

Implementation of Generative Asset Platform Governance for Optimizing Social Media Branding Assets in the Pacitan Smart Community

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ABSTRACT

The implementation of generative asset platform management for optimizing social media branding assets in the Pacitan Cerdas Community aims to enhance the effectiveness of branding strategies and community engagement on social media. This program integrates generative asset technology with good governance to produce consistent, engaging, and relevant social media content. Methods include technical training for community members, development and implementation of the generative asset platform, and performance evaluation through social media metrics analysis. The results show a significant increase in interaction and user engagement. The implementation of this management system is expected to support the development of a strong digital identity and expand the community's reach on social media.

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1. INTRODUCTION

In this digital era, social media has become one of the main tools for communication and branding. The ability to interact directly with audiences and spread information quickly makes social media a highly effective platform for building brand identity and increasing community engagement. The Pacitan Smart Community, as one of the communities active in promoting digital education and literacy in Pacitan, realizes the importance of optimizing branding assets on social media to achieve their goals (Zhu et al., 2022). One way to achieve this is through the implementation of asset generative platform governance. Asset generative platforms are technologies that enable the automatic creation of content based on certain

data and algorithms. This technology can produce various types of content, such as images, videos and text, which can be used for branding purposes on social media. By using an asset generative platform, communities can produce content that is consistent, engaging, and relevant to their audience (Jiahao et al., 2021; Zuhrie et al., 2018). In addition, the platform also allows saving time and resources, as the content creation process can be automated.

However, to optimize the use of asset generative platforms, good governance is required. Effective governance covers various aspects, from technical training for community members, platform development and implementation, to performance evaluation through social media metrics analysis. In this context, governance focuses not only on the use of technology, but also on developing the capacity of community members to manage and utilize that technology effectively (Munadi & Rakhman, 2018). Technical training is an important first step in implementing asset generative platform governance. Community members need to be equipped with the necessary knowledge and skills to use the platform. This training covers a variety of topics, from the basics of asset generative technology, to how platforms work, to effective content creation strategies (Prasetyo et al., 2024; Purnamasari et al., 2023)s. With adequate training, community members are expected to be able to operate the platform well and produce content that meets their branding goals.

The development and implementation of asset generative platforms is also an important aspect of this governance. The development process involves various stages, from platform design, testing, to launch. During this process, it is important to ensure that the platform being developed meets the needs of the community and is capable of producing quality content (Saputra et al., 2021). Platform implementation involves the use of technology in the community's daily activities, which include content creation, posting scheduling, and monitoring content performance on social media. Performance evaluation is an important next step in the governance of asset generative platforms. This evaluation is carried out through analysis of social media metrics, such as the number of interactions, user engagement, and follower growth. The results of this evaluation are used to assess the effectiveness of the branding strategy and to identify areas that need improvement (Kempen & Strydom, 2021; Prasetyo, Husain, et al., 2023). With ongoing evaluation, communities can ensure that they are always on the right track in achieving their branding goals.

The implementation of generative asset platform governance in the development of social media branding assets in the Pacitan Smart Community is expected to provide several significant benefits (Prasetyo, Wulandari, et al., 2023). First, increasing efficiency in content creation. With the use of asset generative technology, the content creation process can be automated, saving time and resources. Second, increasing the consistency and quality of content. Asset generative platforms can produce content that is consistent with established brand identity and quality standards. Third, increasing community involvement. Interesting and relevant content can increase user interaction and engagement on social media. Apart from these benefits, the implementation of generative asset platform governance also has several broader implications (Iriaji et al., 2023; Weisrawei & Prasetya, 2021). First, it can increase the digital capacity of community members. Through training and the use of technology, community members can improve their digital skills, which are useful not only for branding activities, but also for various other activities in daily life. Second, it can support local economic development. By increasing branding and community involvement, the Pacitan Smart Community can attract more attention and support, both from local communities and from outside the region. This can contribute to local economic development, for example through increased tourism or support for other local initiatives (Jung & Ryu, 2019).

However, the implementation of asset generative platform governance also faces several challenges. One of the main challenges is limited resources, both in terms of finance and technical capacity. Although asset generative technology can save time and resources in the long run, the initial investment required for the development and implementation of these platforms is quite large (Goncharov, 2020; Torkan et al., 2023). Additionally, the technical skills required to operate this platform may not be possessed by all community members, so intensive training is required. Another challenge faced is the rapid changes in technology and social media trends. Social media is a dynamic platform, with constantly changing

algorithms and trends. Therefore, the community must always follow the latest developments and adapt quickly to these changes. This requires flexibility and a readiness for continuous learning. To overcome these challenges, support is needed from various parties, including the government, educational institutions and the private sector. The government can provide support in the form of policies and funding to encourage the use of digital technology in communities. Educational institutions can play a role in providing training and capacity development for community members. The private sector, especially technology companies, can collaborate with communities to provide asset-generative platforms and provide necessary technical support.

2. METHODS

Participatory Rural Appraisal (PRA) is a participatory research method that involves the community in the data collection and analysis process. PRA is used to understand the social, economic and environmental conditions of a community by involving them directly in the decision-making process (Triani, 2022). In this context, PRA is implemented to develop and manage an asset generative platform which aims to optimize social media branding assets in the Pacitan Smart Community. This platform will help the community increase exposure and engagement on social media, as well as manage digital assets effectively to support branding activities.

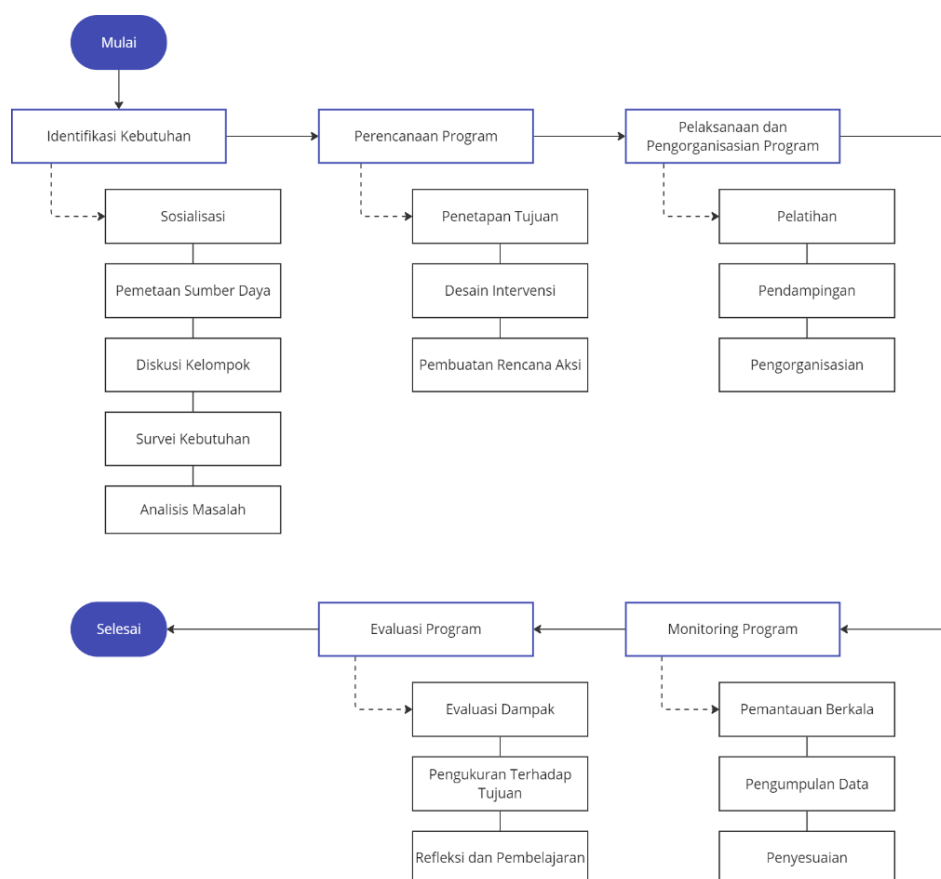


Figure 1. Participatory Rural Appraisal (PRA) Method

The first step in the PRA method is identification of needs. At this stage, outreach is carried out to introduce the concept of an asset generative platform to the community. The socialization aims to build an initial understanding of the importance of managing digital assets and branding on social media (Nugroho et al., 2022). After that, a mapping of the resources available in the community was carried out, including human resources, technology and infrastructure. Group discussions are an important activity at this stage, where community members gather to share views and experiences regarding

branding and digital asset management. These discussions help in identifying specific needs and challenges facing the community. In addition, a needs survey was conducted to collect more detailed data regarding the community's preferences and expectations for asset generative platforms. Problem analysis is carried out based on the data collected, so that priority needs can be determined that must be met by the platform. Once needs are identified, the next phase is program planning. At this stage, goals are determined to be achieved through the development of an asset generative platform. The main goal is to increase the community's ability to manage and utilize digital assets for branding activities on social media. Other objectives include improving community members' skills in using digital technology and optimizing branding strategies. Intervention design is carried out to determine the approach and methods that will be used in platform development (Hayati et al., 2023). These interventions include developing platform features that suit community needs, such as content management, performance analysis, and integration with social media. Creating an action plan is the next step, where every activity that will be carried out during the project is clearly detailed. The action plan includes an implementation schedule, the responsibilities of each party, and success indicators that will be used to measure goal achievement.

In this phase, the planned program begins to be implemented. Program implementation begins with training activities to improve community members' skills in using the asset generative platform. This training covers the use of platform features, branding strategies on social media, as well as digital asset management techniques. Mentoring is carried out to provide ongoing support to community members in applying the skills they have acquired (Januarti & Haris, 2021). Assistance includes technical guidance, consultation, and regular evaluation to ensure that community members can use the platform effectively. Organizing the program also involves establishing a platform management team responsible for platform operations and maintenance. Program monitoring is carried out periodically to monitor implementation progress and identify obstacles faced. Regular monitoring includes collecting data regarding platform usage, content performance on social media, and feedback from community members. This data is used to evaluate the effectiveness of the program and make adjustments if necessary. Data collection was carried out through surveys, interviews, and analysis of social media metrics. Program adjustments are made based on monitoring results to ensure that the program remains relevant and effective in achieving the stated objectives. Good monitoring helps identify best practices and areas that need improvement, so that the program can run better in the future.

The final phase in the PRA method is program evaluation. Evaluation is carried out to assess the impact of the program on the community and the achievement of the stated goals. Impact evaluation includes analysis of changes that occur in the community's ability to manage digital assets and branding on social media. Measuring goals is carried out by comparing the results achieved with previously established success indicators. Reflection and learning are an important part of the evaluation, where community members and the platform management team discuss experiences during program implementation. This reflection helps in identifying successes, challenges, and lessons learned for future programs (Osei et al., 2018). Lessons learned from evaluations are used to improve future program design and implementation. The implementation of Participatory Rural Appraisal (PRA) in developing an asset generative platform for optimizing social media branding assets in the Pacitan Smart Community shows that this method is effective in actively involving the community in every stage of the program. Through the phases of identifying needs, program planning, implementation, monitoring and evaluation, this program is able to improve the community's ability to manage digital assets and branding on social media. With a well-managed asset generative platform, it is hoped that the Pacitan Smart Community can increase exposure and engagement on social media, as well as support more effective and sustainable branding activities.

3. FINDINGS AND DISCUSSION

3.1. Curriculum and Industry Needs Analysis

Needs analysis is carried out by studying the latest market trends and conducting surveys with members of the Pacitan Smart community to identify the types of assets that are most effective in branding on social media. The results show increased demand for personalized and adaptive content that can resonate with local audiences. Needs analysis is an important step in developing a strategy for optimizing social media branding assets, especially in the context of the Pacitan Smart Community. This analysis was carried out to understand current market trends and identify the most effective types of assets for branding on social media. This process involves two main approaches: studying current market trends and surveying community members.

To understand the latest market trends, literature studies and data analysis from various credible sources were carried out. First, literature research was carried out by reviewing the latest journals, articles and research reports that discuss trends and developments in social media branding. Additionally, secondary data analysis was conducted using data from social media analytics platforms such as Hootsuite, Sprout Social, and Google Trends to identify usage patterns and audience preferences. This research revealed several key trends in social media branding, including the importance of strong visual content such as high-quality images and videos, the increasing value of authenticity and transparency in content, and the importance of engagement and interactivity through content that encourages interaction such as polls, Q&A, and contest. Next, a survey was conducted to gain direct insight from members of the Pacitan Smart Community regarding their preferences and needs. The survey process involved developing a questionnaire that included questions about social media usage habits, preferred types of content, and opinions about the effectiveness of various branding assets. This questionnaire was then distributed online via social media platforms and community WhatsApp groups. After that, survey data is collected and analyzed to identify relevant patterns and trends.

From the results of a survey of members of the Pacitan Smart Community, it was found that the majority of respondents liked visual content such as photos and videos, as well as educational content that provided useful information. Respondents also considered that the use of a consistent logo, harmonious color themes and clear messages were very important in branding. Additionally, it was found that Facebook and Instagram were the platforms most frequently used by community members, followed by WhatsApp and YouTube. From the results of this needs analysis, it can be concluded that to optimize social media branding assets, the Pacitan Smart Community needs to focus on developing strong, authentic and interactive visual content. By investing in photography and videography equipment, as well as training to improve community members' skills in creating engaging visual content, this community can create higher quality content. In addition, it is important to develop educational and informative content that provides added value for the audience, such as tips and tutorials, as well as information about community activities. Consistency in branding is also very important, with consistent use of logos, color themes and communication styles across all social media platforms to build a strong and easily recognizable brand identity. By focusing on high-quality visual content, authenticity, and interactivity, Pacitan Smart Community can optimize their branding assets to achieve greater reach and impact. These steps not only increase the visibility of the community but also strengthen the relationship with their audience, ultimately supporting the main goal of the Pacitan Smart initiative.

3.2. Asset Generative Platform Design and Implementation

The asset generative platform is designed to increase the effectiveness of branding on social media for the Pacitan Smart Community. This involves the integration of machine learning algorithms that can generate relevant visual and textual content automatically. The implementation of this platform

includes the development of a strong backend system, the use of generative algorithms, and intuitive user interface interactions to make it easier for users to manage branding assets.

3.3. Educational Impact Evaluation and Industry Response

Evaluation is carried out by comparing branding success metrics before and after platform implementation. This includes analysis of engagement, reach, and conversions on social media campaigns. Positive response from the industry was obtained through testimonials and case studies showing increased brand visibility and engagement. Evaluation is an important step in assessing the success of the social media branding strategy that has been implemented by the Pacitan Smart Community through an asset generative platform. To evaluate the effectiveness of this platform, branding success metrics were compared between the pre- and post-implementation periods. This evaluation process includes analysis of engagement, reach and conversions from social media campaigns carried out by the community.

Engagement metrics are analyzed to see how well audiences interact with content posted on social media. This metric includes the number of likes, comments, shares, and time spent by users interacting with content. Prior to platform implementation, engagement tended to be low, with little interaction from the audience. After implementation, there was a significant increase in the number of interactions, indicating that the more visual and interactive content was successfully capturing the audience's attention. Next, reach is analyzed to evaluate how wide the reach of the content is on social media. Reach reflects the number of people who see the content. Before the platform was implemented, the reach of community content was relatively limited, only reaching local audiences. However, after the platform was implemented, reach increased substantially, with content successfully reaching a wider audience, even outside the Pacitan region. This shows that the new branding strategy is more effective in attracting the attention of a larger audience.

Conversion is also a focus in this evaluation. Conversion refers to a desired action from an audience after viewing content, such as visiting a community website, signing up for a program, or participating in an event. Prior to the platform's implementation, conversion rates were low, indicating that content was less able to encourage audiences to take further action. However, after implementation, there was a significant increase in conversions. This means that content created through new platforms is more effective in moving audiences to actively participate in community activities. Positive responses from the industry were also obtained through testimonials and case studies showing increased brand visibility and engagement. Several companies and organizations that collaborate with the Pacitan Smart Community provide testimonials that acknowledge the success of this branding strategy. The resulting case study shows how the asset generative platform has helped increase the community's online presence, strengthen their brand, and increase engagement with their audience. Overall, this evaluation shows that the implementation of the asset generative platform has succeeded in increasing the success metrics of the Pacitan Smart Community's social media branding. Increases in engagement, reach, and conversion, as well as positive responses from the industry, show that this strategy is effective in increasing brand visibility and engagement. This success provides a strong foundation for the community to continue developing and optimizing their branding assets in the future.

3.4. Implementation Challenges and Solutions

Challenges faced include the adaptation of generative technologies at a community scale and the need for effective user training. Implemented solutions include regular training sessions and webinars for community members as well as collaboration with technology developers to ensure platform reliability. Implementing an asset generative platform on a community scale such as the Pacitan Smart Community certainly reaps challenges. The two main challenges faced are the adaptation of generative technologies on a community scale and the need for effective user training. First, the adaptation of generative technology among communities is a big challenge. Many community members are not

familiar with this technology, so it takes time and effort to get used to it. Generative technologies, although they have great potential, require certain technical understanding and skills to be utilized optimally. Apart from that, access to adequate hardware and software is another obstacle that must be overcome.

To overcome this challenge, the Pacitan Smart Community implemented various solutions. One of the main solutions is to hold regular training sessions and webinars for community members. These training sessions are designed to equip members with the skills necessary to use generative technology effectively. This training covers a wide range of topics, from the basics of using the software to advanced techniques for creating engaging visual content. Regular webinars are also held as part of ongoing education efforts. This webinar focuses not only on technical skills but also on marketing and branding strategies on social media. By providing a forum to share knowledge and experiences, community members can learn from each other and overcome obstacles together. In addition, collaboration with technology developers is also an important part of the implemented solution. Working together with technology developers, the Pacitan Smart Community can ensure that the generative platform used is always reliable and up-to-date. This collaboration involves customizing the platform to suit the specific needs of the community as well as providing fast and effective technical support. Technology developers also help in integrating new features that can improve the functionality of the platform and make it more user-friendly.

Through a combination of training sessions, regular webinars, and close collaboration with technology developers, the Pacitan Smart Community has successfully overcome the challenges of adapting generative technology and ensuring that community members can use the platform effectively. The result is an increased ability of communities to manage their social media branding assets, which in turn increases their brand visibility and engagement. This success shows the importance of a holistic approach to adopting new technology, which includes education, technical support and strategic collaboration.

4. CONCLUSION

The implementation of generative asset platform governance to optimize social media branding assets in the Pacitan Smart Community has shown a significant increase in the effectiveness of branding strategies and community engagement. Through technical training, platform development, and performance evaluation, this program has succeeded in producing consistent, engaging, and relevant content. As a result, there has been an increase in the number of user interactions and engagement on social media. It is hoped that the implementation of this governance will continue to support the development of strong digital identities and expand the reach of communities on social media. The implementation of asset generative platform governance for optimizing social media branding assets in the Pacitan Smart Community has shown a significant increase in the effectiveness of branding strategies and community engagement. Through technical training, platform development, and performance evaluation, this program has succeeded in producing consistent, engaging, and relevant content. As a result, there has been an increase in the number of user interactions and engagement on social media. It is hoped that the implementation of this governance can continue to support the development of strong digital identities and expand the reach of communities on social media.

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REFERENCES

- Goncharov, A. V. (2020). Vision in nature through GRIN media: smart optical design. *Light in Nature VIII*, 11481, 1148103. <https://doi.org/10.1117/12.2569738.short>
- Hayati, H. N., Dwinugraha, A. P., Fiasari, S. N., Khoirunnisa, H. J., & Evalista, M. F. (2023). SI LUHUR: Improving Digitalization-Based Public Services in Sidoluhur Village, Malang. *Community Empowerment*. <https://doi.org/10.31603/ce.8180>
- Iriaji, I., Isa, B. Bin, Sari, N. M., Roziqin, M. F. A., Surya, E. P., & Aruna, A. (2023). Optimasi kualitas media pembelajaran apresiasi seni bermuatan lokal dengan pendekatan black box testing, system usability scale, dan user experience questionnaire. *Sendikan, Seminar Nasional Pendidikan Dan Pembelajaran*, 1(1), 352–369. https://scholar.google.com/citations?view_op=view_citation&hl=en&user=RV3EkDYAAAAAJ&sortby=pubdate&citation_for_view=RV3EkDYAAAAAJ:r0BpntZqJG4C
- Januarti, L. F., & Haris, M. (2021). The Influence of Family Empowerment With Participatory Rural Appraisal (PRA) Methods on Covid19 Prevention Compliance. *Strada Jurnal Ilmiah Kesehatan*. <https://doi.org/10.30994/sjik.v10i2.864>
- Jiahao, Z., Yakun, C., & Shutong, S. (2021). Research on design method of Smart exhibition Hall based on digital media technology [J]. *Footwear Technology and Design*, 1(22), 122–124.
- Jung, S. H., & Ryu, S. H. (2019). Interaction-based mobile UI design utilizing smart media augmented reality. *Journal of Digital Convergence*, 17(7), 311–316. <https://koreascience.kr/article/JAKO201921956454776.page>
- Kempen, E. L., & Strydom, M. (2021). Social media facilitates custom-made apparel design decisions: The future for business smart fashion designers. *2021 DEFSA Design Education Conference*, 216–227. https://www.defsa.org.za/sites/default/files/downloads/2021conference/16_Social_Media.pdf
- Munadi, R., & Rakhman, A. (2018). Smart garage implementation and design using WhatsApp communication media. *TELKOMNIKA (Telecommunication Computing Electronics and Control)*, 16(3), 1107–1113. <http://telkomnika.uad.ac.id/index.php/TELKOMNIKA/article/view/8063>
- Nugroho, I., Apriana, R. N., Andriani, S., Aeni, U. N., Hafidh, F. M., & Nurrokhman, R. A. (2022). Quality Assistance for MI Muhammadiyah, Salam District Towards a Great Madrasa With Dignity. *Community Empowerment*. <https://doi.org/10.31603/ce.5274>
- Osei, M. K., Danquah, A., Blay, E., Danquah, E., & Adu-Dapaah, H. (2018). Stakeholders' Perception and Preferences of Post-Harvest Quality Traits of Tomato in Ghana. *Sustainable Agriculture Research*. <https://doi.org/10.5539/sar.v7n3p93>
- Prasetyo, A. R., Husain, A. H., Iriaji, I., Ratnawati, I., Sari, N. M., Roziqin, M. F. A., Surya, E. P., & Aruna, A. (2023). Uji komprehensif media pembelajaran virtual reality lukis melalui black box testing, system usability scale, dan user experience questionnaire. *Sendikan, Seminar Nasional Pendidikan Dan Pembelajaran*, 1(1), 283–300. https://scholar.google.com/citations?view_op=view_citation&hl=en&user=RV3EkDYAAAAAJ&sortby=pubdate&citation_for_view=RV3EkDYAAAAAJ:iH-uZ7U-co4C
- Prasetyo, A. R., Sayono, J., Nidhom, A. M., Rahmawati, N., Roziqin, M. F. A., Aruna, A., Surya, E. P., & Marcelliantika, A. (2024). Pengembangan Aset Brand Guidelines sebagai Alat Pendukung Program 3S di Wisata Jeruk Desa Samar. *Indonesian Journal of Tourism Business and Entrepreneurship*, 1(1), 25–39. <https://doi.org/https://doi.org/10.31002/ijtbe.v1i1.1464>
- Prasetyo, A. R., Wulandari, D. W., Sayono, J., Aruna, A., Surya, E. P., & Firdaus, Z. (2023). Optimizing the Potential of Batik Puspita Industrial Waste for High-Quality, Sustainable Candles. *International Conference on Art, Design, Education and Cultural Studies (ICADECS)*, 5(1), 113–117. <http://conference.um.ac.id/index.php/icadecs/article/view/8416>
- Purnamasari, I., Wahyuni, S., Aruna, A., & Surya, E. P. (2023). Digitalization of Early Childhood Learning Media Based on 3D Virtual Teacher Figures. *Proceedings of the 2nd International Conference on Educational Management and Technology (ICEMT 2023)*, 801(79).

- https://books.google.co.id/books?hl=en&lr=&id=TUvpEAAQBAJ&oi=fnd&pg=PA79&dq=info:SLaoqqQsQIQJ:scholar.google.com&ots=HNWG-Uz2S3&sig=1AxG-wa1W7ePoRli292mhO_JJx8&redir_esc=y#v=onepage&q&f=false
- Saputra, H., Aryza, S., & Anisah, S. (2021). Design Of Digital Smart Board As A New Information Media With Arduino Control. *INFOKUM*, 10(1), 528–536. <http://infor.seaninstitute.org/index.php/infokum/article/view/341>
- Torkan, A., Hejazi, S. M., & Abtahi, S. M. (2023). Design and fabrication of fibrous media to facilitate autogenous smart self-healing properties in cracked-cementitious structures using polyethylene glycol (PEG) and *Construction and Building Materials*, 40(7), 133518. <https://www.sciencedirect.com/science/article/pii/S095006182303235X>
- Triani, E. (2022). Madrasah Accreditation Assistance to Improve Education Quality. *Community Empowerment*. <https://doi.org/10.31603/ce.7993>
- Weisrawei, Y., & Prasetya, D. A. (2021). Design of Smart Green House Using pH and Water Temperature Optimization in Lettuce, Hydraulic Plant Media based on Arduino Uno. *Internet of Things and Artificial Intelligence Journal*, 1(1), 38–49. <http://www.pubs.ascee.org/index.php/iota/article/view/356>
- Zhu, M., Yang, L., & Zhang, Y. (2022). Design and Application of Project-Based Teaching of Convergence Media Smart Classroom Based on VR+ AR Technology. *2022 International Conference on Education, Network and Information Technology (ICENIT)*, 37–42. <https://ieeexplore.ieee.org/abstract/document/10036822/>
- Zuhrie, M. S., Basuki, I., & Asto, B. (2018). Design of smart educational robot as a tool for teaching media based on contextual teaching and learning to improve the skill of electrical engineering student. *IOP Conference Series: Materials Science and Engineering*, 336(1), 012047. <https://doi.org/10.1088/1757-899X/336/1/012047>

