

Journal of Noesantara Islamic Studies

E - ISSN 3048-2658 | P - ISSN 3048-1147

Generation Z and Religious Moderation: Building Tolerance in an Era Digital

Rosyida Nurul Anwar ¹

¹ Universitas PGRI Madiun, Indoensia

Corresponding Author: Rosyida Nurul Anwar,

E-mail: rosyidanurul@unipma.ac.id

Received: Sep 18, 2024

Revised: Sep 20, 2024

Accepted: Oct 26, 2024

Online: Oct 26, 2024

ABSTRACT

Generation Z, which is said to be more open to diversity, must continue to be fostered and improved through revitalizing tolerance values. With easy access to information through digital technology, generation Z has great potential to have an inclusive view of various information, including religious information. Religious moderation is very important in Indonesia, considering that Indonesia is home to various religions and beliefs. This study aims to determine how Generation Z builds tolerance in the digital era. The research method of this study uses qualitative with a phenomenological approach to explore the subjective experiences and understanding of Generation Z regarding religious moderation in the context of the digital era. The location of the study is Universitas PGRI Madiun (UNIPMA), namely students who are Generation Z. Data collection techniques through in-depth interviews and participatory observation. Data analysis techniques using Milles Huberman analysis, namely data reduction, data presentation, and concluding/verification. The study results show that Generation Z is building tolerance in the digital era through a strong understanding of students regarding religious moderation, promoting religious tolerance through digital technology, and participation in online forums. Religious moderation is part of the effort to introduce Islam, which loves peace and compassion.

Keywords: *Digital Era, Generation Z, Religious Moderation*

Journal Homepage

<https://journal.ypidathu.or.id/index.php/ijnis>

This is an open access article under the CC BY SA license

<https://creativecommons.org/licenses/by-sa/4.0/>

How to cite:

Anwar, N. R. (2024). Generation Z and Religious Moderation: Building Tolerance in an Era Digital. *Journal of Noesantara Islamic Studies*, 1(5), 303-314. <https://doi.org/10.70177/ijnis.v1i5.1414>

Published by:

Yayasan Pendidikan Islam Daarut Thufulah

INTRODUCTION

Generation Z includes individuals born between the mid-1990s and early 2010s, possessing several unique characteristics that distinguish them from previous generations (Gebremariam & Mulugeta, 2025; Ginolfi et al., 2025; Günkân et al., 2025; Poddar, 2025; Singh & Kumar, 2025). Generation Z is the first generation to grow up with digital technology as an integral part of everyday life. Generation Z is familiar with the internet, social media, smartphones, and various digital platforms from an early age, shaping how they communicate, learn, and interact (Coates, 2025; Hussein, Ahmad, Yaakob, Mohammed, & Khan, 2025; Mathur et al., 2025; Nawawi et al., 2025; Tanshzil, Suryadi,

Komalasari, & Anggraeni, 2025; Uppal et al., 2025). Even today, every individual needs to understand and use digital technology, which has become part of life, to survive. Generation Z tends to have a realistic view due to the economic uncertainty witnessed growing up. With the experience of the global economic crisis, they are more focused on career readiness and financial security and tend to prefer education that can provide practical skills (Girard, 2025; Haval, 2025; Novitra, Abdullah, Özdemir, Riyasni, & Metra, 2025; Vijay Anand et al., 2025). Generation Z is fearless of continuous change, and because of the world of the internet, they have much information. Still, only to a certain extent do they try to find solutions on the internet to solve problems.

An era or time where life has progressed and become digital. The digital era is marked by increasingly rapid and sophisticated information and communication technology development. The development of digital technology began with computers, the birth of the internet, mobile phones (cellular phones), and social networks. Digital devices include televisions, handheld gaming devices, digital watches, smartphones, computers, and laptops. The digital era is marked by the revolution in information and communication technology that has changed how humans interact, learn, and live their daily lives. With the advancement of the internet, mobile devices, and information technology, the digital era has introduced many changes in various aspects of life, including economics, education, and society.

Current technological developments are developing rapidly and rapidly. Generation Z plays an important role and influences the nation's development now and in the future. Generation Z, which is said to be more open to diversity, must continue to be fostered and improved through revitalizing tolerance values. The teaching of tolerance as positive behavior in interpersonal relationships is implemented towards harmony in life. As social beings, humans cannot live alone because they will need help from others. The pluralistic life of Indonesian society demands the adoption of a tolerant attitude.

Setara Institute noted 122 violations of freedom of religion/belief with various forms of action. The Wahid Institute's report recorded 154 cases of violations of religious freedom. In contrast, the Komnas HAM report showed 67 report files in 2014, and records from the Institute for Community Study & Advocacy (ELSAM) found 52 incidents that went to court (<http://elsam.or.id>). Not to mention the cases that emerged in 2015 and 2016, violations of the freedom to practice religious teachings still occur and often involve public figures and government figures, such as the alleged blasphemy case that became a national issue at the end of 2016.

In general, the religious practices of Generation Z are moderate, but there has been an increase in heated religious debates among Generation Z in cyberspace (Bongelli & Riccioni, 2025; Razali et al., 2025; Tiwari, Goel, & Ahamad, 2022; Zhao et al., 2025). This phenomenon reflects the younger generation's search for identity and space for expression. Therefore, efforts are needed to accompany Generation Z so that they can practice religion and interact in the digital world by upholding the values of moderation. With the ease of access to information through digital technology, generation Z has great

potential to have an inclusive view of various information, including religious information.

Religious moderation is very important in Indonesia, considering that Indonesia is home to various religions and beliefs. Generation Z, the young generation who grew up in the digital era and are connected to information from various sources, has a key role in shaping the future of a harmonious society (Ahamad & Mishra, 2025; Sanjalawe, Al-E'mari, Fraihat, Abualhaj, & Alzubi, 2025). Harmonious relations between religious communities in a heterogeneous society are a social wealth that must be maintained and preserved. Religious character building also needs to be strengthened in Generation Z so that they can have a good attitude.

The generation theory was proposed by Karl Manheim, who initially introduced the theory in his book *The Problem of Generation*. In his book, he explained that the characters formed in humans tend to have similarities as an influence of the socio-history passed together. Therefore, American sociologists group generations according to their birth time based on their birth year. Generation Z (English - Post-Millennials, iGeneration, Plurals) is the generation that follows Generation Y. According to demographers, they are the young generation born around the mid-1990s to around 2012. The post-Millennial generation is the most global and multicultural. Some experts believe Generation Z is tech-savvy (even more than Millennials) because they have never known a world without smartphones and social media (Alshbanat, Benhidour, & Kerrache, 2025; Arif, Aziz, & Ma'arif, 2025; Maiti, Basak, & Das, 2025). This generation is more fluent in using technology and gadgets, so it is very dependent on digital technology, such as the Internet and social networking sites. In principle, Generation Z is people born in the era of the internet generation. Generation Y and Generation Z are considered more ethnically diverse than previous generations. Generation Z is towards technology and often blurs the distinction between work and leisure. This generation increasingly wants to work via remote access anytime and anywhere, regardless of working hours. Work that suits your passion is important for Generation Z.

Universitas PGRI Madiun (UNIPMA) is one of the educational institutions that currently have students from Generation Z. Students who are Generation Z at Universitas PGRI Madiun are diverse. These students come from high school, MA, vocational high school graduates, and Islamic boarding schools. Based on pre-research, it was found that all students currently use social media, namely WhatsApp, Instagram, and TikTok. The results of the pre-research showed that several students were active in using digital platforms and often had activities on these platforms. The media has an important role in spreading messages of moderation. Content that educates and promotes tolerance must be encouraged, while provocative content provocative and extremist content must be minimized. Content on social media is easier to access and presented in an attractive form, but true and false information is increasingly mixed up and out of control. This seriously impacts religious content, especially since it is also supported by changes in people's attitudes that are instant. It is important today to create an inclusive environment that

supports tolerance, interreligious dialogue, education, and active participation in multicultural societies.

Religious moderation is a middle way that can be understood as a perspective, attitude, and behavior in the middle position, always fair and not extreme in religion (Kementarian Agama RI, 2019). Religious moderation means finding a balance between various aspects of Islamic teachings so that people do not get caught up in extremism on either the liberal or conservative side. Religious moderation is a solution that can be an important key to creating a harmonious, peaceful religious life and emphasizing balance in personal life, family, society, and the lives of fellow human beings. Wasathiyah, or moderation, has now become a new discourse and paradigm in Islam, which is believed to be able to present Muslims who are fairer, superior, more tolerant, and more peaceful. With this moderate understanding and attitude, Muslims are expected to maintain the values of their teachings based on the Qur'an and As-sunnah. Islam as a religion of rahmatan lil-alamin brings a message of compassion and peace, which should be applied with a moderate attitude (Xiao et al., 2025). The challenges Muslims face in religious practice, including extremism, require tolerance towards differences in understanding and other beliefs, which is one of the characteristics of moderation. Religious people must open up space for dialogue and mutual understanding to create a peaceful society. Maintaining a moderate attitude and perspective is very important for the religious system to develop in a pluralistic and multicultural society. This underlines that moderation of religious beliefs impacts individual interests and the considerations of organizations, cultures, and countries that invest in religious issues. Moderation is not just a theory but must be applied in everyday practice. A moderate attitude in worship, interacting with society, and facing life's challenges are the keys to achieving true happiness.

Research relevant to this study was conducted by several researchers, including Habibah, who studied the description of religious moderation to internalize the tolerance values of Generation Z. Yuliana's research discussed the instillation of values regarding religious moderation from an early age. Rosyida's research examined the campaign to build religious moderation on social media. Based on previous research studies, it was found that there had been no research that examined how to build religious moderation in the digital era of Generation Z, so this research was new. This research will profoundly contribute to Generation Z in grounding religious moderation.

RESEARCH METHODOLOGY

This study uses a qualitative method with a phenomenological approach to explore the subjective experiences and understanding of Generation Z regarding religious moderation in the context of the digital era. The phenomenological approach focuses on understanding direct experiences and the meaning given by individuals to certain phenomena. In the context of this study, the phenomenological approach allows researchers to explore how Generation Z defines religious moderation and how their experiences with digital technology shape students' understanding and attitudes toward religious moderation. The location of the study was Universitas PGRI Madiun

(UNIPMA). This study used a sampling technique, namely purposive sampling, by selecting participants who were active in religious organizations and had access to digital technology. Generation Z students came from various study programs (Kunekar et al., 2025). The data collection technique for this study used in-depth interviews and participant observation. The data analysis technique used Milles Huberman's analysis, namely data reduction, data presentation, and concluding/verification.

RESULT AND DISCUSSION

Generation Z's Understanding of Religious Moderation

Based on the results of the search, it was found that most of the Generation Z students at Universitas PGRI Madiun (UNIPMA) understand religious moderation. The results of an interview with a student who is actively serving as a mosque caretaker in his neighborhood named Syarif stated that:

"I understand religious moderation because when I was in college in the first semester, I studied Islamic religious education, and there was material about religious moderation in the course."

Other results in an in-depth interview with a seventh-semester student who is also a content creator and has various activities on his YouTube channel stated that:

"Religious moderation is the same as religious harmony, neutral and not extreme. Moderation varies not only among Muslims but also with other religions."

The results of an interview with UNIPMA alums who graduated in 2017 and was born in 1998 named Erwin from the PGSD Study Program stated that:

"Religious moderation when I was in college was new material, but in essence it was the same as religious tolerance."

Generation Z understood religious moderation at UNIPMA ved material on various modes during the first semester, most of them in the second semester. Students' understanding of religious moderation is also obtained from the existence of content that promotes religious moderation; Generation Z often watches YouTube channels about tolerance, such as the YouTube show "Login" hosted by Habib Jafar, then the YouTube channel account of the Ministry of Religion which discusses a lot about religious moderation. The results of student interviews were obtained:

"During the fasting month of 2023, I often watched the Login channel hosted by Habib Jafar and Onad. The event made mea lot about the meaning of tolerance among the community and even among Generation Z."

The research results on Generation Z and religious moderation in the digital era in a study at Universitas PGRI Madiun found that Generation Z students understood religious moderation. The understanding possessed by Generation Z is obtained from the existence of lecture materials on campus. Islamic Religious Education courses in Public Universities are part of the Effort to instill diverse moderation in students.

Teaching Islamic religious education is a deliberate effort by teachers to educate their students to believe, practice, and follow Islamic teachings. Various activities, such as

training and guidance, are carried out with commitment in order to achieve the goals that have been aspired to.

Islamic religious education taught in public universities colors the lives of academics at all levels. The course emphasizes students' application of Islamic values as individuals and citizens.

Students' understanding of religious moderation in the digital era is also obtained through YouTube content containing tolerance values, such as Habib Jafar's login content. This is in line with various studies on Habib Jafar's Login content. The preaching message conveyed by Habib Jafar covers various topics and themes relevant to Islamic teachings, especially regarding tolerance. Habib Jafar conveys messages related to noble morals and morality in everyday life (Chen, 2025). Husna's research confirms that this login program is a breath of fresh air for Generation Z, thirsty for religious knowledge. This Login event can be easily accessed anytime via the YouTube application. In addition, the Login event, presented in the form of a relaxed dialogue between Habib Ja'far and Onad, a non-Muslim, has successfully attracted the attention of various groups from across religions. This should be a reference for digital preaching for preachers who want to broadcast Islamic teachings through social media.

Promotion of Religious Tolerance through Digital Technology

The results of in-depth interviews with students who are activists or in the Student Activity Unit of the Islamic Religious Spirituality Unit (UKM UKKI) found that the university administrators of the UKM are Generation Z, who are still active in college. The students have a program in the Da'wah division, namely promoting religious tolerance through posts on the organization's Instagram. This was conveyed by the head of UKKI in 2022 stating that:

"We in the Da'wah division have a work program, namely posting anything that is da'wah in nature, we very often post about things that are included in religious moderation. For example, when Indonesia's Independence Day, we UKKI posted Happy Indonesian Independence Day by quoting hadiths or verses of the Quran about nationalism."

Based on this, it was found that Generation Z students who are members of religious organizations at UNIPMA build religious moderation by promoting tolerance content on Instagram and the official TikTok. Students currently taking Islamic Religious Education courses at UNIPMA also promote religious tolerance. The results of the interview with Anna stated that:

"I and my friends in class promote content about Islam almost every week; we do this because there is an assignment from the Islamic Religion lecturer. However, not infrequently we also promote content about tolerance and various moderation, for example, "lakum dinakum waliyadin", or about the story of the Prophet in respecting non-Muslims."

The promotion of religious tolerance through digital technology is carried out by students posting WhatsApp statuses and Instagram stories about Islam, which is rahmatan

lil alamin, religious tolerance packaged in the daily all of the Quran, hadith, or just words of wisdom.

The study results on Generation Z and religious moderation at UNIPMA are that Generation Z builds tolerance in the digital era by promoting religious tolerance through digital technology (Stoll, Lorentz, Binkofski, & Randerath, 2025). Promotion of religious tolerance through digital technology is carried out by students posting in the form of WhatsApp statuses and Instagram stories about Islam, which is rahmatan lil alamin. Social media is a technology that is part of social interactions that occur face-to-face and virtually. Social interaction on social media is part of da'wah, spreading Islam rahmatan lil alamin easily and efficiently.

This is in line with the religious moderation campaign on social media by Wibowo, which, currently, the importance of efforts to strengthen religious moderation in Indonesia is based on social media. The idea is that the spread of exclusive religious understanding is widespread through social media. The ease and speed of access offered by social media provide a free space for radicals to indoctrinate young people, which is necessary to build tolerance on social media as well.

Participation in Online Forums

The results of the researcher's search found that Generation Z students tried to participate in various activities related to Islam/religion. These activities discussed harmony in religion a lot. The observation results found that students participated in online discussions through the WhatsApp groups they had. Generation Z students joined Facebook groups where students could share experiences, discuss religious issues, and learn from each other. Students stated:

"I joined Facebook groups and found a lot of information from these groups that made me more able to appreciate other people's views. Honestly, I prefer Instagram, but on Facebook, I have more space to express myself because there are many religious groups there."

Participation in online forums was also followed by Generation Z students, such as attending seminars or workshops that discussed religious moderation. A final-year student who was working on his thesis stated:

"I often follow accounts that contain webinars, and then I also often join the webinars. Not infrequently, I also get emails even though I don't feel like announcing my email. Maybe I registered for a webinar and then it was saved by the committee and finally spread. But actually I didn't mind and was very happy because I could have information about the webinar".

The study results found that Generation Z students at UNIPMA are building religious moderation by promoting religious moderation in digital spaces such as social media groups or virtual face-to-face platforms such as webinars. The study results on Generation Z and religious moderation build tolerance in the digital era, with participation in online forums attended by Generation Z students, such as seminars or workshops discussing religious moderation. This has become currently commonplace for students

since the Covid-19 pandemic. The Covid-19 pandemic has had a positive impact on changes in learning (Babitha, Maheswari, Prakash, Matthai, & Karthik, 2025). Technology, especially social media, has become the main activity in society so that people can stay connected with other people and find information about the outside world.

Challenges Faced in Implementing Religious Moderation

Researchers' Observations found that Generation Z students in UNIPMA often face challenges implementing religious moderation in the digital era. The results of interviews with students of the Electrical Engineering study program stated that:

"I often get information on my Instagram account that is inaccurate, or extremism often circulates on my social media. I also often read on the internet about information that leads to radicalism. I am worried that it will be carried by students or other groups who do not understand religious moderation; I am worried that they will be influenced because they cannot filter it."

The results of in-depth interviews with other Generation Z students also found that:

"I am sometimes confused when watching YouTube; there are several YouTube accounts that normalize being disharmonious between adherents of other religions, sometimes there is even fake news that can trigger hatred."

Based on this, it was found that Generation Z often receives hoax news about religion that even triggers riots and can be divisive. Another challenge for some respondents is the existence of intolerant attitudes in an intolerant social environment or extreme views among friends that make it difficult to promote an attitude of religious moderation.

"I once chatted with my friend; he did not come from UNIPMA, but from another university. My friend seemed extreme because he could not appreciate the differences in religious practices with his other friends who he felt were different."

Based on the results of in-depth interviews with other students, it was found that many students experienced challenges in building tolerance in Generation Z in the digital era; this was evident when answering each other in the comments column on several social media posts.

Other results obtained are the challenges of Generation Z in building tolerance in the digital era, namely the existence of hoaxes that trigger conflict in a religious context. This is reinforced by the concept that social media has become a place for developing hoax information about various things. The character of social media, where everyone can construct information about anything without any control over its validity, is then spread on social media so that hoax information appears more and more often on social media.

Hoaxes that raise religious issues arise due to the diversity of religious understandings in society. (Omeish, Shaheen, Alharthi, & Alfaiza, 2025) Claims often emerge that favor certain religious understandings and, of course, bring down other religious understandings. Radical groups use social media to spread content that smells of extremist and radical ideological propaganda, in Islam, the tradition of developing knowledge is not something foreign.

CONCLUSION

Generation Z and religious moderation about building tolerance in the digital era is carried out through students' deep and strong understanding of the meaning of religious moderation. This understanding is the foundation for Generation Z in building tolerance in the digital era. Generation Z promotes religious tolerance through digital technology by posting content on religious tolerance and religious moderation on Instagram and TikTok. Generation Z also participates in online forums such as WhatsApp groups and Facebook GROUPS, where they discuss many religious issues and learn from each other. The challenges for Generation Z in building tolerance in the digital era are fake news or hoaxes, intolerant attitudes in intolerant social environments, or extreme views among fellow students outside their campus. This research recommends that the promotion of religious moderation through digital spaces should be carried out so that it can expand the reach of the general public.

ACKNOWLEDGEMENT

The researcher would like to thank the students who became informants of this research and Universitas PGRI Madiun. And thanks to the parties involved in this research.

REFERENCES

- Ahamad, R., & Mishra, K. N. (2025). Exploring sentiment analysis in handwritten and E-text documents using advanced machine learning techniques: a novel approach. *Journal of Big Data*, 12(1). <https://doi.org/10.1186/s40537-025-01064-2>
- Alshbanat, H. I., Benhidour, H., & Kerrache, S. (2025). A survey of latent factor models in recommender systems. *Information Fusion*, 117. <https://doi.org/10.1016/j.inffus.2024.102905>
- Arif, M., Aziz, M. K. N. A., & Ma'arif, M. A. (2025). A recent study on islamic religious education teachers' competencies in the digital age: a systematic literature review. *Journal of Education and Learning*, 19(2), 587–596. <https://doi.org/10.11591/edulearn.v19i2.21311>
- Babitha, S., Maheswari, A. P. G., Prakash, G. J. A., Matthai, P. A., & Karthik, A. S. (2025). Augmented reality analytics visualization engine. In *Applications of Mathematics in Science and Technology: International Conference on Mathematical Applications in Science and Technology* (pp. 485–489). Department of Information Technology, Hindustan Institute of Technology and Science, Chennai, India: CRC Press. <https://doi.org/10.1201/9781003606659-91>
- Bongelli, R., & Riccioni, I. (2025). Exploring epistemic management of healthcare interactions in the digital era. *Patient Education and Counseling*, 134. <https://doi.org/10.1016/j.pec.2025.108660>
- Chen, Y. F. (2025). Analysis of the reasons and legal countermeasures of disruptive behaviors on Chinese civil aircraft—From the perspective of legislation improvement. *Journal of Transportation Security*, 18(1). <https://doi.org/10.1007/s12198-024-00283-7>
- Coates, W. C. (2025). Precision education – a call to action to transform medical
-

-
- education. *International Journal of Emergency Medicine*, 18(1). <https://doi.org/10.1186/s12245-025-00819-1>
- Gebremariam, H. T., & Mulugeta, Z. A. (2025). In-service language teachers' engagement with online learning platforms after the emergence of Covid-19. *Ampersand*, 14. <https://doi.org/10.1016/j.amper.2024.100215>
- Ginolfi, M., Mannucci, F., Belfiore, F., Marconi, A., Boardman, N., Pozzetti, L., ... Oliva, E. (2025). Inferring redshift and galaxy properties via a multi-task neural net with probabilistic outputs: An application to simulated MOONS spectra. *Astronomy and Astrophysics*, 693. <https://doi.org/10.1051/0004-6361/202452799>
- Girard, C. (2025). Cultural information dynamics and the rise of women in Norway's state and military. *Humanities and Social Sciences Communications*, 12(1). <https://doi.org/10.1057/s41599-024-04247-z>
- Günkan, A., Ferreira, M. Y., Bocanegra-Becerra, J. E., Pehlivan, U. A., Vilardo, M., Semione, G., ... Jabbour, P. (2025). In the era of transition from fiction to reality: Robotic-assisted neurointervention-a systematic review and meta-analysis. *Neurosurgical Review*, 48(1). <https://doi.org/10.1007/s10143-024-03155-9>
- Haval, A. M. (2025). Deploying cloud computing and data warehousing to optimize supply chain management and retail analytics. In *Applications of Mathematics in Science and Technology: International Conference on Mathematical Applications in Science and Technology* (pp. 810–816). Department of CS and IT, Kalinga University, Raipur, India: CRC Press. <https://doi.org/10.1201/9781003606659-156>
- Hussein, S. A. A., Ahmad, R. B., Yaakob, N., Mohammed, F., & Khan, A. G. (2025). Content-Defined Chunking Algorithms in Data Deduplication: Performance, Trade-Offs and Future-Oriented Techniques. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 52(1), 21–34. <https://doi.org/10.37934/araset.52.1.2134>
- Kementerian Agama RI. (2019). Moderasi Beragama. In *Kementerian Agama* (Vol. 53). Jakarta: Badan Litbang dan Diklat Kemenag RI.
- Kunekar, P., Popalghat, A., Borude, O., Gavali, V., Gholap, D., & Hadole, S. (2025). AgriTech: Empowering agriculture through integrated technology. In *Emerging Trends in Computer Science and Its Application* (pp. 41–47). Department of Information Technology Vishwakarma Institute of Technology, Pune, India: CRC Press. <https://doi.org/10.1201/9781003606635-6>
- Maiti, D., Basak, M., & Das, D. (2025). A review on fingerprint based authentication-its challenges and applications. *Computer Science Review*, 57. <https://doi.org/10.1016/j.cosrev.2025.100735>
- Mathur, I., Ruisch, A., Conlin, M., Oyatoye, I., Griffiths, U., Walker, D. G., & Suharlim, C. (2025). COVID-19 vaccination integration, innovations and key populations: Results from a global survey. *Vaccine*, 52. <https://doi.org/10.1016/j.vaccine.2025.126863>
- Nawawi, A., Sidek, N. A., Sanusi, M. H., Nani, K., Sa'don, H., Nor, M. S. M., & Elewe, A. M. (2025). Potential Application of Concurrent Engineering in Video Production Process. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 54(1), 184–197. <https://doi.org/10.37934/araset.54.1.184197>
- Novitra, F., Abdullah, M. N. S., Özdemir, E., Rivasni, S., & Metra, P. (2025). Design of Dual Space Inquiry framework for facilitating flexible learning in digital technology era. *International Journal of Educational Research Open*, 8. <https://doi.org/10.1016/j.ijedro.2024.100424>
-

-
- Omeish, F., Shaheen, A., Alharthi, S., & Alfaiza, A. (2025). Between human and AI influencers: parasocial relationships, credibility, and social capital formation in a collectivist market: a study of TikTok users in the Middle East. *Discover Sustainability*, 6(1). <https://doi.org/10.1007/s43621-025-00891-w>
- Poddar, A. K. (2025). Impact of Global Digitalization on Traditional Cultures. *International Journal of Interdisciplinary Social and Community Studies*, 20(1), 209–232. <https://doi.org/10.18848/2324-7576/CGP/v20i01/209-232>
- Razali, M. H., Jamal, A. A., Fadzli, S. A., Zakaria, M. D., Wan Nik, W. N. S., & Hassan, H. (2025). e-Voting on Ethereum Blockchain. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 50(2), 186–194. <https://doi.org/10.37934/araset.50.2.186194>
- Sanjalawe, Y., Al-E'mari, S., Fraihat, S., Abualhaj, M., & Alzubi, E. (2025). A deep learning-driven multi-layered steganographic approach for enhanced data security. *Scientific Reports*, 15(1). <https://doi.org/10.1038/s41598-025-89189-5>
- Singh, D., & Kumar, S. (2025). Image authentication and encryption algorithm based on RSA cryptosystem and chaotic maps. *Expert Systems with Applications*, 274. <https://doi.org/10.1016/j.eswa.2025.126883>
- Stoll, S., Lorentz, L., Binkofski, F., & Randerath, J. (2025). Apraxia: From Neuroanatomical Pathways to Clinical Manifestations. *Current Neurology and Neuroscience Reports*, 25(1). <https://doi.org/10.1007/s11910-024-01391-6>
- Tanshzil, S. W., Suryadi, K., Komalasari, K., & Anggraeni, L. (2025). Radicalism in the Age of Digital Technology: A Bibliometric Study. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 50(2), 18–29. <https://doi.org/10.37934/araset.50.2.1829>
- Tiwari, M. M., Goel, V., & Ahamad, F. (2022). State of the science of environment, spirituality and health: An overview. *Environment Conservation Journal*, 23(3), 471–478. <https://doi.org/10.36953/ECJ.15772491>
- Uppal, A., Pullen, N., Baysson, H., Schrempft, S., Bouhet, A. R., Zaballa, M.-E., ... Arm-Vernez, I. (2025). Covid-19 pandemic-related changes in teleworking, emotional exhaustion, and occupational burnout: a cross-sectional analysis of a cohort study. *BMC Public Health*, 25(1). <https://doi.org/10.1186/s12889-024-21142-z>
- Vijay Anand, R., Magesh, G., Alagiri, I., Brahmam, M. G., Balusamy, B., Selvan, C. P., ... Soufiene, B. O. (2025). Design of an improved model using federated learning and LSTM autoencoders for secure and transparent blockchain network transactions. *Scientific Reports*, 15(1). <https://doi.org/10.1038/s41598-024-83564-4>
- Xiao, C., Peng, S., Zhang, L., Wang, J., Ding, D., & Zhang, J. (2025). A transformer-based adversarial network framework for steganography. *Expert Systems with Applications*, 269. <https://doi.org/10.1016/j.eswa.2025.126391>
- Zhao, S., Jiao, T., Adade, S. Y.-S. S., Wang, Z., Ouyang, Q., & Chen, Q. (2025). Digital twin for predicting and controlling food fermentation: A case study of kombucha fermentation. *Journal of Food Engineering*, 393. <https://doi.org/10.1016/j.jfoodeng.2025.112467>
-

Copyright Holder :

© Rosyida Nurul Anwar et al. (2024).

First Publication Right :

© Journal of Noesantara Islamic Studies

This article is under:

