

## FROM MADRASAH TO METAVERSE: RADICAL INNOVATION IN CONTEMPORARY ISLAMIC EDUCATION MANAGEMENT

Revalia Sukmawati<sup>1)</sup>, Ririn Rifdayani<sup>2)</sup>, Riski Pradana<sup>3)</sup>

Universitas Hasyim Asy'ari<sup>1)</sup>, Universitas Nahdlatul Ulama Nusa Tenggara Barat<sup>2)</sup>, STAI  
Kupang<sup>3)</sup>

*revaliasukmawati@gmail<sup>1)</sup>.com, rifdayaniririn@gmail.com<sup>2)</sup>,  
riski84pradana@gmail.com<sup>3)</sup>*

### ABSTRAK

Madrasah, sebagai lembaga pendidikan Islam historis di Indonesia, telah lama berhadapan dengan tantangan fundamental yang berakar dari dikotomi antara pendidikan agama dan pendidikan umum. Sebagian besar madrasah yang tumbuh dari inisiatif masyarakat dan swasta sering kali dianggap marjinal, menghadapi kelemahan dalam aspek manajerial, kualitas tenaga didik, serta ketersediaan sarana dan prasarana yang terbatas. Di tengah laju disrupsi digital dan tuntutan masyarakat yang semakin selektif, madrasah dituntut untuk tidak hanya berinovasi secara inkremental, melainkan melakukan inovasi radikal yang mampu menciptakan pergeseran paradigma (paradigm shift) dalam seluruh ekosistemnya. Penelitian ini mengkaji potensi adopsi teknologi metaverse sebagai manifestasi dari inovasi radikal dalam manajemen pendidikan Islam kontemporer. Metaverse, sebagai ruang virtual tiga dimensi (3D) yang imersif dan kolaboratif, diyakini dapat mengatasi keterbatasan yang dihadapi platform pembelajaran digital konvensional, seperti kurangnya interaksi dan pengalaman mendalam. Melalui studi kasus dan tinjauan pustaka, penelitian ini menganalisis bagaimana metaverse dapat menjadi katalisator bagi transformasi madrasah, mengubahnya dari institusi yang berfokus pada kuantitas menjadi lembaga unggulan yang berorientasi pada kualitas, relevansi global, dan penguatan nilai spiritual. Temuan menunjukkan bahwa meskipun terdapat potensi besar dalam peningkatan pembelajaran melalui simulasi ibadah, ziarah virtual, dan visualisasi konsep agama yang kompleks, implementasi ini menghadapi tantangan signifikan, terutama terkait keterbatasan infrastruktur, pendanaan, dan resistensi terhadap perubahan budaya organisasi. Oleh karena itu, inovasi ini menuntut perubahan menyeluruh dalam manajemen madrasah, mulai dari kepemimpinan yang visioner hingga perumusan kurikulum yang responsif dan beretika. Studi ini menyimpulkan bahwa transformasi menuju "Madrasah di Era Metaverse" bukan sekadar adopsi teknologi, melainkan reformasi manajerial dan filosofis untuk menyatukan ilmu pengetahuan dan agama dalam satu pengalaman pendidikan yang holistik.

**Kata Kunci:** Manajemen Pendidikan Islam, Inovasi Radikal, Metaverse.

### ABSTRACT

Madrasahs, as historical Islamic educational institutions in Indonesia, have long faced fundamental challenges rooted in the dichotomy between religious education and general education. Most madrasahs that grow from public and private

=====

initiatives are often considered marginal, facing weaknesses in managerial aspects, the quality of educators, and the availability of limited facilities and infrastructure. In the midst of digital disruption and increasingly selective societal demands, madrasas are required not only to innovate incrementally, but also to make radical innovations that are able to create a paradigm shift in their entire ecosystem. This study examines the potential adoption of metaverse technology as a manifestation of radical innovation in contemporary Islamic education management. The metaverse, as an immersive and collaborative three-dimensional (3D) virtual space, is believed to overcome the limitations faced by conventional digital learning platforms, such as a lack of interaction and immersive experiences. Through case studies and literature reviews, this study analyzes how the metaverse can be a catalyst for the transformation of madrasas, transforming them from quantity-focused institutions into flagship institutions oriented towards quality, global relevance, and strengthening spiritual values. The findings show that while there is great potential in improving learning through worship simulations, virtual pilgrimages, and visualizations of complex religious concepts, these implementations face significant challenges, especially related to infrastructure limitations, funding, and resistance to organizational cultural change. Therefore, this innovation demands a comprehensive change in madrasah management, from visionary leadership to the formulation of a responsive and ethical curriculum. The study concludes that the transformation towards "Madrasah in the Metaverse Era" is not just the adoption of technology, but rather managerial and philosophical reforms to unite science and religion in one holistic educational experience.

**Keywords:** Islamic Education Management, Radical Innovation, Metaverse.

## INTRODUCTION

Historically, madrasas in Indonesia were born and developed from grassroots initiatives of communities and scholars, often standing next to mosques and Islamic boarding schools. This phenomenon creates a unique educational entity, but at the same time, it also places it in a vortex of educational dichotomy that separates religious sciences and general sciences (Ismah, 2020). Since the beginning of the 20th century, madrassas have sought to adopt a formal education system by integrating the national curriculum, but this dichotomous narrative still continues to loom, creating the perception that madrassas are marginalized institutions and only appeal to the economic and lower middle class (Puspita et al., 2020). This perception is exacerbated by the fact that madrasas, especially those outside the cottage, often have substandard quality, both in terms of management, facilities, and the competence of educators (Dewi, 2018). This fundamental

=====

challenge has become the root of the problem that hinders madrassas from competing equally with public schools.

In the contemporary era, the challenges faced by madrassas have become increasingly complex (Firdhaus et al., 2021). Various studies have highlighted issues such as low quality of human resources, limited funding, and mediocre facilities as the main obstacles (Zhou, 2020). The external environment also exerts great pressure; The community is increasingly selective in choosing educational institutions that are able to produce globally competitive graduates, who master 21st century skills such as critical thinking, creativity, and technological literacy (Hasanah, 2020). In addition, madrassas also face moral crises, where the flow of globalization and social media often bring negative influences that are contrary to the values of religion that are upheld (Nurjanah, 2018). Therefore, madrasas must be able to respond to the demands of the times and society that continue to change if they do not want to be abandoned (Nurjanah, 2018).

Responding to these complex dynamics requires more than just minor improvements. Educational innovation is a must to improve the quality and professionalism of madrasas. Innovation is the successful implementation of creative ideas into a practical change (Awwaliyah & Baharun, 2018). However, the adoption of technology limited to the use of blogs or digital presentations, which can be considered incremental innovations, will not be enough to overcome fundamental challenges (Basit, 2014). What is needed is radical innovation—a paradigmatic shift that creates significant shifts in science, technology, market structures, and capabilities.

This concept of radical innovation is very relevant in the context of Islamic education. One of the potential triggers for radical innovation today is the emergence of metaverse technology (Dragono, 2023). The metaverse is defined as an always-on and immersive virtual space, combining the features of virtual reality (VR) platforms, social media, and the internet. This technology allows users, represented by avatars, to meet, interact and collaborate in a 3D environment without distance and time limitations. This experience is considered much more

=====

interactive and immersive compared to two-dimensional (2D) online learning platforms that often make users lose focus and feel less engaged.

A review of the literature shows that the integration of technology in Islamic education is not new, but has become a rapidly growing topic of study. Previous studies have examined the benefits of educational technology in increasing the availability of resources and personalizing learning (MZ & Suhardi, 2016). In addition, studies have also shown that technology can make learning more effective and engaging (Mustofa et al., 2021). In recent years, the focus of studies has begun to shift to more immersive technologies, such as the metaverse. Journals published in 2022 to 2025 have explored the potential of the metaverse in strengthening students' spiritual values, simulating worship practices, and supporting Islamic history learning (Hasan, 2020). However, the real implementation of this concept is still in its early stages, with limited case studies.

Fundamentally, the challenges facing madrassas today are symptomatic of a larger problem: the historical dichotomy between religious and general education. Separate curricula and systems over the years have created an image that madrassas are less relevant to the demands of the modern workforce. This is where radical innovation through the metaverse can come into play, by enabling the integration of religious and public curricula in one unique immersive experience. This change is not just a change in tools, but a fundamental restructuring in the way madrassas operate and are seen by the community.

Based on this background, this research will in-depth analyze the potential, challenges, and implications of radical innovation through the adoption of the metaverse in contemporary Islamic education management. The objectives of this study are: (1) Identifying Islamic education management challenges that demand radical innovation, (2) Exploring the potential of the metaverse as a radical innovation to overcome these challenges, and (3) Formulating the managerial and ethical implications of the implementation of the metaverse in madrassas.

## **METHODS**

This study adopts a qualitative approach, which focuses on understanding the phenomena and experiences experienced by the research subjects naturally and in depth. This approach was chosen because it is very relevant to examine complex and dynamic concepts, such as the transformation of education management due to radical innovation. The type of research used is a case study (literature study), which allows for an in-depth analysis of a phenomenon that is limited to a single case, in this case, "radical innovations in Islamic education management". This method is not limited to collecting data from a single location, but rather synthesizing findings from a variety of existing empirical and conceptual studies, thus providing a comprehensive and detailed picture of the problem being studied.

Data is collected through documentation study techniques, which involve searching, collecting, and analyzing literature from a variety of relevant and credible sources. The data sources used include accredited scientific journals, conference proceedings, reference books, and research reports published between 2021 and the present. This approach allows researchers to integrate findings from existing empirical case studies, such as the implementation of SIMDIK at Madrasah Aliyah Purwakarta and community service related to the metaverse at Madrasah Aliyah Al Hidayah. In addition, data was also obtained from a literature review that conceptually analyzed the potential and challenges of the metaverse in an educational context.

Data analysis was carried out using an interactive model developed by Miles and Huberman, which consisted of three main stages. The first stage is data reduction, where irrelevant data will be filtered, and meaningful data will be focused on leading to the discovery or interpretation of the problem. The second stage is data presentation, where the reduced data will be presented in various forms, such as narratives, matrices, and tables, to make it easier to understand and see the relationships between concepts. Finally, the conclusion drawing stage is carried out continuously from the beginning of the study, where temporary conclusions are drawn and verified along with the addition of new data, until a

strong and accountable final conclusion is produced. This systematic procedure ensures that the conclusions drawn are not careless or biased.

## **RESULTS AND DISCUSSION**

### **Challenges of Islamic Education Management in the Digital Era**

The management of contemporary Islamic education, particularly in madrasas, faces a complex and multidimensional set of challenges. One of the main obstacles is the limitation of resources which include funding, human resources (HR), and infrastructure. The majority of madrassas in Indonesia are private, which often have limited budgets and mediocre facilities, making it difficult to compete with public schools. In addition, there is a gap in teacher quality between urban and rural madrasas, where many educators in remote areas still lack experience and qualifications. This creates challenges in terms of adapting to technological developments and modern teaching methods, which ultimately impacts the quality of graduates (Iswandi & Taufan, 2017).

Beyond internal problems, madrasas also face external competition and less supportive public perceptions. Madrasas are still considered marginal and less professional, with the perception that their graduates can only have a career as religious teachers or kiai, without having competitiveness in the modern world of work. Although government support for madrassas is starting to increase, the portion received is still not comparable to public schools. All these challenges confirm that madrassas can no longer rely on the old ways, but must make radical breakthroughs to change their image and increase their relevance (MAHLUDDIN, 2018).

### **Metaverse as an Innovative Solution for Learning**

The metaverse offers solutions that go beyond the limitations of conventional online learning. This technology creates a three-dimensional (3D) virtual classroom that can bridge geographical and time differences between students and teachers (Nastiti & 'Abdu, 2020). This virtual environment provides an immersive and interactive learning experience, allowing students to understand

=====

content that is difficult to observe or explain through text. The concept of "anywhere, anytime" learning embraced by the metaverse is particularly appealing to Generation Z, who have become accustomed to digital flexibility (Tarantang et al., 2019). More so, the metaverse also has the potential to improve a range of essential skills, including strategic thinking, problem-solving, and collaboration skills, that are relevant to the real world.

The potential of the metaverse in Islamic Religious Education (PAI) learning is huge and transformative. Religious concepts that are often abstract can be embodied in real-life virtual experiences. For example, this technology allows for the simulation of Hajj or Umrah, where students can virtually "visit" the Kaaba and perform the Sa'i and Tawaf processions. This experience not only improves cognitive understanding, but also engages the affective and spiritual dimensions of the students, something that is difficult to achieve with conventional lecture methods (Satrianingrum et al., 2021). In addition, students can also make "virtual pilgrimages" to Islamic historical sites such as the Hira Caves or the Prophet's Mosque, which provide more vivid and real historical insights than just reading from books.

Other innovations in immersive technology, such as Augmented Reality (AR), have also shown their effectiveness in PAI learning (MZ & Suhardi, 2016). Case studies show that the use of AR can visualize complex concepts in fiqh, such as the procedures of ablution and tayamum. This technology effectively increases student engagement, making them more enthusiastic and interested in the learning material. Visualization in the form of interactive 3D objects helps students understand the procedure more easily and deeply.

### **Management Implications: Leadership, Competence, and the Accessibility Paradox**

Radical innovations such as metaverse adoption demand comprehensive managerial change. Visionary leadership is the main key in guiding the course of innovation, because without a clear vision, the innovation is at risk of failure. Madrasah management must be proactive in preparing educators to integrate

technology into curriculum and learning methods. As a case study at Madrasah Aliyah Al Hidayah shows, intensive socialization and training on metaverse technology can significantly increase teachers' understanding and enthusiasm (Wahyuni et al., 2020).

However, the implementation of this radical innovation is also faced with a profound paradox. The madrassas that most need innovation to address their fundamental problems, such as marginal perceptions and limited quality, are the least prepared to adopt advanced technologies such as the metaverse. The biggest challenge is not the technology itself, but the limitations of infrastructure, funding, and a lack of digital competence. Research shows that madrassas, especially in remote areas, face budget constraints, a lack of hardware (VR headsets), and unstable internet network issues. If not managed with the right strategy, this innovation can actually widen the gap between "superior" madrassas (those with adequate resources) and "traditional" madrassas, instead of uniting the dichotomy of education (Subowo, 2021).

### Tables and Supporting Data

Tabel berikut menyajikan perbandingan antara manajemen madrasah konvensional dan model yang diusulkan di era metaverse, yang menunjukkan sejauh mana perubahan paradigmatis yang diperlukan.

**Tabel 1: Perbandingan Manajemen Madrasah Konvensional vs. Era Metaverse**

Management Aspects	Conventional Madrasah	Madrasah Era Metaverse
<b>Leadership</b>	Tends to be reactive, focus on routine	Visionary, proactive, and risk-taking
<b>Curriculum</b>	Rigid, text- and memory-based, is often considered separate between religion and general	Responsive to the times, integrated, and student-centered
<b>Learning Methods</b>	Lecture and face-to-face dominance, less interactive	Immersive and collaborative, using simulations and experiential projects



Management Aspects	Conventional Madrasah	Madrasah Era Metaverse
<b>Sarana &amp; Prasarana</b>	Mediocre, inadequate for modern learning	Berbasis teknologi VR/AR, dilengkapi laboratorium virtual, and stable internet connection
<b>Teacher-Student Interaction</b>	Limited, only through physical meetings or 2D platforms	Through avatars in a dynamic 3D environment, with no distance limitations
<b>Penilaian</b>	Tends to focus on cognitive and formalistic aspects	Thorough, covering cognitive, affective, and psychomotor dimensions

The second table provides concrete examples of the implementation of immersive technology in PAI learning that have been studied in various literatures.

**Table 2: Immersive Technology Innovation in Islamic Religious Education Learning**

Types of Technology	Applications in PAI	Key Benefits	Reference
<b>Virtual Reality (VR)</b>	Simulation of Hajj/Umrah, Virtual Pilgrimage to historical sites (Prophet's Mosque, Hira Cave)	Immersive experiences, visualization of abstract concepts, emotional engagement	(Mystakidis, 2022), (Solihin, 2022)
<b>Augmented Reality (AR)</b>	Visualization of the procedures of Wudu and Tayamum, learning the science of Tajweed	More enthusiastic learning, visualization of abstract concepts, and interactive	(Latifah et al., 2021), (Adhani et al., 2022)
<b>Metaverse</b>	Virtual classroom environment, collaborative learning	Cross-geographical collaboration, spiritual value enhancement, and personalization of learning	(Kye et al., 2021), (Witono, 2022), (Fauzi, 2023)

### Ethical Issues and Social-Psychological Impacts

In addition to technical challenges, the implementation of the metaverse in madrasas also brings ethical issues and socio-psychological impacts that need to be considered. There are risks related to cybersecurity, student data privacy, and the potential for misuse of technology for unintended purposes. An immersive environment can also have negative impacts on mental health, such as addictions and traumatic experiences. Therefore, the role of madrasas in instilling digital ethics is very crucial. Islamic Religious Education has an important role in guiding students to use technology wisely, be responsible for information, avoid negative content, and respect the privacy of others, in accordance with Islamic principles (Amin, 2018).

### **Transcendence from "Learning to Know" to "Learning to Be"**

The true advantage of metaverse innovation in PAI goes beyond its technical ability to visualize data. Religious education has often been criticized for focusing too much on the cognitive and ritualistic aspects, ignoring the affective aspects and character formation. The metaverse offers a way to overcome these weaknesses. By simulating the practice of Islamic worship or history, this technology allows students not only to "know" facts, but also to "feel" and live spiritual and moral values. This directly changed the role of technology from a mere teaching tool to a medium for character building and spiritualization, which is the core mission of Islamic education. This transformation helps madrassas to cultivate noble morals and form a comprehensive personality, not only intellectually intelligent but also spiritually and emotionally (Agustia, 2019).

### **CONCLUSION**

This research confirms that madrasas are currently at a crossroads and must make radical innovations to overcome fundamental challenges rooted in the dichotomy of education. The metaverse, as an immersive technology, offers significant potential to be a catalyst for this transformation, providing solutions to problems such as rigid learning methods, limited interactions, and a lack of immersive experiences. By integrating this technology, madrassas can offer a

learning experience that is not only engaging and interactive, but can also strengthen the spiritual and affective dimensions of students, which have been a weakness in religious education.

Theoretically, this study enriches the literature on Islamic educational innovation by positioning the metaverse as a radical innovation that is able to change the paradigm of learning and management. In practical terms, the implementation of the metaverse requires a comprehensive reform in madrasah management, from visionary leadership, adequate teacher training, to the formulation of a responsive curriculum. It is necessary to understand that technology adoption is not just a purchase of tools, but a fundamental restructuring in the culture and organizational structure to ensure the success of innovation.

Although the potential of the metaverse is huge, its implementation faces serious obstacles, especially related to limited infrastructure, funding, and human resource readiness. Therefore, further empirical studies are needed to evaluate the effectiveness and real challenges of metaverse implementation in madrasahs in various regions, especially in the context of infrastructure and socio-economic differences. Future research may also focus on the formulation of a digital ethical framework specific to Islamic education, to ensure that the use of technology is carried out responsibly and in accordance with religious values.

#### DAFTAR PUSTAKA

- Agustia, N. R. (2019). Nuansa Edutainment Dalam Pembelajaran Kurikulum SD/MI 2013. *Ilmiah AL-Hadi*, 4(2), 887–886.
- Amin, M. N. K. Al. (2018). Komunikasi Sebagai Upaya Untuk Membangun Ketahanan Keluarga Dalam Kajian “Teori Nilai Etik.” *Al-Ahwal: Jurnal Hukum Keluarga Islam*, 11(1), 79–90.  
<https://doi.org/10.14421/ahwal.2018.11107>
- Awwaliyah, R., & Baharun, H. (2018). Pendidikan Islam Dalam Sistem Pendidikan Nasional. *Jurnal Didaktika*, 19(1), 34–49.  
<https://doi.org/10.21154/cendekia.v12i1.370>
- Basit, A. (2014). Tantangan Profesi Penyuluh Agama Islam Dan Pemberdayaannya. *Jurnal Dakwah Tahun Jurnal Dakwah*, XV XV(1), 157–178.

- Dewi, C. (2018). Implementasi kebijakan pemerataan guru dalam meningkatkan mutu pendidikan. *Indonesian Journal of Education and Learning*, 1(2), 60–69. <https://doi.org/10.31002/ijel.v1i2.649>
- Dragono, T. (2023). *Perlindungan Transaksi Aset Digital dalam Dunia Metaverse Terhadap Pembangunan Ketahanan Ekonomi Digital*. Universitas Kristen Indonesia.
- Firdhaus, D. N., Istiqamah, & Aflah, N. (2021). Integrasi Nilai-Nilai Agama Islam Dalam Pembelajaran Tematik Peserta Didik Kelas V MI/SD. *JEMARI (Jurnal Edukasi Madrasah Ibtidaiyah)*, 3(2), 58–65. <https://doi.org/10.30599/jemari.v3i2.991>
- Hasan, H. (2020). PKM Khatmil Kitab Washiyat al-Mustafa li al-Imam 'Ali Karrama Allah al-Wajhah melalui Mixed Method Sorogan dan Bandongan pada Santri PDF Tingkat Ulya di Pondok Pesantren Nurul Qadim. *GUYUB: Journal of Community Engagement*, 1(2), 72–89. <https://doi.org/10.33650/guyub.v1i2.1501>
- Hasanah, U. (2020). Analisis Mutu Dan Kualitas Input-Proses-Output Pendidikan Di Man 2 Yogyakarta. *MANAGERE : Indonesian Journal of Educational Management*, 2(2), 171–181. <https://doi.org/10.52627/ijeam.v2i2.38>
- Ismah, I. (2020). Manajemen Kelembagaan Pendidikan Islam. *Al-Munqidz : Jurnal Kajian Keislaman*, 8(3), 377–395. <https://doi.org/10.52802/amk.v8i3.267>
- Iswandi, & Taufan. (2017). Mutu Pendidikan Pesantren Berbasis Masyarakat Di Pondok Pesantren Dārusy Syifā Tirtanadi Lombok Timur. *Journal Ilmiah Rinjani: Media Informasi Ilmiah ...*, 5(2), 27–34. <https://jurnal.ugr.ac.id/index.php/jir/article/view/144>
- MAHLUDDIN. (2018). *Akuntabilitas Kepala Madrasah Dalam Pengelolaan Pembiayaan Pendidikan Di Madrasah Tsanawiyah Swasta Provinsi Jambi*. UNIVERSITAS ISLAM NEGERI SULTHAN THAHA SAIPUDDIN JAMBI.
- Mustofa, Z., Azizah, D. N., & Fitriyah, R. (2021). IMPLEMENTASI MODEL DAN DESAIN PEMBELAJARAN DARING PADA ANAK USIA DINI SAAT PANDEMI COVID 19 DI TK PERWANIDA SOOKO PONOROGO Zamzam Mustofa Dica Nurul Azizah Ruaidatul Fitriyah Zamzam Mustofa dkk , Implementasi Model dan Desain Pembelajaran Daring proses ya. *Wisdom: Jurnal Pendidikan Anak Usia Dini*, 02(01), 1–17.
- MZ, N. M., & Suhardi, S. (2016). Pengembangan Perangkat Pembelajaran Tematik-Integratif Berbasis Sastra Bagi Siswa Kelas V Sekolah Dasar. *Jurnal Prima Edukasia*, 4(2), 176–185. <https://doi.org/10.21831/jpe.v4i2.7717>

- Nastiti, F. E., & 'Abdu, A. R. N. (2020). Kesiapan Pendidikan Indonesia Menghadapi era society 5.0. *Edcomtech: Jurnal Kajian Teknologi Pendidikan*, 5(1), 61–66.
- Nurjanah, S. (2018). Perkembangan Nilai Agama Dan Moral (Sttpa Tercapai). *Paramurobi: Jurnal Pendidikan Agama Islam*, 1(1), 43–59. <https://doi.org/10.32699/paramurobi.v1i1.177>
- Puspita, Y., Fitriani, Y., Astuti, S., & Novianti, S. (2020). SELAMAT TINGGAL REVOLUSI INDUSTRI 4.0, SELAMAT DATANG REVOLUSI INDUSTRI 5.0. *PROSIDING SEMINAR NASIONAL PENDIDIKAN PROGRAM PASCASARJANA UNIVERSITAS PGRI PALEMBANG*, 3(1), 122–130.
- Satrianingrum, A. P., Setiawati, F. A., & Fauziah, P. Y. (2021). Pembelajaran Jarak Jauh pada PAUD: Studi Literatur berbagai Metode Pembelajaran pada Masa Pandemi di berbagai Tempat. *Jurnal Pendidikan ...*, 10(1), 34–41. <https://journal.uny.ac.id/index.php/jpa/article/view/37320>
- Subowo, A. T. (2021). Membangun Spiritualitas Digital bagi Generasi Z. *DUNAMIS: Jurnal Teologi Dan Pendidikan Kristiani*, 5(2), 379–395. <https://doi.org/10.30648/dun.v5i2.464>
- Tarantang, J., Awwaliyah, A., Astuti, M., & Munawaroh, M. (2019). Perkembangan Sistem Pembayaran Digital Pada Era Revolusi Industri 4.0 Di Indonesia. *Jurnal Al-Qardh*, 4(1), 60–75. <https://doi.org/10.23971/jaq.v4i1.1442>
- Wahyuni, I., Nuruzzaman, M., Usman, H., & Darmono. (2020). Pengaruh Gaya Kepemimpinan Mutu Dan Distributif Kepala Sekolah Dalam Meningkatkan Mutu Pendidikan Melalui 8 Standar Nasional Pendidikan (SNP). *JPTS*, 2(2), 159–174.
- Zhou, E. W. (2020). 101 Tips Berbasis Sains. *Buku Panduan Pencegahan Coronavirus 101 Tips Berbasis Sains Yang Dapat Menyelamatkan Hidup Anda*, 1(1), 1–120. <https://fin.co.id/wp-content/uploads/2020/03/Buku-Panduan-Pencegahan-Coronavirus-101-Tips-Berbasis-Sains.pdf>