

LEARNING MANAGEMENT SYSTEM AS COVID 19 RISK MITIGATION

Aliwafa*¹, Muhammad², Shofiya³

^{1,3}Universitas Nurul Jadid, Probolinggo, East Java, Indonesia

²Sekolah Tinggi Agama Islam Nurul Abror Al Robbaniyin, Banyuwangi, East Java, Indonesia

DOI: <https://doi.org/10.52627/ijeam.v3i3.174>

Article History:

Received: July 2021

Accepted: December 2021

Published: December 2021

Keywords:

Learning Management, Covid 19, Risk Mitigation

*Correspondence Address:

aliwafa.fiza@gmail.com

Abstract :

This study aims to analyze the learning management system as a risk mitigation for Covid 19 at an early childhood education institution in Probolinggo Regency. The research method used is a qualitative case study type. In order to get an overview of the Learning Management System Learning as Covid Risk Mitigation in early childhood, the researchers mingled directly in the implementation of learning and made observations and documented learning activities at the institution. Interviews were conducted with principals and teachers. The results of the study indicate that teacher innovation using a learning management system is carried out through; parental involvement, use of online media, selection of materials, assessment, and follow-up. This study implies that teachers must have innovation and creativity in managing their learning according to the targets they have set to generate total motivation and intelligence of students.

Abstrak :

Penelitian ini bertujuan untuk menganalisis tentang learning management system sebagai mitigasi risiko Covid 19 pada salah satu lembaga pendidikan anak usia dini di Kabupaten Probolinggo. Metode penelitian yang digunakan adalah kualitatif jenis studi kasus. Guna mendapatkan gambaran tentang Pembelajaran Learning Management System Sebagai Mitigasi Risiko Covid pada anak usia dini, peneliti berbaur langsung dalam pelaksanaan pembelajaran dan melakukan observasi dan mendokumentasikan aktivitas pembelajaran di lembaga tersebut. Interview dilakukan terhadap kepala sekolah dan guru. Hasil penelitian menunjukkan bahwa inovasi guru dengan menggunakan learning management system dilakukan melalui; keterlibatan orang tua, pemanfaatan media online, pemilihan materi, penilaian, dan tindak lanjut. Penelitian ini memberikan implikasi bahwa guru harus memiliki inovasi dan kreatifitas dalam mengelola pembelajarannya sesuai dengan target yang ditentukannya, agar supaya mampu membangkitkan motivasi dan kecerdasan peserta didik secara totalitas

INTRODUCTION

During the COVID-19 pandemic, the learning process for early childhood to improve child development achievements encourages PAUD institutions to carry out home-based distance learning using an online system. This condition requires maximum cooperation between parents and schools. Learning at home encourages parents to guide the tasks given by the teacher and provide the necessary learning facilities (Lilawati, 2020). Parental involvement in the learning process in early childhood serves as a family school that aims to develop empathy and creativity (Mardiyah et al., 2020). However, the pandemic that lasted almost a year gave birth to various obstacles such as; lack of understanding of the material, difficulties in a growing interest in learning, managing study time because parents have to work, parents are impatient to accompany children to study, lack of knowledge to use gadgets, and difficulty in accessing the internet (Wardani & Ayriza, 2020). There are external factor constraints in the form of learning media and internal factors, namely the fatigue of educating children faced by parents during the school from the home period (Mufaziah & Fauziah, 2020).

Facts in the field show that children are not focused and lack concentration; they are indifferent to their guardians or parents, characterized by playing too much activity, watching television for too long, etc. They are less able to solve simple problems faced in everyday life, have not been able to think logically, have not been able to recognize cause and effect, lack initiative, and are less able to recognize and mention letters, numbers, etc. The attitude shown by the child is caused by less attractive learning and can provide a stimulus to them to be able to focus on their learning and develop their intelligence, especially in religious studies. Children are less interested in writing and reciting hijaiyah letters, daily prayers, and short letters.

The solution to dealing with the situation above requires the role of the principal administrator so that the implementation of education continues during the pandemic (Supriadi, 2020). Principals must be able to interact with teachers and parents using online media to create a sense of security and satisfaction and carry out learning (Sudrajat et al., 2020). Thus, information technology supports laptops and androids so that learning continues during the pandemic is inevitable. The implementation of online learning between teachers and students in PAUD institutions must co-occur and be in an application or internet platform to interact with one another as in face-to-face learning (Wijoyo & Indrawan, 2020). The development of information technology and the internet encourages learning, known as e-learning which has a broader concept than online learning. E-learning can be computer-based or called computer-based learning and online-based learning, namely learning in a network or called online. Online learning can use the internet, known as internet-based learning, and a website-based bias known as web-based learning, both of which use online networks that are continuously connected from one user to another. Meanwhile, e-learning and offline, face-to-face learning combine with blended learning or hybrid learning (Kraftl, 2013).

Thus learning in early childhood education can also be carried out using a website-based information system interconnected between displays (Lestari et al., 2021). However, educators in PAUD encounter obstacles such as limited communication, lack of learning methods and materials, high costs, and unavoidable access to technology between educators and parents (Agustin et al., 2020). Meanwhile, based on initial observations that have been made, it shows that the use of social media in the form of WhatsApp, which has been implemented since the beginning of the pandemic period, is still not adequate. Generally, teachers create WA groups for guardians of students that function to make it easier for teachers to communicate with parents. However, the information provided to the WA group is only an announcement or a substitute for a printed letter. When there are certain activities or celebrations, parents send photos or videos of their children's activities to the school. Interaction through this media is considered less communicative, so an adequate online learning system is needed, so the Learning Management System (LMS) was chosen as a follow-up to the E-Learning learning process. Children observe and provide optimal development stimulation even though the mother is working (Rakhmawati et al., 2021).

LMS is software for administrative purposes, documentation, finding materials, reporting an activity, providing online teaching and learning activities training materials connected to the internet. LMS provides various tools that provide services to make it easier to upload and share teaching materials, online discussions, chat, administering quizzes, surveys, reports (reports), and so on (Yauma et al., 2020). At least several research results strengthen the application of the learning management system, including Haryani (2020), who says that learning using technology can improve AUD's understanding of the material being taught.

LMS is a term in the world of technology and was developed specifically to manage and facilitate and become a medium for distance learning processes. A distance learning activity that uses an LMS can be developed into several features, including the registration process, payment, distribution of learning materials, the interaction process between teachers and students in online classes, online tests carried out using computers and Android devices, and there are several other LMS functions such as publication of learning materials, downloading of learning materials, assignment and assessment are all done online (Pratama & Kusuma, 2021). According to Salamah's explanation, LMS is a web-based software application technology used to plan, implement, and assess specific learning processes. Usually, this learning management system provides facilities for instructors/teachers to create and deliver content, monitor student participation, and assess student performance (Salamah et al., 2020).

LMS also known as Virtual Learning Environment (VLE), is learning management that has a function to provide material, support collaboration, assess student performance, record student data, and generate reports that are useful for maximizing the effectiveness of the learning process. a learning statement (Favourite & Kusuma, 2021).

Learning management system, the basic description is a software application that automates the administration, tracking, and reporting of training events. LMS is a software or software for administrative purposes, documentation, finding materials, reporting an activity, providing online teaching and learning activities training materials connected to the internet (Rahardja et al., 2016). LMS is understood as an application that automates and virtualizes the teaching and learning process electronically (Fadhilaturrahmi et al., 2021). The LMS is an application or software used to manage online learning, which includes several aspects, namely material, placement, management, and assessment (Wijayanti et al., 2017). LMS is an information technology system developed to manage and support the learning process, distribute lecture materials and enable collaboration between lecturers and students. Through the LMS, students can access lecture materials, conduct discussion boards with lecturers through discussion forums, conduct chat, and access assignments given by lecturers. Lecturers are also encouraged to make learning materials more creative through learning videos uploaded in the LMS. LMS contributes in terms of utilization. The flexibility of the Learning Management System allows lecturers and students to access the LMS anytime and anywhere and through various devices, either via PC, tablet, or smartphone (Fitriani, 2020).

Some of these researchers explained the importance of innovation in order to create a conducive learning atmosphere and process for students, as well as to achieve the goals of the learning process that had been set; the learning innovation carried out by Raudlatul Athfal (RA) Miftahul Huda was to make the Learning Management System a learning medium because This media is relevant to the situation and situation and also to restore the enthusiasm of students to continue studying at Raudlatul Athfal Miftahul Huda, Banyuanyar, Probolinggo. This research focuses on implementing the Learning Management System as a Covid 19 Risk Mitigation Raudlatul Athfal Miftahul Huda, Banyuanyar, Probolinggo East Java.

RESEARCH METHODS

This research uses a qualitative case study approach to overview the teacher's strategy in improving children's cognitive intelligence through the Learning Management System. The place of research was carried out at an institution in the Probolinggo area, namely Raudlatul Athfal Miftahul Huda Banyuanyar, which is under the auspices of the LP Ma'arif NU. Raudlatul Athfal (RA) Miftahul Huda is a formal education that applies the Learning Management System in teaching and learning.

Researchers, in this case, participate in mingling learning assisted by the Learning Management System and make direct observations about the learning carried out by teachers in developing children's cognitive intelligence. In addition, research information was also obtained from interviews with the principal and the teacher council at Raudlatul Athfal (RA) Miftahul Huda Banyuanyar Probolinggo. Researchers observed the activities of teachers and students in the use and utilization of the Learning Management System during

the learning process. Other data to corroborate the results are taken from documents supporting and strengthening the research. Some of these data, then analyzed in stages, starting with the presentation of all existing data, then continued with data reduction concerning the research theme raised, and ended with concluding a finding in this study.

RESULTS AND DISCUSSION

The results showed that; The learning management system as risk mitigation for COVID-19 carried out at Raudlatul Athfal (RA) Miftahul Huda Banyuanyar, Probolinggo is as follows;

Parent Involvement

Disaster mitigation is an activity that acts to reduce the impact of a disaster or an effort made to reduce victims when a disaster occurs, both loss of life and property. Disaster mitigation includes both the planning and implementation of actions to reduce the risks associated with known human-caused and natural hazards and the planning process for effective response to disasters that do occur (Aisyah, 2021).

Mitigation is the ongoing action taken to reduce or eliminate the long-term risk to life and property from a hazard. In order to prevent the spread of Covid-19, the Government has instructed the public to avoid crowds (social distancing) and maintain physical contact (physical distancing) in carrying out activities. In addition, video-based educational media can help the community increase understanding, be trusted, facilitate interpretation, and obtain information about COVID-19 Mitigation Education (Nico et al., 2021).

The Minister of Education and Culture of the Republic of Indonesia, through Circular Letter number 4 of 2020, ordered the implementation of learning in the Covid-19 emergency period to be carried out remotely or online learning (Kemendikbud. go. id, 2020). This policy forced teachers and students to work and study from home at the PAUD to tertiary levels. Of course, these changes in learning affect the pattern of interaction between students and students, students with teachers, and children with parents. Since the study from home policy was implemented, the role of parents has increased. Parents must apply good parenting patterns in accompanying children for almost 24 hours (Dewi & Khotimah, 2020). The role and function of the family occupy an essential and strategic position. The family has a role in all forms that occur to its members (Syahla, 2021).

The presence of parents in every child's activities is an important thing to do. The presence of parents, in this case, is the interaction between parents and children, by asking children's activities or daily activities, directing shows or games that are allowed and not allowed to be accessed by children. In addition, parents can also take preventive action by setting YouTube viewing in the settings menu and changing it so that only videos that are worthy of being watched by children will appear (Nisa', 2020).

Setting a schedule for using smartphones in children requires communication between parents and children, namely through discussions from both parties, both parents and children, by making a mutual agreement on

the schedule. In addition, it is accompanied by the provision of negative reinforcement that has also been conveyed to the child, namely by reducing the child's pleasure so that the agreement that has been made together can be carried out better. This control does not mean that children are not allowed to access or use smartphones at all, but the provision of rules and supervision is a solution that can be given to regulate the use of smartphones in children. Parents must supervise and continue to accompany their children in various digital activities.

Before teaching and learning activities begin, teachers must prepare complete and systematic learning materials to be delivered to students. In addition to materials, teachers at Raudlatul Athfal (RA) Miftahul Huda must also prepare interesting, innovative, and fun learning methods, prepare educational game media designed explicitly for competency development before sending learning materials.

Halimatus (2021), as the head of the school, conveyed some of the preparations made by the teacher RA Miftahul Huda before the teaching and learning process. Before learning begins, the teachers of Raudlatul Athfal (RA) Miftahul Huda prepare the Annual Program (PROTA), Semester Program (PROSEM), Weekly Learning Implementation Plans (RPPM), and Daily Learning Implementation Plans (RPPH) according to the Raudlatul Athfal (RA) level curriculum. The teacher already has a reference or guide to prepare for the learning process from annual, semester, weekly, and daily. The teachers of RA Miftahul Huda just need to check and match the activities that have been designed in advance in delivering material to students and adapting to religious learning through the existing Learning Management System.

Rodhiya (2021) also said that the teacher at Raudlatul Athfal Miftahul Huda prepares to learn by referring to the RPPH that is made but sometimes it is collaborated with the creativity and strategies of the teacher to attract children to be more enthusiastic about learning in doing game activities while learning the teacher has studied Rpph first. First, what activities will be done at home? In this activity, the teacher collaborates with existing activities with simple songs and uses a learning management system to attract children's interest in playing while learning activities.

Astutik (2021) said that learning using online learning such as the Learning Management System is very effective because children can learn anytime and independently because they learn while playing. Children are happy with the material being taught. Jumila (2021), a student's guardian, said that children are more enthusiastic to know and develop their creativity. Nurhayati (2021), the student's guardian, said that study time could be arranged according to conditions and situations because, according to Nurhayati, conditions and situations also support the growth and development of children's abilities. (Ardiansyah & Arda) explained that parents have a vital role in helping their children in the learning process at home, such as (1) parents guiding their children in using the technology used when studying; (2) parents as facilities and infrastructure facilitators; (3) parents as motivators to provide enthusiasm, motivation, and support in carrying out learning to obtain

exemplary achievements; (4) parents as regulators or directors (Harahap, Dimiyati, & Purwanta, 2021).

Utilization of Online Media

Since the establishment of online learning by the government of Raudlatul Adhfal (RA) Miftahul Huda, many are worried about developing their child's competency abilities because online learning is still foreign to parents. However, after receiving socialization about online learning, parents can understand, and the choice is Learning Management System. At first, when the Learning Management System learning was implemented, the students' parents had difficulties because they lacked knowledge about this learning, and some did not understand it at all. Raudlatul Adhfal (RA) Miftahul Huda teachers provide tutorials on learning the Learning Management System to their parents. Moreover, the result is that after the parents understand and understand the learning management system, they feel the benefits of this learning.

The use of technology in everyday life and the learning process requires wise use so that the benefits can be maximized according to needs. Therefore, this study focuses on how to use technology for teachers in the learning process and for children, especially smartphones in the family, and the right solutions in using them. Interactive media has various advantages when used as a medium for children's learning because it can increase children's motivation; there are color compositions, music, and animated graphics in the video, so that it adds to the impression of realism.

This interactive media can help parents when they want to provide learning at home and increase the closeness of parents and children through joint activities following the instructions of the video being watched. The use of technology in the learning process can provide benefits both in developing aspects of child development in general and in developing cognitive aspects in particular. Based on research conducted by Hsin, Li, and Tsai (2014) that the average child who participates in learning using technology as a learning medium has a positive impact on the development of cognitive, social, emotional, and physical aspects, from Of the 94 children who participated in the study, only two children experienced a negative impact on the cognitive aspect and one child on the social aspect. In research on children's abilities in cognitive aspects in terms of language, literacy, mathematics, science, digital literacy, cognitive abilities, and others experience many positive impacts and develop very well (Nisa', 2020).

Putra et al., (2020) argue that using learning media in the teaching and learning process can generate new desires and interests, generate motivation and stimulation of learning activities and even bring psychological effects on students. The success of distance learning must involve many parties because distance learning is not very different from conventional learning. A student psychologically needs a sense of attention from parents, teachers, and the environment. Therefore, learning media in learning activities is essential and helps teachers achieve educational goals (Ramadhan & Kusuma, 2021).

Raharja et al., (2011) revealed that LMS is software used to create web-based online learning materials and manage learning activities and results. LMS is built through platforms, such as Google classroom, Edmodo, Quipper, Moodle, Schoology, Learnboos, and combining synchronous and asynchronous activities. Like a house, a designer can fill the house as completely as possible so that every activity is carried out without going back and forth outside the house (Bavel et al., 2020).

The implementation of the learning management system requires teachers to constantly improve themselves and become more technology literate because, in the implementation of the Learning Management System, mastery of technology is a significant factor in the success of learning (Lapada et al., 2020). LMS has several characteristics, including lesson content management, learning process management, online evaluation, exams, and chat and discussion. LMS has several advantages and disadvantages of each. Depending on the student or teacher choosing which LMS media when holding learning activities (Wicaksono & Kusuma, 2021).

Online learning media is more practical because the teaching and learning process can take place anytime and anywhere as long as conditions are conducive, children will get a fun learning experience, learning is easy to document, becomes an alternative during a pandemic, children are more sensitive to technological advances, learning resources and of course learning with environmentally-friendly online media.

Material Selection

Various types of early childhood materials can be applied in children's learning. Early childhood education materials are generally adapted to the curriculum of educational institutions and the needs of children. Learning through the Learning Management System can be done using various platforms that can facilitate interaction between teachers and their students, such as calls or video conferences, such as WhatsApp (WA), zoom, Google meets, Before the material is shared with the student's guardians, the teacher must ensure that the material is by the SK, KD that have been listed and set out in the Learning Syllabus so that the assessment target is achieved.

Assessment and Follow-up

The learning assessment was carried out by Raudlatul Athfal (RA) Miftahul Huda, Banyuanyar, Probolinggo. According to Umami Kulsum as a teacher, an assessment of the use of the Learning Management System is carried out every month on the 3rd and 4th Wednesday of the week, which is usually called the KKG (Teacher Working Group). This assessment is carried out together to discuss things experienced during learning during this pandemic; all complaints from teachers can be expressed so that teachers, school principals, and their staff can come up with solutions with mutual agreement.

Umami Kulsum said that the learning assessment was carried out in their respective homes by sending photos of the children's work and videos of activities. For example, whether the children want to practice reading and writing, whether the child's development has emerged, and other aspects that

need to be assessed.

In conducting the assessment, educators make separate anecdotal notes. In addition, every day, educators fill out daily assessments of children during tahfidz learning with tahfidz achievement book assessments, qira'ati learning with qira'ati achievement book assessments, and center learning assessments with center learning assessment sheets. The method used in conducting the assessment is the method of observation or observation, which is done by observing the behavior and activities of children at a time or activity.

Assessment of children's development is carried out according to the level of child development from moral, cognitive, social, and emotional development. The assessment results are recorded in the children's daily assessment format brought by each educator. There are several forms of assessment. For example, the tahfidz and qira'ati provided the student achievement book Raudlatul Athfal (RA) Miftahul Huda, which memorizes children's short letters and children's volumes, children's development notes, and children's rote scores marked with stars. The more stars, the better the child's score or memorization is, and vice versa. The assessment of center activities is recorded in the daily assessment format of center activities which contains core competencies, essential competencies, and notes on child development which are assessed with an asterisk (developing very well), a checklist mark (developing according to target), an O mark (starting to develop), and the O sign (needs guidance). In the form of assessment, it can be in numbers, letters, signs, and some are in the form of descriptions. The assessment results are analyzed to be used as guidelines for follow-up programs, for improvement according to the institution's ability.

CONCLUSION

The application of the Learning Management System as a Covid 19 Risk Mitigation Raudlatul Athfal (RA) Miftahul Huda, Banyuanyar, Probolinggo, East Java, is a learning innovation step carried out to achieve the objectives of learning due to the current situation. Learning with the Learning Management System Apart from this, teachers also involve students' parents to monitor learning activities at home. The use of online media can increase knowledge and interest and motivate children to study harder. Learning materials are adjusted to the applicable curriculum. Parents carry out assessments by sending student work photos or videos of learning implementation to determine student competency achievement. The learning management system as risk mitigation for COVID-19 cannot be generalized to all educational institutions for early childhood. This is casuistic and by the characteristics of learning and analysis of the internal and external environment at the institution. This allows further researchers to study and research with different cases and characteristics.

REFERENCES

- Wicaksono, A. T., & Kusuma, W. A. (2021). Tingkat Keunggulan Beberapa LMS dalam Pembelajaran Daring pada Masa Pandemi Covid-19. *Jurnal Health Sains*, 2(8), 1374–1383. <https://doi.org/10.46799/jsa.v2i8.294>
- Bavel, J. J. V., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., ... Willer, R. (2020). Using Social and Behavioural Science to Support COVID-19 Pandemic Response. *Nature Human Behaviour*, 4(5), 460–471. <https://doi.org/10.1038/s41562-020-0884-z>
- Dewi, P. A. S. C., & Khotimah, H. (2020). Pola Asuh Orang Tua pada Anak di Masa Pandemi Covid-19. *Seminar Nasional Sistem Informasi*, 2433–2441.
- Einggi Gusti Pratama, M., & Andhyka Kusuma, W. (2021). Penggunaan Learning Management System (LMS) Untuk Pembelajaran Dimasa Pandemi. *Jurnal Health Sains*, 2(8), 1545–1554. <https://doi.org/10.46799/jsa.v2i8.288>
- Fadhilaturrahmi, Ananda, R., & Yolanda, S. (2021). Jurnal basicedu. *Jurnal Basicedu*, 5(3), 1683–1688.
- Favourite, A. W., & Kusuma, W. A. (2021). Pemanfaatan Industri 4.0 dalam Pembelajaran Jarak Jauh Selama Pandemi Covid-19 Menggunakan LMS (Learning Management System). *Jurnal Syntax Admiration*, 2(9), 2722–5356.
- Fitriani, Y. (2020). Analisa Pemanfaatan Learning Management System (Lms) Sebagai Media Pembelajaran Online Selama Pandemi Covid-19. *Journal of Information System, Informatics and Computing*, 4(2), 1. <https://doi.org/10.52362/jisicom.v4i2.312>
- Harahap, S. A., Dimyati, D., & Purwanta, E. (2021). Problematika Pembelajaran Daring dan Luring Anak Usia Dini bagi Guru dan Orang tua di Masa Pandemi Covid 19. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 5(2), 1825–1836. <https://doi.org/10.31004/obsesi.v5i2.1013>
- Nico, N., Wahyudin, W., & Hilmi, I. L. (2021). Edukasi terhadap masyarakat terkait mitigasi Coronavirus Disease (COVID-19) di Kabupaten Karawang. *Kacaneegara Jurnal Pengabdian Pada Masyarakat*, 4(2), 173–184.
- Nisa', L. (2020). Pemanfaatan Teknologi Dalam Pendidikan Anak Usia Dini. *ThufuLA: Jurnal Inovasi Pendidikan Guru Raudhatul Athfal*, 8(1), 001. <https://doi.org/10.21043/thufula.v8i1.6283>
- Putri, D. P., & Aisyah. (2021). Mitigasi Bencana (Covid 19) Melalui Kegiatan Multiliterasi Di Sekolah Dasar. *JAMU: Jurnal Abdi Masyarakat UMUS*, 1(02), 105–112.
- Rahardja, U., Aini, Q., & Zuliana, S. R. (2016). Metode Learning Management System (LMS) Idu Untuk Mendukung Kegiatan Belajar Mengajar MIT Pada Perguruan Tinggi Raharja. *Cices*, 2(2), 156–172. <https://doi.org/10.33050/cices.v2i2.311>
- Rakhmawati, N. I. S., Mardiyah, S., Fitri, R., Darni, D., & Laksono, K. (2021). Pengembangan Learning Management System (LMS) di Era Pandemi Covid-19 pada Pendidikan Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 6(1), 107–118.

- Ramadhan, H., & Andhyka Kusuma, W. (2021). Penggunaan Upaya Peningkatan dan Motivasi Belajar E- Learning Management System (LMS) Pada Saat Pandemi. *Jurnal Health Sains*, 2(8), 1453-1460. <https://doi.org/10.46799/jsa.v2i8.287>
- Salamah, I., Lindawati, L., Fadhli, M., & Kusumanto, R. (2020). Evaluasi Pengukuran Website Learning Management System Polsri Dengan Metode Webqual 4.0. *Jurnal Digit*, 10(1), 1-13.
- Syahla, N. (2021). Peran Keluarga dalam Pencegahan Penularan Covid- 19. *Jurnal Kesehatan*, 3(2), 1-7. Retrieved from <https://osf.io/p4gdu>
- Wijayanti, W., Maharta, N., & Suana, W. (2017). Pengembangan Perangkat Blended Learning Berbasis Learning Management System pada Materi Listrik Dinamis. *Jurnal Ilmiah Pendidikan Fisika Al-Biruni*, 6(1), 1-12. <https://doi.org/10.24042/jpifalbiruni.v6i1.581>
- Yauma, A., Fitri, I., & Ningsih, S. (2020). Learning Management System (LMS) pada E-Learning Menggunakan Metode Agile dan Waterfall berbasis Website. *Jurnal JTIK (Jurnal Teknologi Informasi Dan Komunikasi)*, 5(3), 323-337. <https://doi.org/10.35870/jtik.v5i3.190>