

SUPERVISION BY THE PRINCIPAL ON THE IMPLEMENTATION OF IOT-BASED LEARNING AT SMP N 1 DARUL IMARAH

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ABSTRACT

a systematic effort to set performance standards on planning in designing learning feedback systems, namely comparing actual performance with predetermined standards in the curriculum. The principal determines whether there has been a change in teachers in teaching and takes the necessary corrective actions to ensure that students in learning use IOT as a learning resource that is used so that learning is carried out as effectively and efficiently as possible. The purpose of this study is an implementation of the principal's supervision activities for teachers who are efficacious in learning. This study uses a descriptive qualitative method whose data sources were obtained from teacher interviews, relevant journals, and opinions from several news stories. The results of this study indicate that the implementation of learning is effective and efficient through the student IOT process. The implementation was successful due to the results of the principal's supervision of the teacher as an educator.

Keyword: *Supervision, Implementation, IoT*

1. INTRODUCTION

Connecting various technologies using an internet connection, IoT can facilitate everyday life. This is because connected devices can collect and analyze data to carry out commands automatically. One example of IoT in everyday life is everyday life that requires the internet and video-based learning that teachers use in the teaching and learning process, (Sulistyanto et al., 2015). The operational automation process of video-based learning provides learning through videos, and various materials, for example learning mathematics, science, and others.

Beginning with the process of planning, implementing and evaluating the learning process, teachers as educators and educational leaders play an important role in determining the success of the learning process in the classroom. The government is trying to improve the quality of teachers through various national-scale programs, which are inseparable from the hot issue that is currently being highlighted by the government and society, namely teacher performance. This is because the task being developed for teachers is quite heavy. Sharing training and workshops, Continuous Performance Assessment (PKB), and Subject Teacher Deliberations (MGMP) (P. M. Education et al., 2016).

Supervision of school principals is a series of activities to help teachers develop their abilities in managing the learning process so that they can improve pedagogical and professional competencies, which improve the quality of education, (Ibrahim, 2019).

2. LITERATURE REVIEW

2.1 Principal supervision

Supervision is a teacher mentoring process that must be carried out by school principals to improve their professional abilities in order to improve the quality of student learning processes and outcomes, including both general learning and IOT-based learning.

Through supervision, the principal must help teachers solve problems encountered related to learning. Therefore implementing IOT-based learning supervision is very important to implement as an effort to guarantee the quality of learning at the learning unit level. So, as mentioned in the previous section, the principal also has the duty to protect teachers.

Implementation of teacher supervision is also regulated in Permendiknas No.19 of 2007 concerning Education Management. The principal as the leader of the institution is obliged to supervise learning. In the basic education minimum service standards it is stated that learning supervision is carried out at least twice in one semester for each teacher. So each educational unit needs to develop a supervision program at the beginning of the school year.

Teacher supervision must be carried out to improve teacher competency in planning and implementing the learning process in the classroom. For principals at the managerial level, supervision is also useful for the management and administration of class teachers and subject teachers. In addition, supervision also improves teacher professionalism and services to students while evaluating teacher performance.

One of the evaluations and input evidence for the preparation of the next educational supervision program is the follow-up report on educational supervision. Teachers' teaching skills can be improved in the future with the help of supervisors notes. Harun (2009) emphasized that "Evaluation of educational programs should always be carried out at each subject level, semester and yearly to see how well educational goals in general and curricular goals in particular are ready and achieved by educational units (Num, 2021)

2.2 Definition of IOT (internet of things)

The Internet of Things (IoT) is a network that connects various objects that have identities and IP addresses, so they can communicate with each other and exchange information about themselves and the environment they sense.

Objects in IoT can use or produce services and work together to achieve a common goal. With this ability, IoT has shifted the definition of the internet as computing anywhere, anytime, to anything, anyone and any service.

IoT is one of the many technologies developed to face the digital era as it is now and can make it easier for people and users to use it and overcome these digital-based difficulties. (binarakademi.com,2022)

IoT has a close relationship with the term machine-to-machine or M2M. All devices that have M2M communication capabilities are often referred to as smart devices. This smart device is expected to help humans work in completing various existing affairs or tasks.

2.3 Implementation in learning

As we know that the internet in modern society has become something that cannot be separated, so the concept of the Internet of Things (IoT) was born [1]. IoT is a computing concept that describes a future where every physical object can be connected to the internet and can identify itself between other devices. This concept is important to apply to learning materials because the relationship between learning materials is not fully integrated. As an IoT implementation, Arduino is used as an Embedded System device in controlling electronic devices. Arduino can be connected to the internet by means of an additional shield (electronic module) Ethernet, Wifi or GPRS/GSM. Systems that are connected to the internet can then be controlled via web browsers or Android-based mobile devices, each of which is contained in Web Programming and Mobile Computing lessons.

Teachers in designing learning that is pro-student, will not ignore the nature of the times, namely by displaying video-based learning media either taken from YouTube or designing their own with the educational CANVA application. When using the application, you must always be connected to the internet.

As a professional teacher, he must be able to present learning according to student learning profiles. One of the advantages of video learning is being able to coordinate audio and visuals which provide new things for students. In creating interesting content or videos, educators must be quite qualified in operating laptops and applying various applications for editing. One of the easy-to-use Canva applications, to access Education Canva, you only need to use the Learning ID account which has very good features, you just have to choose the theme to use. The video really helps the learning process that takes place because it can add insight and knowledge to students. with videos students can use their hearing and sight and can see firsthand movements, pictures and readings. The use of video-making applications in designing learning models must be able to involve students in the learning process, (Anarchyta, 2015)

The video depends on the creativity of the teacher in choosing features and designs that suit the needs of the material, (Mayang Sari et al., 2022)

3. METHODS

In this study the approach taken is through a qualitative descriptive method whose data sources were obtained from teacher interviews, documentation, relevant journals, and opinions from

several news stories. Data analysis in this study went through two stages, the first during data collection, the second after collected data. All collected data were then analyzed based on an interactive analysis model developed by Milles Huberman, namely data reduction, data presentation and drawing conclusions

4. RESULTS & DISCUSSION

Instructive supervisors (administrators and managers) must have solid expert skills in completing educational supervision, the manager's expert capacity is expected to work on the nature of the progress of educators in schools. The responsibility of supervisors to provide professional support and services to teachers so that they can carry out their main responsibilities better is basically related to the issue of improving the quality of teacher development in schools. Improving the supervisory capacity of school supervisors and school principals in carrying out their responsibilities responsibly must become the basis for the quality of school supervisor performance. The process of providing assistance and applying supervision techniques does not only end with supervision; there must be follow-up to assess the effectiveness of the monitoring process and its results (Kristiawan et al., 2019).

IOT-based learning using learning videos as learning media at SMP N 1 Darul Iman consists of planning, implementing and evaluating. RPP is an important stage in the implementation of learning. The researcher will describe each lesson plan in SMP N 1 Darul Iman Subdistrict which is related to video-based learning.

This image is an implementation of video-based learning using the Canva application which is effective for learning



Figure 1. Video example from youtube

5. CONCLUSION

Through supervision, the principal must help teachers solve problems encountered related to learning. Thus IOT-based learning supervision is very important to implement as an effort to guarantee the quality of learning at the learning unit level. So the

principal also has the duty to protect the teacher.

The results of this study indicate that the implementation of learning is effective and efficient through the student IOT process. The implementation was successful due to the results of the principal's supervision of the teacher as an educator

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