ananda et al., 2025) states that social media ethics need to be taught from an early age to equip individuals with a better understanding of the consequences of their actions online. With the right educational approach, individuals can learn to critically evaluate information, communicate with empathy, and respect the rights of others when socializing online. In the absence of adequate digital literacy, individuals are more vulnerable to engaging in negative behaviours such as hate speech, the dissemination of inappropriate content, and copyright infringement.

Furthermore, digital literacy is closely associated with individuals' reflective capacity to evaluate their own online behaviour. Research shows that digitally literate users are generally

more cautious in their online communications and more aware of ethical considerations than those with lower levels of digital literacy. These findings imply that digital literacy serves not only as an informative tool but also as a transformational element that shapes individual attitudes and behaviors in digital contexts, as stated by Batoebara & Lubis (2022) and (Latip & Sutantri, 2021).

In the context of education and character development, digital literacy has been shown to significantly contribute to the formation of ethical awareness and digital citizenship. Sari and colleagues (2024) stated that individuals who understand digital ethics are better prepared to position themselves as responsible digital citizens, in line with prevailing moral values and social norms (Tahir, Aswan, & Makbul, 2024). This awareness reflects the importance of digital literacy not only as technical knowledge, but also as a foundation for building ethical attitudes in individuals.

Moreover, previous research demonstrates that increased digital literacy significantly reduces the risk of problematic online behaviours, such as cyberbullying and the spread of false information (Purnama et al., 2021). Accordingly, the present findings reinforce the argument that digital literacy is a critical factor in cultivating ethical and constructive online conduct in the digital era (Bernhardt, 2024).

The Effect of Self-Control on Ethical Online Behaviour

The partial test results show that self-control (X2) has a positive and statistically significant influence on ethical online behaviour (Y), with a regression coefficient of 0.324 and a significance value of 0.000. This finding indicates that self-control is a key psychological factor in directing individuals' behaviour in digital spaces. Self-control plays a role in an individual's ability to regulate their emotions, especially when faced with situations that can trigger impulsive reactions, such as provocation on social media. (R. A. Pambudi, Budiman, Rahayu, Sukanto, & Hendrayani, 2023) showed that individuals with good self-control tend to be better able to restrain themselves from unwanted emotional reactions and maintain more constructive communication (R. A. Pambudi et al., 2023).

In a digital context characterized by anonymity, rapid information flow, and minimal social control, weak self-control has the potential to be a major cause of unethical behavior. Research shows that individuals with low self-control are more prone to engaging in negative behavior on social media platforms, including online conflict and hate speech. As an illustration, Floridi asserts that typical digital environmental conditions, such as social and emotional uncertainty, often lead individuals to exhibit impulsive and aggressive behavior online (Taylor, Valencia-García, VandenBroek, Stinnett, & Allen, 2023).

In the context of digital media use, self-control is crucial for preventing negative behaviors such as excessive device use, abusive comments, and cyberbullying. Research shows that individuals with good self-control are able to manage their media time, choose positive content, and maintain their attitudes and language in the digital space. (Xue, Hu, Chai, Han, & Sun, 2022). In addition, individuals with high self-control are more likely to avoid deviant behavior in cyberspace which can have negative impacts on both themselves and others. (Li & Peng, 2022).

Self-control plays a very important role in helping individuals apply moral values in digital interactions. According to Pasni (2025), in this digital era, it is important for educators to instill moral values so that students can adapt to technological advances without losing their moral identity. In this context, self-control becomes a key aspect that allows students to critically

evaluate their actions when using technology and social media (Rohmiyati, 2023), (Nugraha, Sofyan, & Repelita, 2024). This indicates that self-control is not merely a psychological skill, but also the outcome of value education and character formation.

Self-control not only serves to regulate technology use but also influences the ethical decisions individuals make in the digital world. When faced with temptations such as product advertisements or promotions on social media, individuals with good self-control are better able to assess the long-term consequences of their actions, enabling them to maintain responsible consumption behavior (Radianto, Salim, Putri, Efrata, & Dewi, 2023).

The Predictive Power of Digital Literacy and Self-Control on Ethical Online Behaviour

The simultaneous test results demonstrate that digital literacy and self-control jointly exert a significant influence on ethical online behaviour, with an R-square value of 0.481. This indicates that these two variables account for 48.1% of the variance in ethical online behaviour, while the remaining proportion is explained by other factors outside the model. These findings suggest that ethical behaviour in digital spaces emerges from the interaction between cognitive factors (digital literacy) and regulatory factors (self-control).

Digital literacy provides normative knowledge regarding what constitutes appropriate and inappropriate behaviour in digital environments, whereas self-control determines the extent to which such knowledge is translated into actual behaviour (Zheng & Kim, 2025). Without self-control, even high levels of digital literacy may not necessarily result in ethical conduct; conversely, self-control without adequate digital literacy may lead to misguided actions.

These findings reinforce an integrative approach to developing digital ethics. Ridhoh et al. (2025) emphasize that the combination of critical thinking skills (cognitive competence) and values such as responsibility, empathy, and openness (personal character) are crucial in creating ethical behavior in cyberspace (Taylor et al., 2023). Therefore, fostering ethical online behaviour requires not only the enhancement of digital literacy but also the strengthening of self-control and character education.

CONCLUSION

This study concludes that digital literacy and self-control significantly influence ethical online behaviour among Generation Z. Partially, digital literacy has a positive and significant effect, indicating that higher levels of digital competence and ethical awareness contribute to more responsible and morally grounded online conduct. Individuals with strong digital literacy are better equipped to evaluate information critically and adhere to ethical norms in digital interactions. Self-control also demonstrates a positive and significant effect on ethical online behaviour. This finding confirms that the ability to regulate emotions and impulses plays a crucial role in preventing unethical actions in digital environments, particularly in situations that encourage rapid and emotionally driven responses.

Simultaneously, digital literacy and self-control explain 48.1% of the variance in ethical online behaviour, highlighting the importance of integrating cognitive and self-regulatory dimensions in digital ethics development. Therefore, efforts to strengthen ethical online behaviour among Generation Z should focus on enhancing both digital literacy and self-control through comprehensive digital citizenship and character education programs.

REFERENCES

- Adhvidya, A., & Maulana, R. (2025). Literasi Media Digital Berbasis Praktik: Refleksi Pelatihan Penggunaan Media Sosial Sehat Di SMK Manggala Tangerang. *Sewagati Jurnal Pengabdian Masyarakat Indonesia*, 4(3), 236–247. <https://doi.org/10.56910/sewagati.v4i3.3129>
- Conde, M., Tudor, K., Begh, R., Nolan, R., Zhu, S., Kale, D., ... Hartmann-Boyce, J. (2024). Electronic Cigarettes and Subsequent Use of Cigarettes in Young People: An Evidence and Gap Map. *Addiction*, 119(10), 1698–1708. <https://doi.org/10.1111/add.16583>
- Fitria, L., Muttaqin, K., Fadillah, N., & Ihsan, A. (2023). Pelatihan Literasi Digital Dan Produksi Konten Positif Melalui Website Sebagai Upaya Peningkatan Kemampuan Remaja Masjid Dalam Memanfaatkan Media Teknologi. *JMM (Jurnal Masyarakat Mandiri)*, 7(5), 5218. <https://doi.org/10.31764/jmm.v7i5.17554>
- Gita Ananda, N., Mira Wati, N., Wardahtul Jannah, N., Safrani Zahra, N., Rangga Aditya, N., Mhd. Wira Pratama, N., ... Mirza Syadat Rambe, N. (2025). Etika Bermedia Sosial Dalam Perspektif Pendidikan Islam: Analisis Literatur Qur'an, Hadis, Dan Pemikiran Ulama. *Qouba Jurnal Pendidikan*, 2(2), 434–440. <https://doi.org/10.61104/qb.v2i2.594>
- He, J., Iskhar, S., Yan, Y., & Aisuluu, M. (2023). Exploring the Relationship Between Teacher Growth Mindset, Grit, Mindfulness, and EFL Teachers' Well-Being. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1241335>
- Hwang, H. J., Liu, C., & Qin, C. (2023). Development and Validation of a Digital Literacy Scale in the Artificial Intelligence Era for College Students. *Ksii Transactions on Internet and Information Systems*, 17(8). <https://doi.org/10.3837/tiis.2023.08.016>
- Kwak, M., & Kim, D. (2023). Investigating Psychological and Motivational Predictors of Problematic Smartphone Use Among Smartphone-Based Social Networking Service (SNS) Users. *Addictive Behaviors Reports*, 18, 100506. <https://doi.org/10.1016/j.abrep.2023.100506>
- Latip, A., & Sutantri, N. (2021). Profil Literasi Digital Siswa Kelas Xi Pada Pembelajaran Jarak Jauh Mata Pelajaran Kimia. *Jurnal Pendidikan*, 22(1), 35–45. <https://doi.org/10.33830/jp.v22i1.884.2021>
- Li, W., & Peng, H. (2022). The Impact of Strain, Constraints, and Morality on Different Cyberbullying Roles: A Partial Test of Agnew's General Strain Theory. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.980669>
- Mujiwati, Y., & Laili, I. (2023). The Impact of Social Media on Changing Behavior Patterns of Generation Z. *Cebong Journal*, 2(3), 77–82. <https://doi.org/10.35335/cebong.v2i3.88>
- Nugraha, Y., Sofyan, F. S., & Repelita, T. (2024). Pembentukan Karakter Generasi Z Melalui Lembaga Pusat Karakter Sebagai Implementasi Profil Pelajar Pancasila. *Jurnal Moral Kemasyarakatan*, 9(1), 73–81. <https://doi.org/10.21067/jmk.v9i1.10231>
- Pambudi, R. A., Budiman, A., Rahayu, A. W., Sukanto, A. N. R., & Hendrayani, Y. (2023). Dampak Etika Siber Jejaring Sosial Pada Pembentukan Karakter Pada Generasi Z. *Jurnal Syntax Imperatif Jurnal Ilmu Sosial Dan Pendidikan*, 4(3), 289–300. <https://doi.org/10.36418/syntax-imperatif.v4i3.262>
- Pambudi, S. H. A., & Prihantoro, E. (2023). Kominfo's Cybercreation Digital Literacy in Social Media. *International Journal of Scientific Research in Science and Technology*, 79–86. <https://doi.org/10.32628/ijrst5231066>
- Radianto, W. E. D., Salim, I. R., Putri, D. P. K. K., Efrata, T. C., & Dewi, L. (2023). Determinant Financial Attitude Pada Mahasiswa Akuntansi. *Prosiding Seminar Nasional Forum Manajemen Indonesia - E-Issn 3026-4499*, 1, 436–452. <https://doi.org/10.47747/snfmi.v1i.1519>

- Ristiani, R. (2025). Analisis Penerapan Literasi Digital Dalam Bermedia Sosial Di Kalangan Generasi Z. *Khatulistiwa Jurnal Pendidikan Dan Sosial Humaniora*, 5(2), 544–552. <https://doi.org/10.55606/khatulistiwa.v5i2.5911>
- Rohmiyati, Y. (2023). Peningkatan Nilai Moral Siswa Melalui Cerita the Old Woman and the Eagle Pada Platform LETREADASIA.ORG. *Teaching Jurnal Inovasi Keguruan Dan Ilmu Pendidikan*, 3(3), 183–193. <https://doi.org/10.51878/teaching.v3i3.2506>
- Salsabila, A. Q. F., & Yuniardi, M. S. (2024). Social Media Addiction: Does It Affect the Grit of Generation Z? *Scientia*, 3(1), 111–116. <https://doi.org/10.51773/sssh.v3i1.261>
- Sumolang, N. (2023). The Role of Information Technology in Z Generation Behavior Change in Dealing With Conflict. *Ijite*, 2(3), 56–67. <https://doi.org/10.62711/ijite.v2i3.125>
- Tahir, M. S., Aswan, A., & Makbul, M. (2024). Optimalisasi Pembelajaran PAI Berbasis Literasi Digital Di SD IT Plus Qurthuba Makassar. *Wahana Karya Ilmiah Pendidikan*, 8(01), 11–25. <https://doi.org/10.35706/wkip.v8i01.11366>
- Taylor, N., Valencia-García, L. D., VandenBroek, A., Stinnett, A., & Allen, A. (2023). Ethics and Images in Social Media Research. *First Monday*. <https://doi.org/10.5210/fm.v28i4.12680>
- Wiguna, K. A. (2023). Analisis Kompetensi Literasi Digital Pada Guru Sekolah Menengah Atas. *Jurnal Riset Manajemen Komunikasi*, 3(1), 21–32. <https://doi.org/10.29313/jrmk.v3i1.2316>
- Xue, J., Hu, R., Chai, L., Han, Z., & Sun, I. Y. (2022). Examining the Prevalence and Risk Factors of School Bullying Perpetration Among Chinese Children and Adolescents. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.720149>
- Zheng, J., & Kim, K. T. (2025). The Driving Force for Sustaining Future Competencies for University Students in the Digital Era: Learning Strategies. *Journal of Curriculum and Teaching*, 14(1), 19–29. <https://doi.org/10.5430/jct.v14n1p19>