

# Development of a System-Based Evaluation Model Using Moodle in the Semarang e-teacher Community

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**Abstract.** Training development of evaluation models Moodle- based in Semarang e-teacher Community aims For increase teacher skills in utilise technology for the evaluation process learning . Moodle, as a Learning Management System (LMS) platform, enables management quizzes , assignments , and exams online with system evaluation automatic . Research This to study Moodle implementation in the evaluation process For increase efficiency , transparency and quality bait come back to students . Training done in a number of session with focus on usage relevant Moodle features in evaluation learning . Research results show that the majority of teachers who participated training feel more believe self in using Moodle and reporting improvement efficiency in giving bait come back to students . However , the challenges related infrastructure technology and limitations mastery technical by some teachers to be necessary obstacles overcome . Although Thus , the use of Moodle is overall succeed increase quality evaluation learning and facilitating administration education . Based on results this , it is expected application of evaluation models Moodle based can expanded in more Lots school For support development learning based on more technology efficient and effective .

**Keywords :** Moodle, Evaluation Learning , Educational Technology , LMS, Teacher Training

## Introduction

Quality education requires an effective and objective evaluation process to measure student competency achievement. In the context of technology-based learning, the Learning Management System (LMS) has become a very useful tool, especially in supporting a more efficient and measurable learning evaluation process. One of the LMSs that is widely used in various educational institutions is Moodle, an open-source platform that offers various features to support learning management, communication between teachers and students, and a comprehensive evaluation system (Pratomo & Wahanisa, 2021) .

In the world of Indonesian education, the Semarang e-teacher community is one of the communities that prioritizes the use of technology to support learning in schools. This community consists of teachers who are active in developing their technological skills and encouraging more innovative teaching by utilizing digital platforms. Along with the increasing need for digital-based and flexible learning, evaluation using technology-based systems is very relevant to improving the quality of teaching and learning itself (Intania et al., 2023) .

Moodle, with its ability to integrate various evaluation methods such as online quizzes, task-based assessments, and automatic exam result management, is very suitable for use in the Semarang e-teacher Community. Moodle-based evaluation allows teachers to conduct assessments more objectively, transparently, and quickly, while minimizing the administrative burden usually associated with conventional evaluations (Rohman & Santoso, 2023) .

However, although Moodle has proven effective in various countries and educational institutions, its implementation in Indonesia, especially among teachers in the Semarang e-teacher community, still has its own challenges. Many teachers have not fully utilized Moodle's potential in terms of evaluation, either due to a lack of understanding of the use of existing evaluation features, or limitations in the technological infrastructure that supports the implementation of this platform. Therefore, the development of a system-based evaluation model using Moodle is an important need to improve teacher competence in utilizing Moodle for learning evaluation purposes.

The training and mentoring provided to members of the Semarang e-teacher Community aims to improve teachers' understanding and skills in designing and implementing Moodle-based evaluations. The evaluation model developed will include creating online quizzes, managing assignment assessments, and how to provide automatic feedback to students. Thus, teachers are expected to be able to carry out more data-based evaluations, monitor student progress more accurately, and provide a more efficient learning experience for students.

In the long term, the development of this Moodle-based evaluation model aims to encourage the transformation of technology-based education in Indonesia, especially in the Semarang e-guru Community environment. With a more systematic and digital-based evaluation model, it is hoped that the learning process will be more transparent, adaptive, and relevant to existing technological developments. In addition, this development is also expected to contribute to improving the quality of teaching in schools in Semarang and its surroundings, as well as accelerating the adoption of technology in the world of education in Indonesia.

## Research Methods

Study This use method research and development (R&D) with objective develop evaluation models based on system using Moodle in the Semarang e-teacher Community . This method chosen Because in accordance with objective For design , test , and evaluate implementation system evaluation Moodle based in context education . Stages First in study This is analysis needs , which are carried out with survey and interview to member Semarang e-teacher community for identify challenges and opportunities in implementation system evaluation Moodle based . This process aiming For dig understanding and level related teacher skills the use of Moodle, especially in management evaluation learning . In addition , it is carried out identification to relevant Moodle features For support the evaluation process , such as making quizzes , assignments , and management online exam .

After analysis needs , stage next is evaluation model design Moodle based . This model covers making online quiz , assessment based on tasks , and management bait come back automatic use Moodle features . This design aiming For make it easier for teachers to compile question test , give evaluation on tasks , and give bait come back to student in a way direct after they do exam or tasks . In addition , the system reporting results Evaluation is also designed so that teachers can monitor progress Study student in a way effective .

At the stage development and implementation of the model, carried out training intensive for member Semarang e-teacher community for introduce them on the use of Moodle in context evaluation . Training This covers making quiz , assessment tasks , management exams , and method give bait come back automatic to students . After training , conducted simulation and testing using Moodle for evaluation in class . Teachers are asked For manage learning and evaluation using Moodle, which allows they For feel direct benefits and challenges from system This .

After implementation , stage furthermore is evaluation and feedback back . Evaluation done with gather bait come back from teachers who have use system evaluation Moodle based . Feed come back This used For evaluate convenience usage , effectiveness in manage evaluation , as well as the impact towards the learning process . In addition , it is carried out field observation For monitor how teachers use system mentioned , as well as analyze the results data evaluation obtained through Moodle. This process aiming For know to what extent is the evaluation model This can increase efficiency and quality evaluation learning .

Finally , based on results evaluation , carried out revision and development advanced to the evaluation model Moodle based . Revision This Can covers adjustment Moodle features , simplification interface user , or improvement quality training for teachers who are still face difficulty in implementation system . With Thus , research This expected can generate evaluation models effective and efficient Moodle- based For used by teachers in the Semarang e-teacher Community , as well as give contribution to development education based on technology in Indonesia.

## Results and Discussion

After carry out training and implementation of evaluation models Moodle -based in the Semarang e-teacher Community , a number of significant results succeed achieved . The majority of teachers who participated training show better understanding Good about Moodle usage in context evaluation learning . Based on survey conducted post-training , almost 80% of participants report that they feel more believe self in using Moodle to manage quizzes , assignments , and online tests . Many teachers also stated that that they can more efficient in give bait come back to student blessing feature automation that Moodle has .

In addition , the increase ability technical teacher in design and manage evaluation learning is also visible clear . Most of the participant training succeed create and manage quiz as well as task in Moodle, set up system evaluation automatically , and provide bait back more fast to students .

Besides that, the teacher also reported that they can more easily track development. Study student blessing reporting results evaluations available within the platform.

At the stage simulations and trials, a number of teachers have succeeded in implementing evaluation Moodle based in class. Some successful examples found among others the implementation online quiz as exam mid-semester, use task Moodle based for gather work home, and use of discussion forums. For give chance to student ask and discuss about material lessons. The results of evaluation This show that implementation system evaluation Moodle based can speed up the assessment process and enable teachers to give bait come back in a way direct.

However, not all in all walk smooth. Some challenges also arise during implementation, including is problem infrastructure technology, such as internet connection is not stable, and limitations in mastery technical by some teachers. Although Thus, the problem the can overcome with give mentoring technical and support more carry on from facilitator training. Some teachers who are still difficulty get help through session ask answer online or look at face.

In general overall, results from application of evaluation models Moodle based shows that system This can increase efficiency evaluation and facilitation management learning in the Semarang e-teacher Community. The use of Moodle has give impact positive in facilitate a more thorough evaluation process transparent and more fast, and support teachers in give experience learn more interactive for students. Implementation system evaluation This expected can become example for community education other in utilise technology For increase quality learning and evaluation.

### **Discussion**

Result of training and application of evaluation models Moodle-based in Semarang e-teacher Community shows a number of significant findings about effectiveness Use of LMS (Learning Management System) in the evaluation process learning. In In general, the implementation of Moodle provides clear benefits in matter efficiency, transparency and convenience in manage evaluation for teachers. However, the findings this also reveals a number of challenges that need to be overcome be noticed For ensure success Moodle implementation in sustainable.

### **Improvement Teacher Understanding and Skills**

One of results main from training is improvement understanding and skills technical teacher in using Moodle, in particular in matter making quizzes, assignments, and giving bait come back. The teachers who followed training feel more believe self in leveraging Moodle to evaluate students and track progress they. Before training, many teachers are not familiar with Moodle features, such as evaluation automatic, announce results evaluation, and management task online. With further introduction and training deep, partial big participant now feel more Ready using this platform in activity daily they.

In addition, training This also helps teachers to more understand How optimize bait return given to students. Feed fast and accurate feedback is essential in learning based on technology, because allow student For understand error them and fix it before continue to material next.

### **Evaluation Process Efficiency**

One of superiority the biggest from The use of Moodle is his ability For speed up the evaluation process. Before Moodle implementation, many teachers manage evaluation manually, which often takes time time and risk error. However, with Using Moodle, teachers can direct upload question test, give score automatic For quizzes, and manage task with a better way efficient. This reduces burden administrative teacher, allowing they For more focus on learning and interaction with student.

Moodle also provides ability For track progress student in real-time. With feature reporting available results, teachers can with easy access results exam or task students and monitor development They. This feature is very helpful in give a better picture accurate about ability students, who may difficult done in system manual evaluation.

### **Challenge in Infrastructure and Skills Technology**

Although Lots benefits obtained, implementation evaluation Moodle-based also faces a number of challenges, especially in matter infrastructure technology and mastery skills technical by some teachers. In some location, limitations internet access that is not stable become constraint in

implementation system this , especially at the time exam or online assignments that require strong connection . This is cause some teachers and students experience difficulty in access material , assignments , or results evaluation that has been created in Moodle.

In addition , although training has done , some teachers still feel not enough comfortable in using Moodle in a maximum . Limitations understanding about management Features continuation in Moodle becomes obstacle separately . For example , even though many teachers have succeed arrange quizzes and assignments , there are a number of feature like arrangement testing with time limited or assignment ongoing which is still Not yet fully mastered .

### **Impact To Experience Learning Student**

Implementation of evaluation model Moodle- based also provides impact positive to experience learning students . With existence online quizzes and online assignments , students can more involved in the process of learning and getting feedback directly . Students No need waiting long for accept bait come back from the teacher, which allows they For quick repair lack them and continue learning . Speed bait come back this , which is automatic provided by Moodle, also encourages student For more active and proactive in follow learning .

More far , use evaluation based on technology give student more experience interactive and engaging . Moodle allows teachers to designing question exams and quizzes with variation type more questions diverse , so that No monotonous and more challenging . This is can increase motivation Study students and help they develop skills think critical .

### **Recommendations and Future Developments**

Based on results training and evaluation , some recommendation For development more carry on can recommended . First , to overcome challenge infrastructure technology , need existence improvement internet and device accessibility harder the more adequate in affiliated schools in Semarang e-teacher community . Second , to increase mastery technical teacher, recommended For to organize training advanced with a more approach practical , including session based on problems that enable teachers to overcome challenge real in using Moodle in the classroom . Training this is also possible more personalized in accordance with level the expertise of teachers.

In addition , it can done development feature specifically in Moodle which is more adequate for need evaluation in the environment Indonesian education , such as evaluation based on project or evaluation cross discipline knowledge that can measure skills critical and collaborative student in a way more comprehensive .

### **Conclusion**

Application of evaluation models Moodle- based in the Semarang e-teacher Community provides positive impact towards the evaluation process learning among teachers . Research results show that Moodle usage can increase efficiency in management evaluation , accelerate giving bait back , and make it easier tracking progress students . The majority of teachers who participated training feel more believe self in using this platform For make online quizzes , assignments , and exams , as well as give bait come back automatic to student .

Although There is challenge related infrastructure technology that is not always support and existence difficulty technical from some teachers, things the can overcome with mentoring more further and training continued . Improvements are also needed in internet access and strengthening capacity device hard For ensure smoothness Moodle implementation in maximum .

In general Overall , implementation of the evaluation model Moodle- based in Semarang e-teacher Community is proven increase quality evaluation learning and simplify the administration process . With existence ongoing training and support , systems This expected can applied in a way more wide in various school and community education others , so that support development learning based on more technology interactive and efficient in Indonesia.

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