

## **MEDIA DEVELOPMENT OF EDUCATION AND PROMOTION BASED ON LEARNING MANAGEMENT SYSTEM (LMS) AT NURUL HIDAYA ISLAMIC BOARDING SCHOOL, CIJERUK-BOGOR**

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### **ABSTRACT**

This paper identified two main problems at Nurul Hidayah Islamic Boarding School (Pondok Pesantren). First, the school has limited access to learning materials and relies on printed books. Learning assessment there are conducted conventionally through face to face by giving memorization test. Students (called Santri) have to take a written test every six months. Second, the existence of the Pondok Pesantren Nurul Hidayah is less know. Their promotional activities only carried out by word-of-mouth. This community service activity (PKM) proposed a solution to address those problems. To improve learning process at Pondok Pesantren, PKM developed a Learning Management System (LMS). To improve its visibility, it installed a Search Engine Optimization (SEO) on the LMS website. This PKM uses the *Participatory Action Research (PAR) method, consisting of several stages: problem identification at the Ponpes (to know); problem analysis (to understand); activity planning (to plan); LMS development; administrator training (to act); and evaluation (to change)*. As an outcome, PKM in Pondok Pesantren Nurul Hidayah has established an LMS structure for online learning. Their teachers (called Ustad and Ustadzah) have been trained for LMS usage. SEO adjustment have been installed to increase their visibility in search engines.

**Keywords:** learning media, LMS, pondok pesantren, promotion, SEO

### **INTRODUCTION**

This community service activity (PKM) was developed in order to assist the Indonesias government meet its obligation to achieve the 17 Goals and 169 targets of the Sustainable Development Goals (SDGs). PKM activities is to contribute at achieving Goal 4 which relates to Quality Education. Specifically, Goal 4 states: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all." Improving the quality of education is important to achieve the other goals, and for enhancing Indonesia's Human Development Index (HDI) (Kementerian PPN/Bappenas).

The focus of this PKM is to achieve Target 4.4 of Goal 4 of the SDGs. In the Social Development Pillar Book from the National Development Planning Agency (Bappenas) highlights Targets 4.4 as aiming to increase, by 2030 significantly, the number of youth and adults with relevant skills, including technical and vocational skills for decent work and entrepreneurship. The indicator mentioned in 4.4.1 (a) is the proportion of youth (aged 15-24 years) and adults (aged 15-59 years) with information and communication technology (ICT) skills (Nasional, K. P. P., 2020).

Pondok Pesantren Nurul Hidayah is facing the issues that relevant to this target. As an islamic boarding school that conduct a traditional education, Pondok Pesantren Nurul Hidayah is confronted with the challenge of relevance and attractiveness in the era of technological development. Nurul Hidayah has two types of students (santri) namely residential students and non-residential students. For non-residential students, the learning begins above 7.pm after the evening prayer time (Ba'da Isha) because most of them must work or attend regular school during the day. Meanwhile, learning class residential students start from 8.00am to 9.00pm. Learning process is still conducted in conventional way. The learning method is entirely done face to face in pondok pesantren. It is relying on printed textbooks. To evaluate their materials, each santri had to test based on memorization. The formal evaluation was conducted every six months by a written exam.

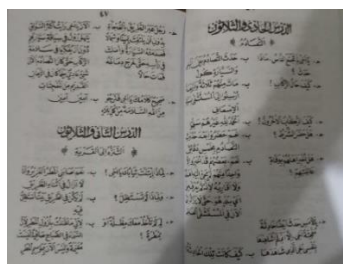


Figure 15. Printed Textbook as Learning Material

In the digital era, Nurul Hidayah also having a problem regarding its visibility. Historically, this school founded in 2005 by Drs. Ece Hidayat. The location of Pondok Pesantren Nurul Hidayah was relocated in 2019 due to the construction of the Bogor-Yogyakarta railway line. It significantly affected this pondok pesantren. The relocation reduced the number of santri, and forcing Nurul Hidayah pioneering to rebuild from scratch. This Islamic Boarding School primarily only known to the local community around the pondok pesantren. To date, the school’s promotion efforts have relied solely on word-of-mouth. The lack of recognition of Nurul Hidayah as islamic boarding school in digital platform needs to address.

This PKM designed to solve those problems faced by Nurul Hidayah Islamic Boarding School. The development of a Learning Management System (LMS) and setting SEO on the LMS web are suitable solution for pondok pesantren (Mahbub, M. A., 2021). It will bring modernization to boarding school. LMS allows santri to learn online and enable access learning materials or recorded lesson more flexibly (Muklason, A., 2023 & Fatimah, T., 2018). A smartphones-based learning application is also used to increase santri engagement and motivation to study (Fauzi, N., 2021). This demonstrates the traditional boarding school’s adaptation to technological developments in education (Mukhid, M. P., 2023). Installed SEO for the LMS web is important to improve the website's ranking in search engines. As a result, pondok pesantren will be more easily found by prospective students or their families when searching for islamic educational institutions.

**METHOD**

This community service activity used the *Participatory Action Research* (PAR) method. This method is a participatory approach aimed to solve problems and addressing needs of society, producing knowledge, also facilitating the process of religious social change (Afandi, A., 2022). Figure 2 below shows how a cycle of PKM activities with PAR method.

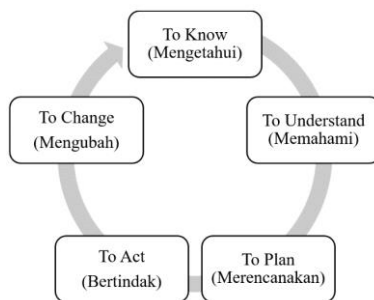


Figure 16. The cycle of PKM Activities with PAR method

The PKM cycle using PAR method involves five main stages:

1. First stage - To Know. Identify problems in Nurul Hidayah Islamic Boarding School. The PKM team identified that pondok pesantren have limited access to learning materials and the lack of visibility. In this first stage, school administrators, teachers (ustadz/ustadzah), and santri are interviewed.
2. Second stage - To Understand. Analyzing the problems that have been identified. The team also review some relevant literature to provide solutions. The outcome in this stage is the development of LMS and configuring SEO for LMS.
3. Third stage - To Plan. Based on the outcome, the team planned details LMS such as designed its homepage and SEO configuration for LMS. The team also planned training session for their administrators, ustadz/ustadzah and santri.

4. Fourth stage - To Act. This stage focuses on implementation base on plan that already made. Activities that already done in this stage were designing the website, optimizing SEO, and conducting training for administrators and teachers on using the LMS.
5. Fifth stage - To Change. It is a final stage of the cycle to emphasize the result. It carried out by evaluating the LMS and SEO configurations. The PKM team distributed questionnaires to those who will use the LMS, to assess the LMS usability. meanwhile SEO performance was evaluated based on the number of new visitors to the LMS website. The result of the fifth stage is also included the dissemination of the PKM activities to the wider public.

The problems that identified at the Nurul Hidayah Islamic Boarding School need a multidisciplinary approach from two fields of knowledge: social sciences and information technology. Therefore, the PKM team consist of one lecturer from Magister of Communication Science and two lecturers from the Faculty of Information Technology, Budi Luhur University, Jakarta. This PKM also involved one student from the Faculty of Information Technology.

## RESULTS AND DISCUSSION

Nurul Hidayah Islamic Boarding School is an islamic educational institution under the Ece Hidayat Islamic Education Foundation founded by Drs. Ece Hidayat in 2005. At the beginning, it was initially as a religious studi group (majelis ta'lim). It had not yet received an official recognition from the government. Slowly, it continued to grow and now officially registered as islamic boarding school under the Ministry of Religious Affairs Republic of Indonesia pesantren statistical number 510032011505). Nurul Hidayah Islamic Boarding School is located in Kampung Pondok Bitung RT 003 RW 004 Village Sukaharja, Cijeruk District, West Java Province (Figure 3).

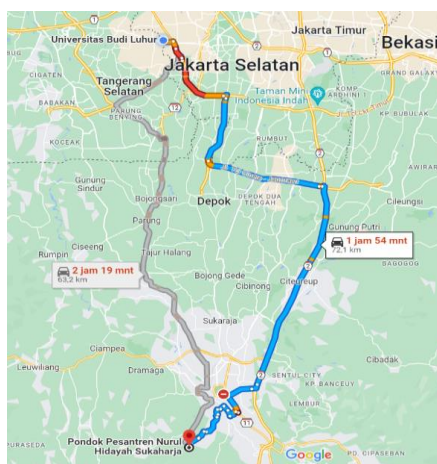


Figure 17. Location of Nurul Hidayah Islamic Boarding School & Distance from Budi Luhur University

This pondok pesantren has 10 Ustad/Ustadzah, 2 female boarding supervisors, 2 male boarding supervisors, and 3 kitchen managers. The age of students or called as santri at Pondok Pesantren Nurul Hidayah categorized as teenager, which is the target age for the SDG Goal 4.4. Most of their santri originally from the surrounding community of pondok pesantren.

This pondok pesantren already has a website with the address <https://ppnurulhidayah.com> (Figure 4). The website provides information about the profile of Nurul Hidayah as an islamic boarding school, news and activities carried out by pondok pesantren. It also uses for some announcement and event agenda at Pondok Pesantren Nurul Hidayah. On the front page there is a banner related to the registration of new students that provides contact information for registration. Although, the management of Nurul Hidayah not yet optimize their website because not widely known by the public. People need to know the address to access this website since it has not appeared in search engine.



Figure 18. Front Page of <https://ppnurulhidayah.com>

The implementation of this PKM has successfully installed and configured Moodle LMS at Nurul Hidayah Islamic Boarding School website (Figure 5). The installation process included server preparation, ensuring the server met the specifications required by Moodle, downloading the Moodle installation package from the official site, extracting the installation package, and performing the initial setup through the Moodle installation wizard. Initial configuration steps were also successfully completed, including setting up the site name, time zone, language, creating an administrator account, and configuring access permissions.

E-Learning Pondok Pesantren Nurul Hidayah Bogor



Figure 19. LMS of Pondok Pesantren Nurul Hidayah

The Moodle LMS homepage of Pondok Pesantren Nurul Hidayah was designed more attractive and informative for user. Theme of homepage was customized that match with the visual of islamic boarding school. Colors, fonts and layout were configured to be consistent with its branding.

To increase the visibility of the Moodle LMS page on search engine, this PKM has applied SEO setting configuration into several steps. First, it was identifying some relevant keywords associated with Pondok Pesantren Nurul Hidayah, Cijeruk. Then, it included those keywords in the LMS page content such as in titles, descriptions and texts. It continued with the optimization of meta tags such as page titles, descriptions and meta keywords for each page of LMS. Hopefully, all those steps brought Moodle LMS page of Pondok Pesantren Nurul Hidayah more visible and easily accessed online by users.

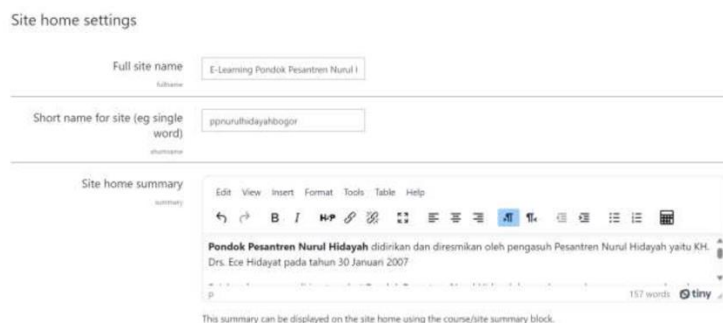


Figure 20. Keyword on Nurul Hidayah LMS setting

As final stage of PKM activity, the evaluation was carried out. The team distributed questionnaires to all participants. Ustadz/ustadzah - represented teachers and administrators who had participated in the LMS training submitted some feedbacks. The assessment uses a Likert scale with a rating scale 1 for strongly disagree to 5 for strongly agree. The questions exercise with Use Questionnaire which consists of 4 categories of questions, namely Usefulness, Ease of Use, Ease of Learning, Satisfaction (Lund, A. M., 2001) and use feasibility category assessment (Kusuma, 2016). Figure 7 shows the total score of this assessment. While Figure 9 shows that the usability of the Nurul Hidayah Islamic Boarding School LMS from the usefulness category got a decent score (78%). The ease of use category got a decent score (71%), and the ease of learning category got a decent score (73%). Finally, the satisfaction received a decent score (79%).

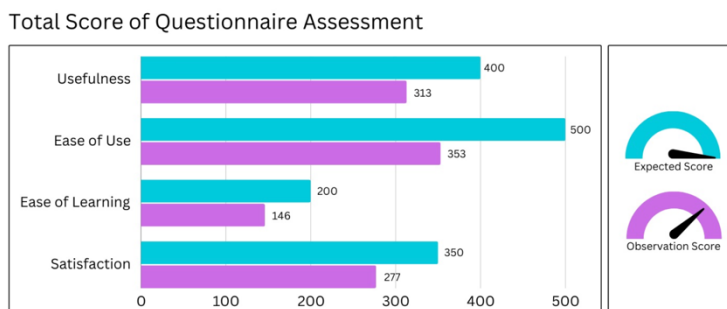


Figure 21. Graph of the Results of the Use Questionnaire Assessment Scores

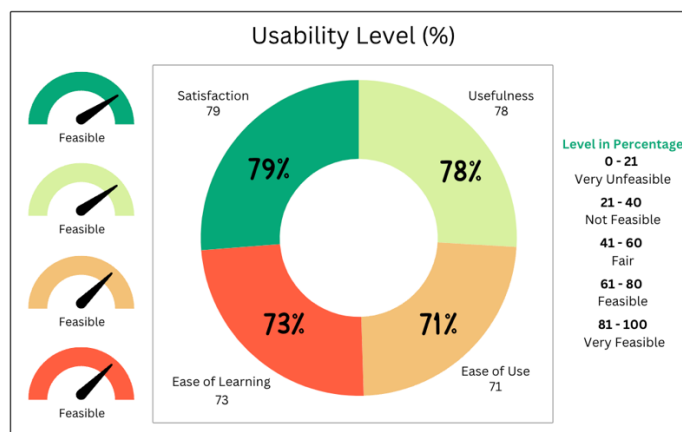


Figure 22. Feasibility Category Assessment

## CONCLUSION

Learning Management System is a step to start the modernization at Nurul Hidayah Islamic Boarding School. Learning methods in traditional islamic boarding school will be more attractive by utilizing technology. LMS can support a more interactive learning process at Pondok Pesantren Nurul Hidayah. LMS in this boarding school was created using Moodle, starting from the installation to the configuration stage and making it ready to be used as a learning medium. Teachers (Ustad and Ustadzah) have been trained by the team in using the LMS. Students (Santri) are also introduced to LMS and feel more interested to study. These means that all parties in islamic boarding school are technologically literate. Communication and interaction between them now more interactive involving internet. Although they are not yet fully accustomed to it, this PKM recorded their enthusiasm for continuing to develop more interactive learning materials.

The LMS configurations at Pondok Pesantren Nurul Hidayah website also includes Search Engine Optimization settings. This configuration hopefully will increase the visibility of the Pondok Pesantren Nurul Hidayah LMS page on search engines. Visibility on SEO could promote the Nurul Hidayah Islamic Boarding School, so this school will be widely known by public outside the village of Sukaharja, Cijeruk - Bogor.

The next PKM activity can be design for training program that focuses on teacher. PKM can be aimed to produce a learning material in the form of modern or more enjoyable content that suitable with the teenage. This PKM found that all Ustad and Ustadzah appear to be familiar with the internet, so the next program will further optimize their use of gadgets. The LMS does not require complex applications, so santri can access it through their own smartphone. Santri should also be equipped to make better use of internet to learn and gain more knowledge. PKM activities will greatly assist the government to fulfill the Target 4.4 of SDG, and it should be continued by all stakeholders.

## ACKNOWLEDGMENT

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