



Enhancing Teacher Competence in the Use of Learning Media through Academic Supervision

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Abstract

Academic supervision has a significant impact on teachers' abilities in developing learning processes, including planning, implementation, and assessment of learning. This study aims to identify and analyze efforts to enhance teacher competence, as well as the inhibiting and supporting factors in the use of learning media through academic supervision at SDN 020 Penajam. The method used is descriptive qualitative, utilizing interview techniques with teacher informants at SDN 020 Penajam. Data analysis techniques employ the interactive model of Miles and Huberman. The results show that the role of the school principal as an academic supervisor is substantial and helps teachers improve their competence in using learning media in the classroom. Despite technical obstacles such as limited network access, the enthusiasm and commitment of the supervisor in guiding and motivating teachers are supportive factors in efforts to enhance teacher competence in using learning media at SDN 020 Penajam.

Introduction

Law of the Republic of Indonesia Number 14 of 2005 concerning Teachers and Lecturers mandates teachers to: (i) have a minimum academic qualification of S1/D4, (ii); have teacher performance/ability as a learning agent, namely pedagogical, personality, social, and professional teacher performance/ability; and (iii) have a teacher certificate. In order for teachers to have teacher performance/ability as a learning agent as mandated in the Law above, teachers must improve their teacher performance/ability through various efforts, including through training, writing scientific papers, and various meetings in working groups or academic supervision. The process of selecting learning media as part of the implementation of learning technology in the early stages must be planned, selected, and determined carefully and specifically designed to overcome the learning problems faced. This aims to ensure that the selected learning media is truly appropriate and able to overcome learning problems, and can be used and utilized effectively.

In this context, the principles of selecting learning media, developing selection criteria, criteria for selecting learning media, methods and procedures for selecting learning media, and examples of selecting learning media in a school will be explained (Adhipertama et al., 2020). Elementary school education (SD) is the initial step in laying the foundation of knowledge to change humans to be better, more proficient and more skilled. To achieve this goal, of course, a strategy is needed which is called a learning strategy. In the learning strategy, there are three main things, namely planning, implementation, and evaluation. Program planning functions to provide direction for the implementation of learning so that it becomes focused and efficient. One part of the learning plan that is very important to be made by the teacher as a learning director is the learning device. Learning device In accordance with what Alamri et al. (2021) expressed that learning devices are components of devices used to manage the learning process, so that they can achieve the desired competencies optimally. Another definition is expressed

(Abdulrahaman et al., 2020) that learning devices are a number of materials, tools, media, instructions and guidelines that will be used in the learning process.

Over time, technological developments and advances in science have influenced the use of teaching aids in schools. Several schools have been able to use these tools as teaching aids so that learning is more effective and efficient (Haleem et al., 2022; Hillmayr et al., 2020). These tools are very helpful and facilitate teaching and learning activities and provide students with ease in understanding the material being taught. Thus, learning media is very important to help teachers in providing materials and making it easier for students to understand. There are many learning tools or media that can be used to help the learning process. One of the media that can be used is audio-visual media. Audio-visual media plays a very important role in helping teachers and students in the learning process (Winarto et al., 2020; Harsa et al., 2020). With audio-visual media, learning will attract more attention from students. Learning will be clearer, teaching methods will be more varied, and students will be more focused and pay attention during the learning process.

The existence of learning media is very important for students, but it needs to be balanced with the ability of teachers to create and utilize learning media that are appropriate to learning needs (Hoerudin et al., 2023). This becomes more crucial with the new curriculum that emphasizes the use of learning media. However, unfortunately, the use of media and media evaluation are still not optimally carried out by teachers. In practice, many teachers still experience obstacles in facilitating themselves to improve their competence, especially in the use of learning media. Learning media is recognized as having an important role in motivating students to learn. With increased learning motivation, there is a positive correlation with increased grades and quality of education in schools. Learning devices are components of devices in the learning process that are needed to prepare for learning so that the learning process can be achieved properly. The components of the learning devices in question are the syllabus and RPP (Santie et al., 2022).

According to Wulandari et al. (2023) the syllabus is one of the products of curriculum development containing outlines of subject matter, learning activities, and assessment designs, usually known as the syllabus and RPP. The syllabus is one of the products of curriculum development containing outlines of subject matter, learning activities, and assessment designs. The syllabus as a learning tool has several components in its development. Academic supervision is a program design that seeks to improve the professionalism and competence of teaching staff or teachers in managing the teaching and learning process in order to achieve learning objectives. So academic supervision can be said to be a good program plan that can be seen from the qualitative aspect of the school by providing assistance to teaching staff through support and evaluation in learning activities from which learning outcomes will be improved (Lorensius et al, 2022). In this context, further efforts are needed to support teachers in overcoming the obstacles they face. A supervisor is responsible for Academic Supervision. The principal is responsible at school. In this research study, the supervisor referred to is the principal, in accordance with the Regulation of the Minister of National Education Number 13 of 2007 concerning the Standards of School/Madrasah Principals.

Sagala explained that the supervisor's duties are to "improve the quality of learning activities, develop the curriculum, and evaluate learning so that it continues to be better and of higher quality". The principal's duties and obligations, in addition to managing the running of the school, must also be able to cooperate and have close relationships with the community. He is obliged to raise the spirit of the staff of teachers and school employees to work better, build and maintain a sense of family, togetherness and unity between teachers, employees and

students, develop the school curriculum, know the school's plan and know how to implement it; pay attention to and strive for the welfare of teachers and employees. Pidarta stated that the principal's position as a supervisor has the task of fostering teachers to become professionals, who are observed and developed. Guidance for teachers includes aspects of the teacher's personality, continuous professional development, learning process, mastery of subject matter, diversity of teacher abilities, regional diversity, and the ability of teachers to cooperate with other parties (Ostinelli & Crescentini, 20240; Hali et al., 2021).

Supervisors should be able to provide guidance and development which includes providing assistance or guidance to teachers related to a quality learning process in order to produce satisfactory student learning achievements. Supervisors also provide advice to teachers to carry out effective learning (Alam et al., 2021; Maryati et al., 2020). In addition, the principal should also follow up by reporting the development and results of supervision. The supervisor's duties mentioned above are part of the academic supervision functions which are the principal's obligations as a supervisor at school. Therefore, in order to carry out supervision duties, the principal must have personal and professional abilities, characteristics and knowledge that are in accordance with his profession as a supervisor. This study focuses on efforts to improve teacher competence in the use of learning media through academic supervision at SD 020 Penajam Paser Utara. Based on the data, SD Negeri 020 Penajam has 10 active teachers, 9 classrooms, 1 library, SD Negeri 020 Penajam has B accreditation, but unfortunately there is no internet access yet.

Methods

This research uses the qualitative descriptive design to establish the principal as a supervisor to promote teachers' professional competence at SDN 020 Penajam especially the use of learning media. The choice of the qualitative approach is due to the fact that the study focuses on processes and phenomena in their real context to get an understanding of the conditions under which this or that principal's supervisory actions take place. The research was undertaken in SDN 20 Penajam Paser Utara, East Kalimantan Province. The participants were chosen purposively; all were teachers in the school who have experienced or undergone academic supervision. This was made possible in order to increase the participation rate and get individuals who have a firsthand experience of the process of supervision to contribute to the study and hence ensuring that the data collected are valid and rich. More particularly, about ten participating teachers were targeted, and all of them are active employees of the school to cover the whole range of the teaching staff who experience the supervisory processes

Data Collection Process

The choice of data collection was mainly influenced by the fact that semi-structured interviews provided the necessary freedom to elicit detailed information about participants' experiences and point of view. The study employed interviews of the teacher informants who had been involved in the academic supervision process. The interviews lasted about 45 to 60 minutes in order to allow extensive discussions. All the interviews conducted were voice recorded with the participants' consent in order to capture the data in detail and the interviews were thereafter transcribed word-by-word for analysis. The interview protocol was informed by the research questions; they were broadly categorised into sections including supervisory experiences of the teachers, learning media employed and supervisory experiences on professional growth.

Instrumentation

The main research tool employed in this study was a semi-structured interview guide The interview guide was designed to elicit a rich understanding of the participants' experiences

and/or attitudes towards the application of learning media in teacher education and the role of academic supervision in this process. The development of the interview guide followed a number of steps which are explained in the following points. First, a literature survey was made in an attempt to extricate significant themes and matters in academic supervision, teacher competency, and learning medias. The questions for the interviews were developed with reference to the literature so that the questions could be based on previous studies while still leaving room for the discovery of previously unexplored areas in the context of the particular study.

The interview questions used in the current study were, therefore, unstructured and open-ended because these were deemed to elicit as much detail and depth as possible from the participants. The questions were defined this way to ensure that there is no leading question that might make the participants have preconceived minds about their responses. Besides that, the questions which covered the same areas as the previous broader questions were framed based on the guide, and some follow-up questions were framed so that the interviewer can get to the roots of the area if the respondent gives any complicated or an unexpected reply. The interview guide was divided into number of sections and each section was designed to address different aspects of research questions. Overview and Context: It aimed at the initial contact with the participants and the identification of the most basic characteristics including their background in teaching and familiarity with educational resources. The questions under this section were developed with the aim of laying down the context with regard to the experiences that the participants would have before getting to the interview stage.

Hailed as the next main component of the study, participants' experiences on academic supervision were questioned focusing on how their professional practices were shaped by the principal's supervisory role. The questions examined the reported frequency of, and the participants' characteristics, as well as how the supervisory activities enhanced or hindered their ability to utilise educational resources. The part was dedicated to the special approaches to learning media employed by the teachers and their students. To this end, respondents were asked to explicate the media categories that they used, challenges encountered and strategies used in integrating media in teaching methods. The purpose was to make sense of the concrete outcomes of supervision on the efficient use of media in classroom practice. In turn, the focus of the research was on how supervision affected learners' teaching practices and, in particular, their use of learning media. The questions in this part were meant to identify any changes that may have occurred as a result of the supervisory process in terms of behaviour, attitude or performance. Challenges and Recommendations: The participants were asked to ponder over the challenges likely to be faced by learners when using learning media and getting academic supervision. At the same time, they were asked to submit their suggestions as for the improvement of the procedure and the enhancement of the support of the instructors' professional development.

While gathering information, informants offered consent to have their discussions videotaped for purposes of capturing accurate responses during the process of information gathering. All the interviews were completely transcribed without any omission or paraphrase to provide in detail and literally the transcription of the entire study. As for the data analysis, the researcher employed the participants' transcripts as the central record of the participants' reactions.

Data Analysis Techniques

The data were analyzed using the interactive model of Miles and Huberman, which involves several stages: They include data reduction, data display and conclusion drawing/verification. First, the interviews were analyzed in order to define the themes and patterns concerning the

supervision and the learning media usage. These codes were subsequently clustered into themes that readily described the major subjects arising from the data collected. Categorization and coding was done in a very controlled manner, so that only the actual information gathered was included, thus giving highly summarized results. The informations were then summarized in matrixes and narrative reports that allow the imprinting out of generalized relations and data patterns between the cases under investigation. Last was the conclusion made for each analysis, and they were interactively compared with other source of data to maintain verification and validation from the participants.

Results and Discussion

Academic supervision carried out by the principal is one of the factors that influences the improvement of the quality of education in schools. To realize the improvement of the quality of education, the principal needs good planning in compiling a supervision program to improve teacher professionalism, in this case improving teacher ability in using learning media.

Academic supervision activities begin with the stages of preparation, implementation and evaluation. The principal as a supervisor has prepared academic supervision. In planning academic supervision, the activities carried out include determining the objectives of supervision, making a supervision schedule, determining the approach and techniques of supervision, and making supervision instruments. The objectives of academic supervision at SDN 020 Penajam are: Assisting teachers in developing the learning process, Improving teacher management and administration and Evaluating teacher performance in the context of teacher development. After determining the objectives of supervision, the principal then formulates an academic supervision schedule which includes an initial monitoring schedule, a supervision schedule in class, and an evaluation schedule and a follow-up schedule for academic supervision. The supervision schedule is made at the beginning of the new school year, then agreed upon by the supervision team and then socialized to teachers through meetings. In connection with the preparation of supervision activities, academics, the researcher conducted an interview with one of the teachers, explained that:

"We as teachers at SDN 020 Penajam, have received information about the existence of academic supervision by the Principal, this supervision activity is important so that the problems faced by teachers in the teaching and learning process can be identified and can be solved, especially the problem of using learning media" (Interview results, June 2024).

The academic supervision approach at SDN 020 Penajam uses a collaborative approach between a direct approach and an indirect approach. The direct approach is indicated by the openness of the principal to actively approach teachers to find out obstacles in learning, or to conduct direct observations during the learning process. While the indirect approach taken is by the openness of the principal and the team in receiving consultations from teachers if there are problems. The academic supervision technique carried out at SDN 020 Penajam uses two techniques, namely individual supervision techniques. In this regard, the researcher interviewed one of the teachers, stated that:

"In implementing academic supervision, the Principal usually does it using individual supervision techniques or visits to classes, observing the ongoing teaching and learning process" (Interview results, June 2024).

The role of the principal as an academic supervisor at SDN 020 Penajam is to design an annual academic supervision plan that includes a schedule of class visits, observations, and

evaluations. This plan is prepared based on the needs of the school and aims to improve the quality of learning, especially the use of learning media in supporting the teaching and learning process. In connection with the implementation of academic supervision at SDN 020 Penajam, the principal as an academic supervisor makes regular visits to the classroom to observe the learning process. This observation aims to identify strengths and weaknesses in teacher teaching and provide constructive feedback.

The use of effective learning media is one of the important factors in improving the quality of learning. Teachers who are competent in using learning media can deliver materials more interestingly and easily understood by students. However, many teachers still face difficulties in utilizing learning media optimally. Therefore, academic supervision can be a solution to improve teacher competence in using learning media at SDN 020 Penajam. In relation to the use of learning media at SDN 020 Penajam, one of the teacher informants, explained that:

Academic supervision really helps me understand new ways of using learning media. With direct guidance, I learn to integrate technology such as interactive presentations and learning videos into my class, so that the learning process becomes more interesting for students." "The most useful aspect is the feedback given after class observation. I received specific suggestions on how to improve and optimize the use of learning media, such as maximizing the use of digital whiteboards and educational applications." (Interview results, June 2024).

At SDN 020 Penajam, academic supervision is carried out every month. The impact is very positive, because each supervision session always has a clear evaluation and follow-up process. This helps teachers to know the areas that need to be improved and how to do it. A concrete example of the impact of academic supervision in improving teacher competence is when the supervisor shows how to use interactive learning media. After several practice and observation sessions, the teacher started using the application in mathematics lessons. As a result, students became more active and interested in the material presented.

This was acknowledged by one of the teacher informants, that:

"It is true that this academic supervision really helps teachers in improving teacher professionalism in teaching, especially in terms of using learning media provided by the school" (Interview results, June 2024).

The ongoing academic supervision process certainly leaves various experiences that prove the effectiveness of the academic supervision carried out. The results of the interview with the teacher informant, related to the effectiveness of academic supervision that:

"One of my experiences was when the supervisor taught me how to use the online learning platform. After several supervision and training sessions, I began to feel comfortable using the platform. This not only makes it easier for me to teach, but also increases student participation during online learning." (Interview results, June 2024).

These answers indicate that the informants feel that the academic supervision process at SDN 020 Penajam is very effective in improving their competence in the use of learning media, such as LCDs, Projectors, Laptops, especially through constructive feedback, ongoing training, and practical solutions to the obstacles faced.

The same thing was also stated by one of the teacher informants, that:

"The principal as a Supervisor is very helpful by providing practical solutions and additional resources. When I face technical obstacles or have difficulty understanding

certain media, we are given step-by-step guidance and often demonstrate directly how to use it" (Interview results, June 2024).

The implementation of academic supervision has a significant impact on teachers, especially in developing teaching methods. One informant, Mrs. Sri Kurniati, S.Pd stated that:

"Academic supervision provides changes in teaching methods, and increases interactivity in the classroom. In the past, I only used the lecture method, but now I use various media such as videos, animations, and learning applications that make students more involved and enthusiastic about learning." (Interview results, June 2024)

Regarding the effectiveness of the implementation of academic supervision at SDN 020 Penajam, it is important to ask for views from the academic supervision supervisor. The results of the researcher's interview with the academic supervision supervisor, explained that:

"In general, the implementation of academic supervision in this school is running normally. Regarding teacher competence in the use of learning media, it is quite diverse. There are teachers who are very proficient and creative in utilizing various learning media, both digital and conventional. However, there are still teachers whose abilities are limited, especially in the use of digital technology. This is due to various factors, such as lack of training, limited access to technology, and inability to operate technological devices" (Interview results, June 2024).

The supervisor further explained that the supervision approach taken was quite effective, by combining clinical supervision and administrative supervision. Supervisors appreciate the role of academic supervisors in providing constructive and constructive feedback, as well as providing more personalized and specific guidance according to the needs of each teacher. In principle, the main purpose of academic supervision is to help teachers identify their strengths and weaknesses, and provide support for continuous improvement. In principle, the implementation of academic supervision carried out at SDN 009 Penajam focuses on direct observation of classroom learning activities. Examining teaching methods, learning strategies, and teacher-student interactions, assessing the effectiveness of the use of learning resources and technology in the classroom.

In this regard, the principal as the academic supervisor evaluates the learning process based on the achievement of learning targets, the extent of mastery in the use of learning media, then the supervisor prepares a professional development plan for teachers who need improvement, provides constructive feedback to help teachers improve the quality of teaching. Furthermore, the academic supervisor stated that:

"After we carry out monitoring, up to evaluation, we hold a coordination meeting, regular meetings with all teaching staff to discuss developments and problems in the academic field, including discussing the challenges faced in the form of technical obstacles that greatly affect teacher performance, especially in the use of learning media in schools ". (Interview results, June 2024).

Improving teacher competence in the use of learning media through academic supervision activities at SDN 020 Penajam, of course, is faced with various supporting and inhibiting factors. In this regard, the results of the researcher's interview with the teacher informant, stated that:

"The supporting factor is strong support from the school, especially the principal who always provides facilities and time to participate in supervision. In addition, the availability of technology and learning media devices, such as LCDs and laptops for

teaching, are felt to be very helpful to us. The inhibiting factor is the problem of limited internet access” (Interview results, June 2024).

In line with that, stated that:

“Cooperation and support from fellow teachers are very helpful. We often discuss and share experiences regarding the use of effective learning media. Limited initial knowledge about technology is an obstacle. The internet network is not stable, that is a technical obstacle, hopefully in the future, it can be overcome” (Interview results, June 2024).

Regarding the supporting and inhibiting factors, the academic supervisor of SDN 020 Penajam explained that:

“The most important thing in supporting the implementation of academic supervision is budget support for the procurement of technological devices and teacher training activities. We have coordinated with the supervisor to coordinate with related parties, especially the Education Office to help facilitate our school.” (Interview results, June 2024).

In relation to supporting and inhibiting factors, several informants explained that there are several things that support the implementation of academic supervision, including relevant and applicable supervision materials, as well as concrete examples that can be directly applied in the classroom. In addition, the commitment and enthusiasm of the supervisor who is always ready to help and provide guidance to teachers at SDN 020 Penajam.

Academic supervision is a supervisory activity aimed at improving the conditions of both personnel and materials that allow for the creation of a better teaching and learning situation in order to achieve educational goals. Although the science of supervision is not included in the eight fields of work in the world of Educational Management (curriculum management, student management, personnel management, facilities and infrastructure management, school administration management, financial management, and public relations) and is not included in the function of educational management, however, this academic supervision is another element that is closely related and functions to control and foster each or all fields of work in educational management, because the ultimate goal of this academic supervision is to improve the quality of the process and student learning outcomes through the intermediary of coaching and development of teacher professional abilities (Zimmer & Matthews, 2022).

Or in other words, by carrying out academic supervision activities for teachers, it can improve the professional competence of teachers (Sunaryo, 2020). The Ministry of National Education defines academic supervision program planning as the process of compiling monitoring documents or a series of activities that can help teachers develop their abilities, manage the learning process to achieve learning goals. This academic supervision planning activity is an activity of planning or determining starting from the objectives, targets and strategies to achieve these objectives to carry out academic supervision with a predetermined time period, where the process of helping teachers develop their abilities will all lead to achieving learning objectives (Lisliana et al., 2020). Considering that this planning activity is the most basic part of an academic supervision activity, this activity is very important because by making good planning, the objectives of academic supervision can be achieved and we will also find it easy to measure its achievement. In developing academic strategies, it begins with determining various equipment that supports academic supervision activities, then determining which teachers will be given supervision and finally determining the strategy in carrying out

academic supervision and, informing the supervision program planning to teachers and finally preparing the Academic Supervision schedule (Faujiyah et al., 2024).

Academic supervision activities at SDN 020 Penajam begin with the preparation, implementation and evaluation stages. Where the principal as the supervisor makes preparations by informing teachers about the academic supervision activity schedule. The supervisor prepares supervision materials, including modules on the use of learning media. The results of interviews with the principal of SDN 009 Penajam showed that academic supervision in the implementation of learning was carried out through class visits. In this case, the principal does not only check, but also provides direct assistance to teachers who experience difficulties, provides direction, especially when there are obstacles in the use of learning media, and ensures that learning activities run smoothly. At the academic supervision preparation stage, the principal holds an initial meeting with the teachers. According to Mulyasa, the things that need to be done by the principal in this initial meeting are first, the principal must be able to set a friendly atmosphere, not a superior and subordinate atmosphere, where by setting such an atmosphere, it is hoped that these teachers can express their opinions openly, second, the principal explains the lesson plan that has been made and discusses it to agree on and improve the plan that has been made together, and finally the principal and teachers prepare the things needed for the implementation of supervision starting from tools, instruments and others.

In order to improve the quality of qualified teachers, it needs to be done in a programmed, structured and sustainable manner through professional development by the principal, one of which is by conducting academic supervision (Karacabey, 2021). The essence of academic supervision is not to assess the teacher's performance in managing the learning process, but to help teachers develop their professional abilities. Makin (2018) formulated the objectives of educational supervision (in relation to national education objectives), namely to develop supervised people into mature developmental humans.

Academic supervision by the principal at SDN 020 Penajam is an approach that involves monitoring and evaluating the learning process at the school. The goal is to improve the quality of learning, teacher performance, and student achievement. Academic supervision at SDN 009 Penajam is carried out through:

The principal makes direct observations of learning activities in the classrooms. Focuses on the use of teaching methods, teacher-student interactions, and the effectiveness of learning strategies. Assesses teachers' abilities in designing and implementing learning in accordance with the curriculum. Providing constructive feedback to teachers based on the results of observations and evaluations. Preparing professional development plans for teachers who need improvement. Encourage the use of innovative learning strategies that can increase student absorption. Designing or recommending additional training for teachers to improve teaching skills, especially the use of learning media. Wahyudin & Nugraha, (2024) stated that: "academic supervision is professional assistance to teachers, through a systematic planning cycle, careful observation, objective and immediate feedback". Thus, it means that the essence of academic supervision is not at all assessing teacher performance in managing the learning process. Implementation of academic supervision by the principal at SDN 020 Penajam, which refers to monitoring and developing the learning process and student achievement at the school.

The implementation of academic supervision by the principal at SDN 020 Penajam focuses on direct observation of learning activities in the classroom, by examining teaching methods, learning strategies, and observing teacher-student interactions. Assessing the effectiveness of

the use of learning resources and technology in the classroom and providing constructive feedback is intended to help teachers improve the quality of teaching (Lai & Ng, 2011). Some things that need to be done by the principal in follow-up activities or feedback meetings, namely the first thing that needs to be done by the principal is to provide reinforcement to the teacher, then the principal needs to invite the teacher to study the learning objectives. Then the principal asks the teacher's opinion about his/her subject, where in asking this it is recommended to start from aspects that are considered successful which are then followed by aspects that are considered less successful. In asking for this opinion, the principal does not give an assessment to the teacher and allows the teacher to express his/her opinion. Then continue by showing the results of the observations to the teacher that have been analyzed, the hope is that when the results are told to the teacher, the teacher can check and analyze them, then the last one discusses the results of the observations openly (Gentrup et al., 2020). Then the principal provides feedback on the results of the coaching exercises carried out by the principal and improves teacher learning and academic discipline plans.

Academic supervision plays a very important role in improving teacher competence, especially in the use of learning media. Program evaluation in the implementation of learning in schools is an initial activity in collecting accurate data so that it can be continued with the provision of appropriate coaching, so that program evaluation is useful especially for decision makers, thus the input from the results of this program evaluation, policy makers will determine various follow-ups from programs that are being or have been implemented (Carson et al., 2020). One of the supervision techniques carried out by the principal is academic supervision. The evaluation model focuses on comparing evaluation results with predetermined standards, then the evaluation results are used as policy making regarding the program being carried out (Skivington et al., 2021). As an academic supervisor, the principal evaluates the learning process based on the achievement of learning targets, the extent of mastery in the use of learning media.

The next stage, the supervisor to prepare a professional development plan for teachers who need improvement, provide constructive feedback to help teachers improve the quality of teaching. As the results of the interview with the academic supervisor of SDN 020 Penajam, the evaluation process was carried out by holding a coordination meeting, a meeting with all teaching staff to discuss developments and problems in the academic field, including discussing the challenges faced in the form of technical obstacles that affect teacher performance, especially in the use of learning media in schools. Evaluation of the implementation of academic supervision at SDN 020 Penajam, is to see the extent to which the results of the supervision carried out are based on pre and post conditions. The results of interviews with informants can be concluded that with supervision activities, teachers are more confident in using learning media. In addition, there is an increase in interactivity in the classroom. Students become enthusiastic about learning by using existing learning media. By making the learning process more interesting, interactive, and relevant, learning media can increase student involvement, motivation, and understanding, thus creating a more effective and enjoyable learning experience.

Learning is basically a positive interaction between teachers and students. To achieve learning objectives, a selection of the right learning model is needed. There are many learning models that can be applied to build good interaction and communication between learners and students. A learning model is a plan or pattern that can be used to form a curriculum (long-term learning plan), design learning materials, and guide learning in class or others (Marek, 1980 & Wu, 2020; Charokar & Dullo, 2022). Learning models can be used as thought patterns, meaning that learners may choose appropriate and efficient learning models to achieve their

learning goals. Improving the learning process in schools is one of the efforts to improve human resources that can be done in the field of education. Improving human resources in the field of education is one of them through improving the quality of teachers because teachers have an important role in the learning process. The way teachers teach in the learning process will affect the success of students. A teacher does not only function to transfer knowledge but is also tasked with providing skills and changing student behaviour (Stevenson et al., 2020; Aldrup et al., 2022). So that professional teachers are needed in education. Therefore, teacher competence must be continuously fostered and developed so that teachers can be professional and able to produce quality education.

Based on the results of the evaluation of the implementation of academic supervision at SDN 020 Penajam, there are several important points that researchers describe, including: The implementation of academic supervision is intended to ensure that teachers are able to use effective learning methods and media to improve the quality of teaching. Through constructive observation and feedback, academic supervisors can help teachers identify weaknesses in their teaching methods and provide suggestions for improvement. According to Amelia et al. (2022), effective supervision plays a role in improving the quality of teaching by providing support and guidance to teachers to develop their professional skills. Academic supervision provides opportunities for teachers to continue learning and developing professionally. This includes training in the use of new learning media and educational technology that can make learning more interesting and effective. Continuous academic supervision and a focus on professional development can help teachers stay up-to-date with best practices and the latest innovations in Education (Huet & Casanova, 2021). Academic supervision provides teachers with constructive feedback on the use of instructional media in the classroom.

This feedback is based on direct observation and can help teachers understand what is working and what needs improvement. Specific and constructive feedback is key to effective professional development, as it helps teachers understand the impact of their practice and how they can improve it (Sancar et al., 2021; Goodyear, 2017; Canaran & Mirici, 2019). With support from academic supervision, teachers can feel more confident in using instructional media. Positive and supportive supervision can increase teachers' motivation to try and adopt new technologies in their teaching. The support and guidance provided by academic supervisors can increase teachers' motivation and confidence, which in turn has a positive impact on their performance in the classroom. The success of the implementation of principal supervision is influenced by several supporting and inhibiting factors (Muhammad et al., 2023; Ni et al., 2018).

The results of interviews with informants generally stated that supporting factors in efforts to improve teacher competence in the use of learning media through academic supervision at SDN 020 Penajam include relevant and applicable supervision materials, as well as concrete examples that can be directly applied in class. In addition, the commitment and enthusiasm of the supervisor who is always ready to help and provide guidance to teachers at SDN 020 Penajam. The inhibiting factors that are felt are more technical problems, namely internet access that is still unstable. In addition, the limited availability of time for implementing feedback, and the practice of new media are often obstacles, especially in the midst of a busy teaching schedule. The implementation of academic supervision at SDN 020 Penajam is still constrained by the lack of budget and software facilities or devices needed to optimally utilize learning media. Learning Media is one solution for teachers to achieve maximum Teaching and Learning Activities (KBM). Learning Media is an educational activity that stimulates the thoughts, feelings, interests of students, so that the process of communication interaction between students and teachers can take place properly. The essence of Learning Media itself

is a tool in the teaching and learning process. According to Latuheru, learning media is a material, tool or technique used in teaching and learning activities with the intention that the process of educational communication interaction between teachers and students can take place appropriately and effectively (Heilporn et al., 2021).

Efforts to improve teacher competence in the use of learning media through academic supervision at SDN 020 Penajam are strongly supported by the commitment of the school. There is support from the principal and school management in providing time and resources for the development of teacher competence. Implementation of school policies that encourage the use of learning media in teaching and learning activities. Cooperation between teachers is very important in improving competence in the use of learning media. The existence of a learning community where teachers can share experiences and best practices in the use of learning media. The implementation of effective academic supervision is carried out with a personal and collaborative approach, where supervisors provide specific guidance according to the needs of each teacher. Providing constructive feedback and clear follow-up plans for improvement and development. Consistency and commitment of the school, especially the school supervisor in encouraging and facilitating relevant training and workshops for teachers. The supervisor is responsible for providing direct guidance during supervision, as well as providing guidance materials that can be used by teachers. In addition, coordination with the school to ensure adequate support for teachers in accessing and utilizing learning media. In principle, the academic supervisor has an important role in encouraging the improvement of this competence through guidance, training facilitation, and coordination with the school.

The biggest challenge faced by teachers is limited access to technology and supporting resources. In addition, there are also problems related to mental readiness and teacher knowledge on how to integrate technology into learning. Some teachers feel less confident and afraid of making mistakes in using technology-based learning media, so they tend to avoid it. The use of learning media can help teachers present things that are not possible to bring into the classroom. According to research conducted by Gilmore (2007), it shows that the use of media is able to present authentic problems in the form of objects that are not directly observed or abstract material. The development of technology has made learning media develop. E-learning is one of the learning media that was born from the development of technology. With technology, learning can be done not only in the classroom or at school, but can be done anywhere and anytime. From the results of interviews with informants, the implementation of academic supervision in improving teacher competence using learning media is still hampered by technical problems, such as an internet network that is sometimes unstable, which interferes with the learning process using digital media.

In fact, the implementation of academic supervision at SDN 020 Penajam is still constrained by the lack of budget and software facilities or devices needed to optimally utilize learning media. The problem of limited budget for the procurement of technological devices and training needed to improve teacher competence. The problem of additional workload that reduces teachers' time and energy to focus on improving competence in the use of learning media. Technical constraints faced by teachers are generally a lack of digital literacy. Some teachers may not have sufficient digital literacy, so they find it difficult to use technological devices. Not all teachers have easy access to the necessary technology, either at school or at home. A common problem that often becomes an obstacle in the use of learning media, especially online-based media in schools is resistance to change, which is reflected in the attitude of teachers. Some teachers may have a resistant attitude to change and innovation in learning, feeling comfortable with traditional methods that have been used for a long time.

In addition, the lack of motivation from some teachers to learn and adopt new technology in teaching. An effective supervision approach is very important, to avoid the implementation of academic supervision that seems too formal or does not provide constructive feedback. In addition, there is a lack of continuous assistance and guidance from academic supervisors after initial training or supervision. According to Lisliana et al. (2020) the success of the implementation of academic supervision is influenced by several factors, including the environment or location of the school. SDN 020 Penajam, which is located in a small town, certainly has many limitations compared to schools located in big cities. Access to information, especially internet access, is an obstacle in supporting the use of online-based learning media. Another factor is the ability and expertise of the principal himself. The principal as well as an evaluator is required to be able to carry out his function as a school leader, as well as a motivator who is able to provide inspiration to teachers, in order to further increase their capacity and competence in implementing technology-based learning methods.

The main goal of optimizing the use of learning media in schools is to improve the quality of students' understanding of the lessons they receive. Learning media not only facilitates learning, but can also provide abstract experiences to become concrete. Teachers in teaching learning material to students are generally always abstract. So that the learning messages received by students are no longer abstract, namely by using media so that the learning delivered becomes concrete and in accordance with reality as seen in everyday life (Haryana et al., 2022). The principal as a leader and academic supervisor, of course, needs to prepare a follow-up plan to overcome various obstacles faced by teachers in using learning media in schools. Efforts or attempts that can be made to overcome obstacles that occur to teachers when using audio-visual media must start from self-awareness to learn and increase insight into the latest technology. The school needs to facilitate teachers to participate in various training outside of school such as technical guidance or workshops on the use of learning media and technological science.

Conclusion

The role of academic supervision is very large in improving teacher competence in using learning media at SDN 020 Penajam. Although the learning media used are still limited, namely textbooks, Whiteboards, LCD Projectors, Laptops and HP, the enthusiasm and commitment of academic supervisors in guiding and motivating, and facilitating teachers to continue to improve their skills in using and maximizing existing learning media, in order to support the quality of teaching to students at SDN 020 Penajam. The implementation of academic supervision has been going well and effectively. Teachers feel motivated and confident in using learning media in every teaching and learning activity in the classroom. Although still constrained by teacher readiness and internet technology access is still an obstacle, continuous support and collaboration between the principal, supervisor, teacher, and school are the main supporting factors for the success of academic supervision at SDN 020 Penajam.

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