

## EVALUATING LEARNING MANAGEMENT SYSTEM (LMS) EFFECTIVENESS: AN LPOMR MODEL APPROACH

Supiani, Dedy Achmad Kurniady<sup>\*)</sup>, Tjutju Yuniarsih, Nur Aedi

Universitas Pendidikan Indonesia, Bandung, Indonesia.

<sup>\*)</sup>e-mail korespondensi: dedy\_acmad@upi.edu

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### Abstract.

The purpose of this study is to evaluate the use of Learning Management System (LMS) as a school management model to improve the quality of education. This study uses the Research and Development (R&D) method with the ADDIE approach, which includes the stages of Analysis, Design, Development, Implementation, and Evaluation. Through this approach, LMS is evaluated to measure its effectiveness in supporting school management and improving the education process. The findings of the study indicate that the implementation of this LMS has improved coordination between schools, teachers, students, and parents, which has led to increased community involvement in school activities and decision making. This increased involvement has contributed significantly to improving the quality of education. This study provides valuable insights into creating a more efficient and participatory school management system through the application of digital technology.

**Kata Kunci:** community involvement; education quality; learning management system; school management.

### EVALUASI PEMANFAATAN LEARNING MANAGEMENT SYSTEM (LMS) DENGAN MODEL LPOMR

**Abstrak.** Tujuan dari penelitian ini adalah untuk mengevaluasi pemanfaatan *Learning Management System* (LMS) sebagai Model manajemen sekolah untuk meningkatkan kualitas pendidikan. Penelitian ini menggunakan metode *Research and Development* (R&D) dengan pendekatan ADDIE, yang meliputi tahapan *Analysis, Design, Development, Implementation, dan Evaluation*. Melalui pendekatan ini, LMS dievaluasi untuk mengukur efektivitasnya dalam mendukung manajemen sekolah dan meningkatkan proses pendidikan. Temuan penelitian menunjukkan bahwa penerapan LMS ini telah meningkatkan koordinasi antara sekolah, guru, siswa, dan orang tua, yang berujung pada peningkatan keterlibatan masyarakat dalam kegiatan sekolah dan pengambilan keputusan. Peningkatan keterlibatan ini memberikan kontribusi yang signifikan terhadap peningkatan kualitas pendidikan. Penelitian ini memberikan wawasan berharga dalam menciptakan sistem manajemen sekolah yang lebih efisien dan partisipatif melalui penerapan teknologi digital).

**Keywords:** *Learning Management System*; Manajemen Sekolah; Kualitas Pendidikan; Keterlibatan Masyarakat.

## I. INTRODUCTION

In the era of digital transformation, the application of technology in educational management has become a key element in improving the effectiveness and efficiency of schools. One significant breakthrough in this field is the development of a Learning Management System (LMS) that functions not only as a platform for learning, but also as a tool to support overall school management. LMS provides comprehensive integration between administrative, operational, and communication aspects in one integrated platform, enabling more efficient and transparent school management.

The implementation of LMS in the educational context provides tangible benefits, especially in streamlining administrative processes, improving communication between schools and students and parents, and encouraging community involvement in the educational environment (Misar, 2024; Rosário & Dias, 2022). Thus, LMS not only improves the operational efficiency of schools but also contributes to improving the overall quality of education (Misar, 2024; Rosário & Dias, 2022). Previous studies have shown that a well-integrated LMS can strengthen parental and

community involvement, increase transparency, and improve educational outcomes (Mignon, 2022; Misar, 2024). However, challenges such as limited technological infrastructure, disparities in ICT competency among teachers, and the need for ongoing support remain obstacles to optimal implementation (Bradley, 2020; Sidana, 2022).

This research aims to develop an LMS based on the LPOMR Model (Leadership, Planning, Organizing, Monitoring and Relationships) as an innovative approach to school management. The LPOMR model offers a structured and comprehensive framework for managing various aspects of school operations, from leadership to fostering community relations. The novelty of this research lies in the integration of the LPOMR Model into the LMS, which is specifically designed to improve school management by optimizing community participation and strengthening school-community relations. By bridging key principles of modern education management with advanced technology solutions, LMS based on the LPOMR Model introduces a new framework that addresses the current gaps in the implementation of effective Learning Management Systems. This approach prioritizes localized, participatory, results-oriented, measurable and responsive strategies adapted to

diverse educational contexts. The significance of this research is twofold: it provides a theoretical contribution by advancing the development of LMS as a tool for school management, and it offers practical guidance for schools to utilize digital technology in improving management performance and educational quality. Beyond its direct impact on educational management, this research contributes to the broader field of education by fostering more inclusive, efficient, and impactful learning environments, as well as serving as a catalyst for systemic educational progress.

In the increasingly advanced digital era, the integration of technology in educational management has become a major focus in improving the effectiveness and efficiency of school operations. Learning Management System (LMS) is one of the main innovations that allows educational institutions to manage various aspects of learning and administration in a more structured manner. LMS functions as an integrated platform that not only supports the learning process but also improves communication between teachers, students, parents, and other stakeholders (Bradley, 2022; Fadil, 2023; Oliveira *et al.*, 2022; Thakre, 2024). Existing literature reviews show that the implementation of LMS provides various benefits in the educational context, including increased accessibility, flexibility, and user engagement.

LMS plays an important role in improving the quality of education through course management, monitoring student learning outcomes, and supporting collaboration and communication between all parties involved. This system provides more flexible access for students and teachers, removes space and time constraints, and supports more independent learning (Bayrak, 2023; Deichakivska *et al.*, 2024; Mansur *et al.*, 2024; Pérez-Garcias *et al.*, 2022; Turan *et al.*, 2022; Yanti, 2024). LMS allows students to access learning materials anytime and anywhere, which has a positive impact on their learning outcomes (Rijal *et al.*, 2024). In addition, LMS also strengthens communication between teachers and parents, facilitating better collaboration in supporting student development (Rekha, 2024; Rahayu *et al.*, 2024; Zhafira *et al.*, 2024).

In addition, LMS can be classified into several types, such as cloud-based, on-premise-based, and open-source LMS. Cloud-based LMS, which are increasingly popular, offer various advantages such as lower costs, simpler maintenance, and better data security (Adi *et al.*, 2024; Chatterjee *et al.*, 2023). However, despite its many advantages, LMS implementation still faces challenges, including limited technological infrastructure and lack of ICT skills among educators. To evaluate the effectiveness of LMS in the context of school management, the LPOMR (Leadership, Planning, Organizing, Monitoring, and Relation) approach offers a holistic framework. The LPOMR model includes five important elements in management, namely leadership, planning, organizing, monitoring, and relationships, all of which are interrelated in supporting educational goals. Previous research has shown that strong leadership and a clear vision play a key role in the success of LMS implementation (Akram & Khan, 2020; Allen *et al.*, 2010). Schools led by principals with a strong technological

vision tend to be more successful in integrating LMS into their school management (Akram & Khan, 2020b; Manaf, 2024).

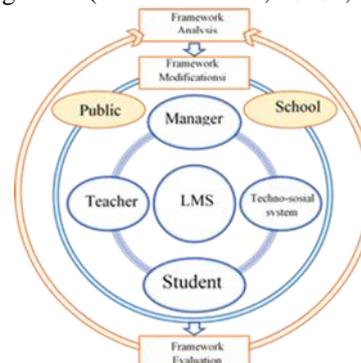


Figure 1. Model visualization.

Careful planning and efficient organization are also key elements in ensuring that LMS can be implemented effectively. Schools that have a strategic plan for LMS implementation tend to experience a smoother transition and more positive outcomes in the use of this technology (Animashaun *et al.*, 2024; Reed, 2011). On the other hand, ongoing monitoring and evaluation are needed to ensure that LMS continues to support educational goals and provide the expected benefits. Intensive monitoring of LMS usage can help identify problems early and make necessary adjustments (Cassels, 2024; Syukri *et al.*, 2023).

Despite the many advantages offered by LMS, its implementation does not always run smoothly. Some challenges often faced by educational institutions in adopting LMS include limited infrastructure, low ICT competency among teachers, and resistance to change (Ali, 2024; Husin *et al.*, 2024). In addition, the involvement of parents and the community in the education process is often less than optimal. In this context, the LPOMR approach offers a comprehensive strategy that can help overcome these challenges, for example through ongoing training for teachers and socialization to the community about the benefits of educational technology.

The implementation of the LPOMR Model in the context of education, as has been done in the Meranti Islands Regency, has shown positive results. The implementation of LPOMR has successfully increased community involvement in planning and evaluating school activities, which ultimately contributes to improving the quality of education (Andari *et al.*, 2024; Sulistyowati *et al.*, 2024). These results indicate that the LPOMR approach can be an effective tool in supporting the use of LMS in various educational settings.

The integration of LMS with the LPOMR approach provides a structured and comprehensive framework for improving school management. With visionary leadership, careful planning, continuous monitoring, and good relationships with all stakeholders, LMS can be optimized to support more efficient teaching and more effective administration. Research shows that the implementation of LMS with the LPOMR approach can strengthen communication between schools and parents, increase their involvement in school activities, and create an inclusive and supportive learning environment (Andari *et al.*, 2024; Nirmayanthi *et al.*, 2024).

However, the success of this implementation requires a strong commitment from all parties involved, including the government, schools, teachers, students, and the community. With the right support, LMS based on the LPOMR Model has great potential to change school management for the better and ultimately improve the overall quality of education.

## II. RESEARCH METHOD

This study involved participants from the school community, including principals, teachers, and community members involved in school management. Participants were selected purposively to obtain relevant views on the development of a management system based on the LPOMR model. This study used a Research and Development (R&D) design with the ADDIE model approach, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. See Figure 2. In the initial stage, a needs analysis was conducted to determine the main problems in school management and how community involvement can be strengthened through the LMS.

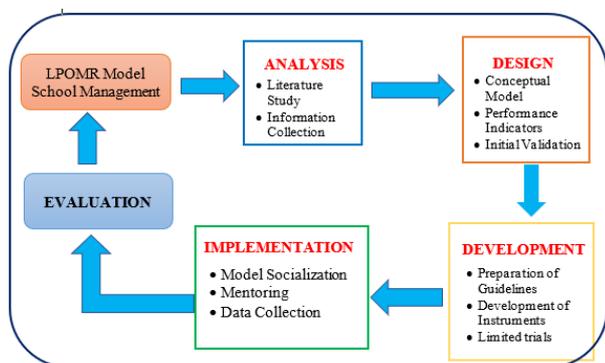


Figure 2. ADDIE Research Design Chart (Cresswell, 2005)

The research instruments used include questionnaires, interviews, and observations to collect qualitative and quantitative data. Questionnaires and interviews focused on collecting data from various parties related to the effectiveness of the current management system and expectations for the system to be developed. Observations were used to understand the dynamics of the relationship between schools and communities. Data analysis was carried out using descriptive methods and simple statistical analysis for quantitative data, while qualitative data was analyzed using thematic analysis techniques. The results of this analysis were used to develop an LMS that is in accordance with the needs of the school community, as well as to evaluate the effectiveness of its implementation in strengthening community involvement.

## III. RESULTS AND DISCUSSION

The development of the LMS Model LPOMR was implemented as a solution to the low quality of education which is often caused by ineffective school management and minimal community participation. This model integrates school-based management with active community involvement, based on the theory of School-Based Management (SBM), to create a conducive and sustainable

learning environment. With this approach, it is hoped that an increase in the quality of education will be achieved through more adaptive, participatory, and inclusive management.

Figure 3 explains that the LPOMR Model applies a techno-social approach to school management. In this context, school management involves active community participation as an important element in school management. LPOMR integrates technology to strengthen engagement and interaction between schools, teachers, students, and the community. The four aspects used to develop a management design with a techno-social approach include collaboration between stakeholders, digital access to information, community involvement in decision-making, and technology-based support.

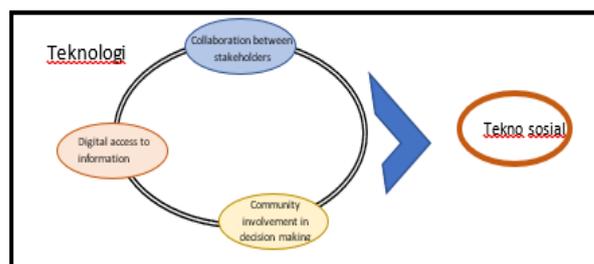


Figure 3. POMR Model Design in Digital Frame

Figure 4 shows the LMS workflow (flowchart) that has been adjusted to support a community-based school management model. This flowchart integrates features such as interactive communication, school progress reporting, voting for decision-making, and collaboration in extracurricular activities. All of these elements are designed to increase community involvement and transparency in school management, which is expected to contribute to improving the overall quality of education.

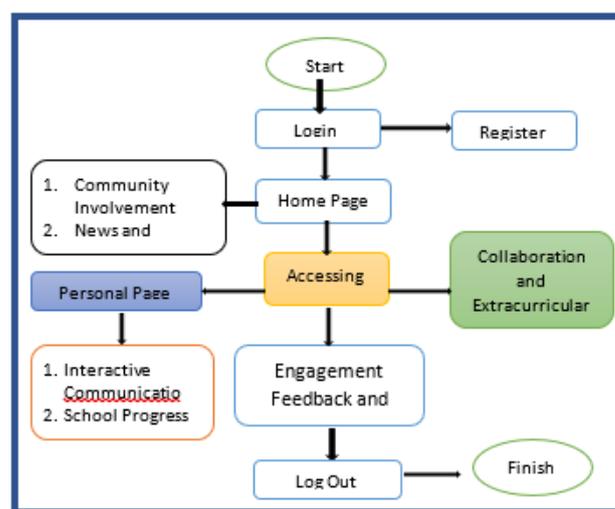


Figure 4. LMS Flowchart

Table 1. summarizes the main functions of the features available in the LMS, including interactive communication features, progress reporting, and voting on the personal page. The home page provides quick access to community engagement features and school announcements. Additional features such as collaboration, evaluation, and parent and

community registration ensure broader involvement in school management.

TABLE 1. Features of The LMS LPOMR Model

No	Features	Functions
1		<ul style="list-style-type: none"> <li>- Facilitate interactive communication between teachers, students, and parents through chat or discussion forums.</li> <li>- Provide school performance and activity reports.</li> <li>- Accommodate polling or voting for school decision making.</li> </ul>
2		<ul style="list-style-type: none"> <li>- Allows quick access to community engagement features such as fundraising and event information.</li> <li>- Provides news and announcements related to school policies.</li> </ul>
3		<ul style="list-style-type: none"> <li>- Facilitate collaboration on projects or extracurricular activities.</li> <li>- Provide evaluation and feedback on student, parent, and community involvement in education.</li> </ul>
4		<ul style="list-style-type: none"> <li>- Accommodate the registration of parents and the community as participants in school activities, expanding participation in school management.</li> </ul>

Based on the results of the observations conducted, the main findings regarding the implementation of the LPOMR model in school management showed significant results. Observations showed that the implementation of the LPOMR model in school planning had been carried out effectively, with the integration of customary and religious values in program planning. Community involvement in school activities was also quite high, with active participation in various school events and customary-based programs. The implementation of customary and religious-based programs showed that they were in accordance with expectations, and interactions between the school and the local community showed positive and mutually supportive collaboration.

The questionnaire designed to assess the effectiveness of the LPOMR model showed varying results from various dimensions. In general, the average score on the dimensions of school leadership and school planning is in the high category, with an average score of 4.2 and 4.0, indicating the implementation of the LPOMR model is effective in the aspects of leadership and planning based on customs and religion. The dimensions of organizing and supervising show a moderate category, with an average score of 3.6 and 3.5, indicating that despite implementation, there is still room for improvement in resource management and program evaluation. The dimension of relationships with stakeholders gets an average score of 4.1, indicating a high category in the

quality of relationships with local communities and other educational institutions. See table 2

TABLE 2. School Management

Dimension	Mean
Effective Leadership	4.2
Efficient Organization	3.6
Strategic Planning	4.0
Monitoring and Evaluation	3.5
Stakeholder Relations	4.1

Interview results with stakeholders revealed positive views on the effectiveness of the LPOMR model. Respondents acknowledged that the model has increased community participation and had a positive impact on the quality of education. However, there are several challenges and obstacles, such as the need for further adjustment to the local cultural context and difficulties in implementing some aspects of the model consistently. Table 3 describe the interviewees also provided recommendations to strengthen training and support for model implementation to make it more effective.

TABLE 3. Validation and Recommendation of Instruments

No.	Aspects Reviewed	Validation	Criticism and Suggestions
1.	Suitability of the instrument with the research objectives	✓	Clarify the measurement of the model's impact on community participation
2.	Relevance of the objectives of the instrument preparation	✓	Adapt the instrument to the local cultural context
3.	Suitability of the instrument with the research questions	✓	Add indicators related to religious values
4.	Systematics of the instrument preparation	✓	Clarify the structure of the observation and interview guidelines
5.	Effectiveness of the selected instrument	✓	Add options for qualitative evaluation
6.	Readability and ease of understanding the instrument	✓	Simplify the language in the questionnaire and interview guidelines

Validation of the instrument by experts showed that the research instrument was in accordance with the research objectives and relevance. However, there were some criticisms and suggestions for improvement, such as clarifying the measurement of the model's impact on community participation and adjusting the instrument to the local cultural context. The suggestions for improvement provided, including detailing the indicators in the questionnaire and adjusting the instrument to customary and religious values, have been accommodated in the revision of the instrument which is described in table 4.

TABLE 4. Suggestions for Improvement

No.	Improvement	Follow Up
1.	Define more details about the indicators in the questionnaire	Researchers have improved the definition of indicators in the questionnaire. Researchers have adjusted the instrument to the local context.
2.	Adjust to customary and religious values	Researchers have improved the definition of indicators in the questionnaire. Researchers have adjusted the instrument to the local context.

The measurement of the effectiveness of the LPOMR model based on the Likert scale shows that overall, this model is in the high category. This means that the LPOMR model is widely applied and effective in improving school quality and community participation. This categorization is supported by observation, questionnaire, and interview data that show good implementation of the model and significant positive impacts on school quality and community involvement. These results indicate that the LPOMR model can be an effective approach in improving the quality of school management and community involvement, with the note that there are several aspects that need to be improved to achieve optimal results.

The results of this study indicate that the implementation of the LPOMR model through LMS not only functions as a tool to support school management, but also as a catalyst in increasing community participation in school management. LPOMR, with elements of leadership, planning, organizing, monitoring, and relationships, has been proven to be able to strengthen school management and ultimately improve the quality of education. This study supports previous studies that found that community involvement and holistic management improvements can improve school performance (Naqvi, 2023; Rofiki *et al.*, 2023). In addition, empirical data showing a significant difference between school quality before and after the implementation of the LPOMR model further strengthens the argument that management integrated with LMS technology is able to accommodate school needs in achieving better quality (Purba *et al.*, 2022; Wong-Fajardo *et al.*, 2023). This finding is also in line with the R&D approach using the ADDIE model, where systematic implementation through the analysis, design, development, implementation, and evaluation phases ensures the effectiveness of the model (Mudjisusatyo *et al.*, 2024; Zulkepli *et al.*, 2024). From the results of this study, it is clear that schools that implement the LPOMR-based management model have a competitive advantage in terms of education quality compared to schools that do not implement it. Therefore, it is hoped that this model can be adopted more widely as a new standard in community-based school management.

#### IV. CONCLUSION

This study has evaluated the effectiveness of the LPOMR model in the context of school management and community participation, with results indicating that the implementation of this model has had a significant positive

impact. The main findings of this study indicate that the LPOMR model, which involves Leadership, Planning, Organizing, Monitoring, and Relation, has succeeded in improving the overall quality of schools. The application of this model in the planning and implementation of customary-based programs and community involvement has shown significant improvements in the quality of education and community participation. The results of observations, questionnaires, and interviews indicate that this model is effective in improving interactions between schools and local communities and better resource management. These findings emphasize the importance of a managerial approach based on the LPOMR model to optimize the quality of education and community involvement in the school environment. However, this study also has several shortcomings that need to be considered. Although the LPOMR model shows positive results, there are challenges in consistent implementation and adjustment to the local cultural context that need to be addressed. In addition, the research instrument used requires further development to address several constraints identified during the study, such as the need for a more in-depth evaluation of the model's impact on community participation. This research makes an important contribution to the development of school management and community participation, but further research is needed to address shortcomings and broaden understanding of the application of the LPOMR model in more diverse contexts.

#### REFERENCES

- Rekha A. P. (2024). The learning management system (LMS) and student learning effectiveness: A systematic literature review. *International Journal of Research Publication and Reviews*, 5(6), 1857–1861.
- Adi, P., Triyono, M., Priyanto, Handayani, S., & Narulita, S. (2024). Learning management system advancement with oncloud based system. *OCEM Journal of Management, Technology & Social Sciences*, 3(2), 7–11.
- Akram, M., & Khan, A. M. (2020a). Exploring e-leadership of principals: Increasing school effectiveness by learning management system. *Journal of Education & Social Sciences*, 8(1), 15–30.
- Akram, M., & Khan, A. M. (2020b). Exploring e-leadership of principals: Increasing school effectiveness by learning management system. *Journal of Education & Social Sciences*, 8(1), 15–30.
- Ali, R. (2024). How challenging? Barriers for teachers in institutional implementation of blended learning. *Open Learning: The Journal of Open, Distance and e-Learning*, 1–18.
- Allen, L. E., Franceschini, L., & Lowther, D. (2010). The role of school leadership in a large-scale student laptop implementation. *In Proceedings of Informing Science & IT Education Conference (InSITE)*, (pp. 631-645).
- Andari, S., Roesminingsih, E., & Trihantoyo, S. (2024). Community-based school management model development in the digital era. *Studies in Philosophy of Science and Education*, 5(1), 32–40.

- Bayrak, H. (2023). Eğitsel süreçlerdeki ortak platformlarda etkileşimli bireysel değerlendirme ile sanal ortamlarda akademik ve kültürel hareketlilik. *International Journal of Social Sciences*, 7(31), 829–844.
- Bradley, V. M. (2020). Learning management system (LMS) use with online instruction. *International Journal of Technology in Education*, 4(1), 68.
- Bradley, V. M. (2020). Using Learning Management Systems to Promote Online Instruction. In *Exploring Online Learning Through Synchronous and Asynchronous Instructional Methods* (pp. 123-150). IGI Global.
- Cassels, A. M. (2024). Leveraging LMS technology to deliver formative assessment in the post-pandemic era. In *Exploring Technology-Infused Education in the Post-Pandemic Era* (pp. 335-352). IGI Global.
- Chatterjee, P., Bose, R., Banerjee, S., & Roy, S. (2023). Enhancing data security of cloud based LMS. *Wireless Personal Communications*, 130(2), 1123–1139.
- Deichakivska, O., Moroz, M., Koliada, A., Hetmanenko, L., & Butenko, V. (2024). Utilising digital education to enhance learning accessibility in isolated areas. *Salud, Ciencia y Tecnología - Serie de Conferencias*, 3.
- Naqvi, S. B. H. (2023). Community involvement in school education. *Pakistan Journal of International Affairs*, 6(3).
- Animashaun, E. S., Familoni, B. T., & Onyebuchi, N. C. (2024). Strategic project management for digital transformations in public sector education systems. *International Journal of Management & Entrepreneurship Research*, 6(6), 1813-1823.
- Fadil, O. A., & Khaldi, M. (2023). *Learning management system: concept and challenge*. Advances in Educational Technologies and Instructional Design. IGI Global.
- Husin, H. S., Ibrahim, I., Ibrahim, H. M., Mahari, M., Yue, Z., & Phang, S. K. (2024). Students' acceptance and attitude of using learning management system (LMS). *2024 International Visualization, Informatics and Technology Conference (IVIT)*, 177–183.
- Manaf, S. (2024). Educational management in the digital age: Integrating technology for student success. *AL-ISHLAH: Jurnal Pendidikan*, 16(2).
- Mansur, H., Ratumbusang, M. F. N. G., & Yuniarti, F. (2024). Designing flexibility, accessibility, and independent learning through the use of hyperapp blended learning module. *Jurnal Komunikasi Pendidikan*, 8(1), 51-59.
- Mignon, C. A. (2022). Conception: The design and implementation of an online learning management system for secondary schools in Grenada. *International Journal for Research in Applied Science and Engineering Technology*, 10(9), 174–232.
- Misar, P. A. (2024). Design and implementation of an school college management system: Enhancing operational consistency and growth. *Gurukul International Multidisciplinary Research Journal*.
- Rofiki, M., Mubarak, N., & Angga, M. (2023). Manajemen pendidikan berbasis community engagement dalam peningkatan mutu sekolah. *Alfihris : Jurnal Inspirasi Pendidikan*, 2(1), 153–162.
- Sidana, A. B. (2022). LMS - A revolution in the higher education system of India. *International Journal of Advanced Research in Science, Communication and Technology*, 177–179.
- Mudjisusatyo, Y., Darwin, D., & Kisno, K. (2024). The use ADDIE model to improve the competence of the higher education task force in obtaining competitive funding for the independent campus program. *Journal of Applied Research in Higher Education*.
- Nirmayanthi, A., Abdalla, M. A. F., & Hasan, M. (2024). Implementasi manajemen strategik berbasis sekolah. *Cognoscere: Jurnal Komunikasi dan Media Pendidikan*, 2(3), 1-10.
- Oliveira, P. C. D., Cunha, C. J. C. D. A., & Nakayama, M. K. (2016). Learning Management Systems (LMS) and e-learning management: an integrative review and research agenda. *JISTEM-Journal of Information Systems and Technology Management*, 13(2), 157-180.
- Pérez-Garcias, A., Tur, G., Villatoro Moral, S., & Darder-Mesquida, A. (2022). Flexible learning itineraries in digital environments for personalised learning in teacher training. *RIED-Revista Iberoamericana de Educación a Distancia*, 25(2).
- Purba, R. A., Munthe, R. G., & Ginting, K. (2022). Learning model with LMS as an innovation to facilitate the implementation of learning from home. *JPI (Jurnal Pendidikan Indonesia)*, 11(2), 293–301.
- Rahayu, D. P., Herpratiwi, H., & Firdaus, R. (2024). The effect of using learning management system learning media on student independence and learning outcomes. *Jurnal Teknologi Pendidikan: Jurnal Penelitian dan Pengembangan Pembelajaran*, 9(3), 471-481.
- Reed, D. (2011). LMS strategies in higher education. *eLearn*, 2011(1).
- Rijal, S., Zou, G., Jie, L., & Demsky, C. (2024). The impact of using a cloud-based learning management system on access and quality of education. *Journal Emerging Technologies in Education*, 2(2), 163–176.
- Rosário, A. T., & Dias, J. C. (2022). Learning management systems in education: Research and challenges. In *Digital Active Methodologies for Educative Learning Management* (pp. 47-77). IGI Global.
- Sulistyowati, A., Haryati, T., & Miyono, N. (2024). Analisis efektivitas dan efisiensi implementasi manajemen berbasis sekolah di SMP Negeri 1 Limpung. *Educational: Jurnal Inovasi Pendidikan & Pengajaran*, 4(2), 79–83.
- Syukri, M., Fachruddin, F., Harmuliani, N., Rubino, R., & Putra, A. (2023). Sistem monitoring evaluasi pendekatan sistem pendidikan. *Jurnal Dirosah Islamiyah*, 5(2), 391–400.
- Thakre, N. V. (2024). Learning system application. *Gurukul International Multidisciplinary Research Journal*.
- Turan, Z., Kucuk, S., & Karabey, S. C. (2022). The university students' self-regulated effort, flexibility and satisfaction in distance education. *International*

- Journal of Educational Technology in Higher Education*, 19(1), 35.
- Wong-Fajardo, E. M., Mendoza-Rodas, M., Hernández-Vásquez, R., & Saavedra-Sánchez, H. (2023). Implementación de un modelo integrado de gestión académica con LMS en el sistema universitario. *Publicaciones*, 53(2), 217–254.
- Yanti, Y. M. (2024). Implementation of the independent learning curriculum for students. *PPSDP International Journal of Education*, 3(2), 354–365.
- Zhafira, D., Simangunsong, I. P., & Harahap, S. S. (2024). Analyzing the utilization of learning management systems to support student learning in an online learning environment. *Proceedings of International Conference on Education*, 2(1), 316–324.
- Zulkepli, N., Albakri, I. S. M. A., Megat Khalid, P. Z., & Ishak, M. F. F. (2024). Using the ADDIE model to develop an online professional development program for non-specialist ESL teachers. *Arab World English Journal*, 10, 302–313.