



The Role of the Madrasah Principal in Improving the It-Based Pedagogical Competence of Teachers at MA Sunan Drajat Lamongan

Muhammad Nur Musabbih

Universitas Sunan Drajat Lamongan, Indonesia

Correspondence Author. mus413b1h@gmail.com

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Abstract

The role of the madrasa head in improving the pedagogic competence of IT-based teachers at MA Sunan Drajat Lamongan, regarding the stages in the role of the madrasa head to improve the pedagogic competence of IT-based teachers, including: 1) The role of the madrasa head as an educator, 2) The role of the madrasa head as manager, 3) The role of the madrasa head as an administrator 4) The role of the school principal as an innovator 5) The role of the madrasa head as a motivator. The researcher's suggestion to madrasa heads is that they can improve training programs that can support increasing competence and can also complete facilities related to facilities and infrastructure at MA Sunan Drajat Lamongan

Keywords: Role, Headmaster, Pedagogical competence

Abstrak

Peran kepala madrasah dalam meningkatkan kompetensi pedagogic guru yang berbasis IT di MA Sunan Drajat Lamongan, terhadap tahapan-tahapan dalam peran kepala madrasah guna meningkatkan kompetensi pedagogic guru yang berbasis IT, diantaranya: 1) Peran kepala madrasah sebagai educator, 2) Peran kepala madrasah sebagai manager, 3) Peran kepala madrasah sebagai administrator 4) Peran kepala sekolah sebagai innovator 5) Peran kepala madrasah sebagai motivator. Adapun saran peneliti terhadap kepala madrasah yakni dapat meningkatkan program-program pelatihan yang sifatnya dapat menunjang peningkatan kompetensi dan juga dapat melengkapi fasilitas terkait sarana dan prasarana di MA Sunan Drajat Lamongan

Kata Kunci: Peran, Kepala Madrasah, Kompetensi Pedagogik

Introduction

The principal is a key component of an educational institution, playing a significant role in improving the quality of education. A principal's leadership encompasses not only administrative skills but also visionary and managerial skills, as well as the ability to build a school culture conducive to student growth and development. Many experts emphasize that the quality of a principal's leadership is closely linked to various aspects of school life, from discipline and student development to the effectiveness of the teaching and learning process (Mulyasa, 2004). This means that the success of an educational institution depends heavily on the principal's ability to manage all the potential within the school.

The principal is also fully responsible for the management and administration

of the educational institution he leads, including direct supervision of the learning process to ensure it runs according to established standards (Mulyasa, 2004). This responsibility includes planning school programs, making decisions, developing human resources, and ensuring the availability of infrastructure to support the educational process. The implementation of the duties, roles, and functions of the principal are an inseparable whole, because all three are inherent in a professional and visionary educational leader.

In facing the increasingly rapid developments of the times, madrasah principals are required to be adaptive and innovative. Educational institutions are currently facing various digital transformations, including the use of social media, online learning platforms, and educational administration applications. Therefore, madrasah principals who are able to keep up with these developments will be better prepared to lead their institutions to compete and adapt to global change. This digital transformation also demands increased teacher competency, particularly in utilizing information technology as a learning medium to increase the effectiveness and efficiency of teaching and learning activities (Nasution, 2012). However, conditions in the field indicate that some teachers and students still use smartphones only as communication and entertainment tools, even though these devices can be optimized as interactive and easily accessible Android-based learning media.

One effort undertaken to address these challenges is through community service activities, which aim to improve teachers' pedagogical competence and their ability to create technology-based interactive learning media. The principal, as the leader of the institution, plays a crucial role in supporting such activities, as he or she is responsible for improving the quality of human resources in the school, motivating teachers, and ensuring that the entire educational process runs according to planned objectives (UPI Educational Administration Lecturer Team, 2010). Furthermore, the principal must also understand the needs of students and the community's expectations of the school, as the success of an educational institution is not only measured by academic achievement, but also by the school's ability to build good relationships with the surrounding environment (Ali Mustadi et al., 2016).

In addition to the role of the madrasah principal, teachers also hold a strategic position in determining the quality of education. Teachers who are able to manage learning creatively and innovatively can stimulate students to be more active and motivated in learning. Students are the main subjects in the educational process, so teachers must have adequate pedagogical competence to understand their characteristics from a moral, emotional, and intellectual perspective (Mulyasa, 2007). Teachers act not only as conveyors of material, but also as facilitators who create an effective learning environment, compile relevant teaching materials, and guide students to optimally achieve learning objectives (Irham & Wiyani, 2013).

In the context of implementing a competency-based curriculum, teachers are expected to employ contextual learning strategies that take into account individual student differences, create varied learning experiences, and connect learning activities at school, home, and in the community. This approach is crucial for increasing student motivation, as it allows them to connect the knowledge they learn to real-life situations (Suryani, 2012). Contextual learning also enables students to be more responsive and active, making the learning process more meaningful.

Entering the era of the industrial revolution 4.0, challenges in the world of education are becoming increasingly complex. Information technology (IT) is now a key component that must be mastered by both teachers and students. The use of IT in education is not only intended to simplify work but also to improve the overall quality of learning. Various IT-based learning media such as digital applications, online learning platforms, interactive videos, and multimedia devices are important tools that teachers must master to make learning more interesting, efficient, and relevant to the needs of the times (Nasution, 2012). Teacher creativity in utilizing this technology is one indicator of teacher professionalism and competence in the modern era.

Method

The approach used by the researcher in this study is a qualitative descriptive research approach. In conducting this qualitative research, how to build knowledge through understanding and discovery. The use of a qualitative research approach is related to the research process and understanding based on a methodology that investigates social phenomena and human problems. In this study, the researcher creates a complex picture, examines words, detailed reports of respondents' opinions, and conducts studies in natural situations (Iskandar, 2009). During the implementation of this qualitative research, the activities carried out include observing people in their living environment interacting with them, trying to understand their language and interpretations of the world around them, approaching or interacting with people related to the research focus with the aim of understanding, exploring their views and experiences to obtain the necessary information or data (Iskandar, 2009).

This research can be defined as descriptive field research, namely analyzing and presenting facts systematically about the actual state of the object. The location of this research was carried out in Paciran Lamongan. The researcher chose this location because he wanted to know how the role of the madrasah principal in improving the pedagogical competence of IT-based teachers, the researcher sought data with Primary Data and Secondary Data, Data Collection Techniques using: Observation, Interviews, Documentation.

Data Analysis Techniques According to Miles and Huberman, "Activities in

qualitative data analysis are carried out interactively and take place continuously until complete, so that the data is saturated. Activities in data analysis, namely, data reduction, data display, and conclusion drawing/verification" (Sugiyono, 2013). Data Validity is used to obtain valid data. To determine the validity of the data, an examination technique is needed. The data validity test in this study uses a credibility test, the data credibility test or trust in the research data in this study uses a triangulation technique. Triangulation is a data validity examination technique that utilizes something else outside the data for checking purposes or as a comparison to the data, the technique is by examining other sources (Lexy J. Moeleng, 2011).

Result and Discussion

The Role of Madrasah Principals in Improving IT-Based Teacher Pedagogical Competence at MA Sunan Drajat Lamongan

On Leadership plays a crucial role and plays a crucial role in determining success. Success and failure are closely related to the leadership qualities of the principal. Therefore, as an educational organization, a madrasah must be led by a principal who can effectively execute their leadership role (Sowiyah, 2016).

The principal of a madrasah is obligated to ensure the success of established programs by providing ideas, strategies, and courageous decision-making to develop and implement the program. Therefore, the principal's role is essential in program implementation. This is consistent with Sowiyah's theory of the principal's role as educator, manager, administrator, supervisor, leader, innovator, and motivator (Soeroso, 2018).

Role is a concept regarding what an individual can do that is important for the social structure of society, roles include norms and values that are developed according to a person's position or place in society, roles in this sense are a series of regulations that guide a person in social life (Soeroso, 2018).

The role of the madrasah principal in improving IT-based teacher pedagogical competence is in accordance with the theory used by the researcher and in accordance with the reality in the field. Looking at the role played by the madrasah principal in improving IT-based teacher pedagogical competence. The role of the madrasah principal in improving IT-based teacher pedagogical competence is as follows:

Madrasah principals have a strategic responsibility in developing the quality of educational institutions. In today's digital era, demands for educator professionalism increasingly emphasize the importance of mastering information technology (IT), both as a learning aid and as a means of modern administrative management. Therefore, the madrasah principal, as the leader of the institution, functions not only as a controller and decision-maker, but also as a prime mover in improving IT-based teacher competency (Mulyasa, 2004). The role of the madrasah

principal can be analyzed from various leadership functions, including as an educator, manager, administrator, leader, innovator, and motivator.

a. The Role of the Madrasah Principal as an Educator

The role of the madrasah principal as an educator is the primary foundation for ensuring that educational activities are conducted according to established standards and objectives. As an educator, the madrasah principal is expected to have the ability to provide guidance, coaching, and direction to teachers and other educational staff in order to improve their professional competence (Mulyasa, 2007).

In the context of improving IT competency, principals need to collaborate with teachers to plan and evaluate all activities related to developing these competencies. Principals can initiate internal training programs and encourage teachers to participate in external training programs provided by various professional institutions.

These trainings, such as workshops on using a Learning Management System (LMS), training on creating multimedia-based learning media, or training on developing digital classrooms, are efforts that directly improve teachers' IT-based pedagogical competencies (Nasution, 2012). Furthermore, madrasah principals also play a role in providing supporting facilities such as adequate internet access, computer equipment, and digital learning applications. Thus, the role of the madrasah principal as an educator is closely related to efforts to improve the quality of learning through teacher competence, especially in utilizing technology as part of the teaching and learning process.

b. The Role of the Madrasah Principal as a Manager

As a manager, the principal is responsible for managing all resources within the educational institution effectively and efficiently. This function includes planning, organizing, implementing, supervising, and evaluating all educational activities (Indra Haryanto, 2014).

According to Haryanto (2014), a madrasah principal as a manager must have at least six main abilities: a) Making predictions about the future of madrasahs, including the quality demands expected by society; b) Carrying out innovation, by taking creative steps for the advancement of the institution; c) Creating strategic policies, which support the implementation of innovative ideas; d) Prepare strategic and operational plans, in order to achieve the vision and mission of the madrasah; e) Finding and managing educational resources, both internal and external; f) Carrying out control over the implementation of education, including evaluation of ongoing programs.

Observations and interviews indicate that the principal has effectively carried out his or her managerial responsibilities. He or she has established a policy for improving teacher competency, particularly in IT, and has managed the entire

implementation process. This is evident in the principal's involvement in developing a structured and sustainable IT-based pedagogical competency improvement program.

c. The Role of the Madrasah Principal as an Administrator

The role of the madrasah principal as an administrator requires the ability to manage educational administration in an orderly, systematic, and procedural manner. Madrasah administration encompasses not only learning aspects but also the management of facilities, infrastructure, finances, personnel, and external relations (Suryani, 2012).

Madrasah principals must be open and proactive in responding to developments in educational policy, as well as changes occurring in society and technology. Interviews with several respondents revealed that madrasah principals collaborate with all elements of the institution to improve and develop educational facilities, particularly IT facilities used to support teachers' pedagogical competence.

Administrative activities carried out by the head of the madrasah include: a) conducting IT-based teacher competency data collection, b) compile training program progress reports, c) ensure the availability of learning devices, d) implementing IT-based training programs both internally and externally. These tasks show that the role of administrator has been carried out effectively to support improving the quality of technology-based learning.

d. The Role of the Madrasah Principal as a Leader

As a leader, the principal must be able to provide direction, guidance, and role model for all members of the madrasah. The principal's leadership is crucial for determining the direction and success of the institution in achieving its educational goals (Mulyasa, 2004).

Based on interviews, the madrasah principal consistently directs teachers and administrators to participate in various IT-based pedagogical competency improvement training programs. The madrasah principal not only directs but also leads by example by participating in training and other self-development activities. This action demonstrates transformational leadership, where the leader inspires and motivates his or her subordinates (Irham & Wiyani, 2013).

The leadership role of the madrasah principal is also reflected in efforts to create a positive work environment, facilitate communication, and strengthen relationships among madrasah members. Thus, the madrasah principal, as a leader, plays a central role in encouraging innovation among teachers, particularly regarding IT skills.

e. The Role of the Madrasah Principal as an Innovator

As innovators, madrasah principals are required to be creative, progressive, and adaptive to change. Innovation in education is crucial to ensuring institutions can compete and evolve with the needs of the times (Ali Mustadi et al., 2016).

The principal of the madrasah demonstrates this role in various ways, for example: a) implementing new programs that are relevant to technological developments, b) establish cooperation with institutions or professional communities outside of school, c) develop new ideas based on knowledge gained from outside, d) encourage teachers to take part in training that focuses on IT-based learning, e) make updates to existing programs to make them more effective.

The madrasah principal also actively expands relationships to obtain information, networks, and training opportunities for teachers. These actions demonstrate that the madrasah principal has a strong innovative orientation in the institutional development process.

f. The Role of the Madrasah Principal as a Motivator

Motivation is a crucial factor in determining teacher performance. As a motivator, the principal must be able to encourage and inspire teachers to improve their competency (Mulyasa, 2007). The principal of the madrasah can provide motivation through various strategies, including: a) Creating a conducive work environment, b) Giving awards or rewards to high-achieving teachers, c) Providing moral support in the face of difficulties, d) Holding activities that strengthen togetherness, e) Provide adequate learning resources or facilities.

Interview results indicate that madrasah principals provide rewards to teachers who actively participate in IT training. These rewards are not only material but also provide recognition and moral appreciation, which significantly boost teacher morale. The principal's motivation positively influences the implementation of IT-based programs and encourages teachers to be more creative and innovative in developing learning.

Learning can be understood as an activity carried out by teachers in organizing and organizing the learning environment optimally and connecting it with students so that the learning process occurs. This demonstrates the vital role of teachers in the world of education. Teachers play a crucial role in determining the quantity and quality of teaching, which ultimately contributes to improving the quality of national education. Teachers act as learning managers, acting as facilitators who strive to create effective learning, develop effective learning materials, and improve students' ability to listen to lessons and master the educational goals they must achieve.

In the field of education, specifically for teachers, pedagogical competence is the skill or ability that a teacher must master in observing the characteristics of students from various aspects of life, be it moral, emotional, or intellectual. In pedagogical competence, teachers are required to be able to understand their students and understand how to provide correct teaching to students. Pedagogical competence that teachers must master includes teacher understanding of students, designing and implementing learning, evaluating learning, and developing students to actualize their various potentials.

Media is anything that can be used to convey messages and can stimulate the mind, arouse enthusiasm, attention, and willingness of students so that it can encourage the learning process in students. Learning media is the media used in learning, which includes teacher aids in teaching and a means of conveying messages from the learning source to the recipient of the learning message (student). As a presenter and channel of messages, learning media can in certain cases represent the teacher in presenting learning information to students. If the media program is well designed and developed, then the media will be able to play this function even without the presence of a teacher. Therefore, IT-based learning media can also be interpreted as a component of learning resources that contain instructional materials in the student environment in the form of information and communication technology.

Supporting and Inhibiting Factors **The Role of Madrasah Principals in Improving IT-Based Teacher Pedagogical Competence at MA Sunan Drajat Lamongan**

In carrying out the role of the Madrasah Principal in improving IT-based teacher pedagogical competencies, there are certainly several supporting and inhibiting factors. These factors can later be used to measure the effectiveness of a madrasah or institution's management.

a. Supporting Factors

Supporting factors for the role of the Madrasah Principal in improving IT-Based Teacher Pedagogical Competence at MA Sunan Drajat Lamongan. There are several theories that the researcher used in the research, including the following:

1) The Existence of Certified Educator Allowances

The certification allowance received by teachers is one of the supporting factors for the pedagogical competence of certified teachers. With this allowance, certified teachers no longer have to worry about other work while at the institution because their daily needs are met, so they can focus on carrying out their duties as teachers at the institution. Furthermore, with this allowance, educators with pedagogical competence can also upgrade their skills to improve their IT-based learning processes.

2) WorkSame All Related Components.

There is cooperation between all related components such as parents, principalsMadrasahs, teaching staff, and educational personnel, and especially students, are important. For example, the madrasah and parents can motivate each other and exchange information to develop pedagogical competencies.

3) Facilities and infrastructure

Complete and adequate facilities and infrastructure add value to students. For example, the adequate facilities provided by the madrasah facilitate the learning process of pedagogically competent teachers.

b. Inhibiting Factors

Factors inhibiting the role of the Madrasah Principal in improving IT-Based Teacher Pedagogical Competence at MA Sunan Drajat Lamongan. There are several theories that researchers used in this study, including the following:

- 1) According to the data obtained, factors hindering teachers' competence in utilizing Information and Communication Technology-based learning media include unstable internet connections, which are sometimes difficult to obtain. The media used is also still limited.
- 2) Lack of teacher training is also a factor inhibiting teaching and learning activities due to the lack of teacher training with IT-based pedagogical competence.
- 3) Another factor that hinders the learning process of teachers with IT-based pedagogical competence is that students have different learning facilities, so teachers must try to adapt the learning media that will be used.

Conclusion

The role of the madrasah principal in improving the pedagogical competence of IT-based teachers, the madrasah principal can provide direction such as holding special training for teachers who are pedagogically competent in the IT field or can also participate in training outside of school. The madrasah principal must also have a policy in improving competence so that it can make the process of improving the competence of each teacher can be carried out well and in accordance with the established criteria. The madrasah principal can also carry out IT-based training activities, because it is also one of the supports so that teachers with pedagogical competence increasingly master their abilities. A teacher is responsible for planning and implementing the learning process, assessing learning outcomes, providing guidance and training, and conducting research and community service, particularly for educators in higher education. Teachers must be able to manage learning by providing guidance to students so they are willing to learn, as students are the primary subjects of learning. Teachers who are able to carry out their roles as outlined above are referred to as competent teachers. This is a standard competency that teachers must possess in carrying out their profession.

Supporting factors of the role of the Madrasah Principal in improving IT-based Teacher Pedagogical Competence at MA Sunan Drajat Lamongan That there are several supporting factors that influence the Role of the Madrasah Principal in Improving IT-based Teacher Pedagogical Competence at MA Sunan Drajat Lamongan, including the existence of certified educator allowances, cooperation of all related components and facilities and infrastructure. These are supporting

factors as a support for the success of the Madrasah Principal's role in improving IT-based teacher pedagogical competence at MA Al-Muhtadi. Inhibiting factors of the Madrasah Principal's role in improving IT-based Teacher Pedagogical Competence at MA Sunan Drajat Lamongan There are several inhibiting factors that influence the Role of the Madrasah Principal in Improving IT-based Teacher Pedagogical Competence at MA Sunan Drajat Lamongan, including unstable networks, lack of teacher training and learning media facilities. This is a factor inhibiting the success of the role of the Madrasah Principal in improving the pedagogical competence of IT-based teachers at MA Al-Muhtadi.

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References

- Ali Mustadi, A., Zubaidah, E., & Sumardi, S. (2016). Peran komite sekolah dalam peningkatan mutu pembelajaran di sekolah dasar. *Jurnal Ilmiah Pendidikan*.
- Haryanto, I. (2014). Peran kepala sekolah dalam penerapan manajemen berbasis sekolah (MBS) di SDIT Jabal Nur Gamping, Sleman. *Jurnal Akuntabilitas Manajemen Pendidikan*, 2(2).
- Irham, M., & Wiyani, N. A. (2013). *Psikologi pendidikan: Teori dan aplikasi dalam proses pembelajaran*. Ar-Ruzz Media.
- Iskandar. (2009). *Metodologi penelitian kualitatif*. Gaung Persada.
- Moleong, L. J. (2007). *Metodologi penelitian kualitatif*. Remaja Rosdakarya
- Mulyasa, E. (2004). *Menjadi kepala sekolah profesional*. Remaja Rosdakarya.
- Mulyasa, E. (2007). *Standar kompetensi dan sertifikasi guru*. Remaja Rosdakarya.
- Nasution, N. (2012). *Teknologi pendidikan*. Bumi Aksara.
- Soeroso, A. (2008). *Sosiologi SMA*. Penerbit Yudistira.
- Sowiyah. (2016). *Kepemimpinan kepala sekolah*. Media Akademi.

Sugiyono. (2016). *Metode penelitian pendidikan: Pendekatan kuantitatif, kualitatif, dan R&D*. Alfabeta.

Suryani, A. (2012). *Strategi belajar mengajar*. Penerbit Ombak.

Tim Dosen Administrasi Pendidikan UPI. (2010). *Manajemen pendidikan*. Alfabeta.