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Application of Principles of Philosophy of Science in Improving the Effectiveness of Education Management in Madrasah Aliyah Fathur Rahman Batu Sopang

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Abstract— This research aims to elucidate and critically assess the application of principles outlined in the Philosophy of Science as a foundational framework to enhance the efficacy of educational management at Madrasah Aliyah Fathur Rahman Batu Sopang. Positioned as a comprehensive paradigm, the Philosophy of Science serves as a guiding compass and philosophical underpinning for educational development within the confines of the mentioned madrasa. Utilizing a qualitative research approach with a case study design, the study employs in-depth interviews, observational techniques, and document analysis as principal methods of data collection. The findings reveal how the intrinsic principles of the Philosophy of Science, including objectivity, the scientific method, and the nexus between knowledge and reality. are assimilated and operationalized across diverse facets of educational management within Madrasah Aliyah Fathur Rahman. The analytical framework also examines responses and the consequential impact of applying these principles on overall educational management effectiveness, encompassing leadership dynamics, decision-making processes, and enhancements in pedagogical quality and the learning environment. The application of the philosophy of science and the principles of Islamic education creates a robust foundation for the development of a holistic and effective educational system. Implementing the philosophy of science, with a focus on objectivity, scientific methods, and the interconnectedness between knowledge and reality, provides a profound philosophical basis for the learning process. These principles align with Islamic values that emphasize the importance of knowledge, justice, and the harmony between reason and revelation. Through the integration of the philosophy of science in Islamic education, the learning process can become more rational, purposeful, and responsive to the spiritual and intellectual needs of students. Thus, the application of the philosophy of science can assist in formulating teaching methods and managing Islamic education that is not only based on faith but also utilizes scientific principles to achieve a deeper and sustainable understanding.

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Keywords— Philosophy, Effectiveness, Education, Management

I. INTRODUCTION

Education is a conscious and planned effort to create a learning environment and learning process that enables students to actively develop their potential. The purpose of education is to enhance spiritual and religious strength, self-control, personality, intelligence, noble character, as well as the skills needed by students, society, the nation, and the country (Sujana, 2019).

The contribution of Islamic schools (madrasah) to the cultivation of the national character, achieved through the inculcation of religious values within the educational framework and in conjunction with the dissemination of general knowledge, warrants scholarly consideration. This is underscored by the notable impact of the organizational structure of madrasah education on the advancement of the educational landscape in Indonesia, facilitating the attainment of mandatory education and elevating school enrollment rates. Madrasah assumes a pivotal role within the broader framework of the National Education System (Noor, 2018). As integral components of Islamic educational infrastructure, madrasahs emerge as crucial agents in the cultivation of students' character and religious convictions. Madrasah Aliyah Fathur Rahman Batu Sopang exemplifies one such institution, demonstrating substantial potential in the delivery of high-quality Islamic education. Nevertheless, it is imperative to acknowledge that challenges in educational management may persist within the operational framework of this specific madrasah.

The effectiveness of educational management is crucial in achieving good educational goals. Sound management can help optimize resources, design relevant curricula, and enhance the quality of learning. Philosophy of science is an in-depth discipline concerning the nature of knowledge, how knowledge is acquired, and how it can be applied in practical contexts (Endraswara, 2021). Objectivity emphasizes the necessity of an objective scientific approach, knowledge is gained through Hifni, H., & Wardhana, K. E. (2024). Application of Principles of Philosophy of Science in Improving the Effectiveness of Education Management in Madrasah Aliyah Fathur Rahman Batu Sopang. Buletin Poltanesa, 24(2)

observation and analysis unaffected by personal opinions or interests (Situmeang, 2021). The application of the principles of the philosophy of science in educational management can help define educational goals, formulate effective teaching methods, and understand the process of evaluation and improvement (Sairah, 2021).

In managing a school, the school principal or leader must pay special attention to the informal, symbolic, and unseen aspects of school life that shape the beliefs and actions of every member of the school. The role of the school principal involves the creation, formation, and support of a culture that reinforces effective attitudes in all aspects of school life. It is believed that a healthy school cultural atmosphere or climate will have a positive impact on students' learning achievements in the school.

Madrasah, as an Islamic educational institution, plays a crucial role in shaping character and enhancing the quality of education. In this context, the research aims to explore the application of principles outlined in the Philosophy of Science as a foundational framework underpinning efforts to improve the effectiveness of educational management at Madrasah Aliyah Fathur Rahman. The Philosophy of Science is considered a comprehensive paradigm that provides guidance and philosophical foundations for the development of education within the madrasa environment. Employing a qualitative research approach and a case study design, this study utilizes various methods, such as in-depth interviews, observational techniques, and document analysis, to delve into in-depth information regarding the application of the principles of the Philosophy of Science. By identifying and analyzing educational management practices, it is hoped that this research will make a positive contribution to our understanding of how the Philosophy of Science can serve as a valuable guide to enhance the effectiveness of educational management at Madrasah Aliyah Fathur Rahman Batu Sopang.

The Potential Influence of the Application of the Philosophy of Science is a question that arises regarding the extent to which the application of the principles of the philosophy of science in the educational management of Madrasah Aliyah Fathur Rahman Batu Sopang can enhance the effectiveness of education in the madrasah. Has this application been implemented, how effective is it, and what impact does it have on the learning process and student achievement? In addition to the potential positive influence, this article also seeks to identify challenges faced by Madrasah Aliyah Fathur Rahman Batu Sopang in applying the principles of the philosophy of science in educational management. Are there obstacles or constraints that need to be overcome?

The results of a preliminary study, conducted through brief interviews and observations involving 8 teachers at Madrasah Aliyah Fathurrahman Batu Sopang, indicate that 3 teachers expressed that the application of the principles of the Philosophy of Science has limited influence in enhancing the effectiveness of educational management at Madrasah Aliyah Fathurrahman. In contrast, 5 teachers stated that the implementation of the principles of the philosophy of science significantly affects the improvement of educational management. Hence, the author is interested in selecting a title related to "The Application of the Principles of the Philosophy of Science in Enhancing the Effectiveness of Educational Management at Madrasah Aliyah Fathur Rahman Batu Sopang."

II. LITERATURE REVIEW

This research can be categorized as pure research, characterized by the absence of references to previous studies. With the absence of references to previous research, researchers have the flexibility to refer to literature related to the application of the philosophy of science in the context of education and educational management. In the process, this research will make a significant contribution by providing new insights and a deeper understanding of the application of the principles of the philosophy of science in enhancing management effectiveness in the environment of Aliyah Fathur Rahman Batu Sopang Islamic High School. It is expected that the results of this research will make a meaningful contribution to the development of management practices in Islamic schools, providing a richer understanding of the concept of the philosophy of science in the context of education.

Concept of the Philosophy of Science. Philosophy actually originates from the Greek word philosophia. From the term philosophy, various philosophical ideas emerge, both in a literal and etymological sense, as well as in content. According to (Saebani, 2013), on one hand, the philosophy of science justifies environmental destruction, and on the other hand, it legitimizes the authoritative subordination of women and men. Science and masculinity are intertwined in the domination of nature and feminist traits, while science and gender concepts complement each other. In simpler terms, philosophy is a comprehensive examination and study of a thought, belief, and attitude that has been highly regarded for its truth through a reexamination and analysis of basic concepts to create a better understanding, consideration, and wisdom (Achmad, 2019).

'Ilmu' is an Arabic word, derived from the root 'alima ya alamu,' which means to know or be aware. Meanwhile, in terminology, science is defined as 'Idroku syai bi haqiqotih' (knowledge of the truth) (Widyawati, 2013).. In English, science is often associated with the term 'science.' The word 'sains' in Indonesian (derived from the Latin word 'scio, scire,' meaning to know) is often referred to as science but is also frequently called knowledge, yet conceptually referring to the same thing" (Marlinton et al., 2022).

Meanwhile, the Philosophy of Science is a philosophy that studies the nature of the implementation of a certain field of knowledge (Endraswara, 2021). The nature of implementing a field of knowledge includes its background, objectives, methods, and educational outcomes regarding a specific topic. The method employed in the philosophy of science involves critically studying the structure and benefits of education

Hifni, H., & Wardhana, K. E. . (2024). Application of Principles of Philosophy of Science in Improving the Effectiveness of Education Management in Madrasah Aliyah Fathur Rahman Batu Sopang. Buletin Poltanesa, 24(2)

(Hardanti, 2020). The philosophy of science can be used by humans to address issues in life, whether they pertain to oneself, others, or concerns regarding the surrounding environment and its creator (Rofiq, 2018).

The philosophy of science helps us understand how scientific knowledge is constructed, tested, and developed (Praja, 2020). Here are some important principles in the philosophy of science:

1. Empiricism

This principle emphasizes the importance of observation and experience as the foundation of knowledge. Scientific knowledge should be testable through concrete observation and experience.

2. Rationalism

Rationalism prioritizes thought and reason as the primary sources of knowledge. This principle emphasizes the importance of logical deduction and rational thinking in building knowledge.

3. Empirical Validity

Scientific knowledge must be based on measurable and repeatable empirical evidence. Research results should be verifiable by others

4. Objectivity

Scientific knowledge must be objective, meaning researchers should strive to avoid personal bias or subjectivity in the investigation and interpretation of data.

5. Falsifiability

Proposed by philosopher Karl Popper, this principle states that scientific theories must be testable and falsifiable. Theories that cannot be tested are not considered scientific.

6. Parsimony (Simplicity)

Also known as Occam's Razor, this principle suggests that in explaining natural phenomena, we should seek the simplest and most efficient explanations.

7. Criticism

The philosophy of science encourages a critical attitude toward scientific theories and concepts. Researchers should always be ready to question and reevaluate accepted ideas.

8. Theory and Data

Scientific knowledge should always be based on empirical data but also requires a conceptual framework or theory that enables the organization and interpretation of data.

9. Reproducibility

Scientific research should be replicable by others with similar results. This emphasizes the importance of open and repeatable scientific methods.

10. Social Context

The philosophy of science also considers the role of social, political, and cultural contexts in shaping scientific knowledge. 9.Evolution of Science: This principle recognizes that scientific knowledge is dynamic and continually evolves over time. Scientific theories and concepts may change with the emergence of new evidence (Endraswara, 2021).

Management Concept, the word 'management' originates from the English language, specifically 'manage,' which means the art of caring for, organizing, implementing, and overseeing. The term 'management' is mentioned in the English dictionary, 'management' refers to direction and leadership. 'Under new management' signifies being under new leadership, with a new administrative structure and administration" (Pananrangi & SH, 2017).

Definition of management according to experts, according to Davis, management is a role inherent in every executive leader wherever they are. Millet describes management as the steps to direct and coordinate formally structured individual activities within a group to achieve desired goals. In the view of Mary Parker Follet, as explained in Handoko's book, management is defined as the artful ability to accomplish tasks performed by others. In this context, a manager's task is to organize and guide others to achieve organizational goals. Ricky W. Griffin describes management as a series of planning, organizing, coordinating, and controlling steps of resources to achieve goals with efficiency and outcomes aligned with the predetermined schedule. Effectiveness in this context means that goals can be achieved according to the established plan" (Pananrangi & SH, 2017).

Management Functions, the function of management is a series of activities and tasks performed by managers to achieve organizational goals effectively and efficiently" (Pananrangi & SH, 2017). Management experts have identified key management functions in the managerial process. The following are management functions according to some renowned management figures: Henri Fayol: Planning: Setting goals, formulating strategies, and planning steps to achieve objectives. Organizing: Arranging resources, organizational structure, and allocating tasks and responsibilities. Leading: Motivating, directing, and guiding staff in achieving organizational goals. Controlling: Monitoring performance, comparing it with standards, and taking corrective action if necessary. Luther Gulick and Lyndall Urwick: Planning: Similar to Fayol. Organizing: Dividing tasks and responsibilities, as well as defining relationships between parts within the organization. Staffing: Identifying, selecting, and training suitable resources. Leading: human Similar to Favol. Coordinating: Integrating various activities and functions within the organization. Controlling: Similar to Fayol. Peter Drucker: Planning: Identifying opportunities, setting goals, and planning actions. Leading: Encouraging staff performance and creating a productive work environment. Controlling: Monitoring performance and implementing continuous improvement. Innovation: Encouraging innovation and change to meet market needs. Evaluation: Assessing outcomes and creating accountability.

These management functions are often referred to as basic or essential functions that must be performed by all

Hifni, H., & Wardhana, K. E. . (2024). Application of Principles of Philosophy of Science in Improving the Effectiveness of Education Management in Madrasah Aliyah Fathur Rahman Batu Sopang. Buletin Poltanesa, 24(2)

managers at various levels of the organization. However, it is important to note that in practice, managers often have to deal with complex and varied tasks, and these functions can be interconnected and interrelated in the decision-making and implementation processes" (Anisa, 2021).

The Definition of Education. Education is a systematic process that involves the transfer of knowledge, skills, values, and cultural norms from one generation to the next (Pristiwanti et al., 2022). Generally, education aims to shape the intellectual, moral, social, and physical development of individuals so that they can play an active and positive role in society (Noor, 2018).

Education is not limited to the formal school environment but also encompasses learning that takes place in various contexts, including family, community, and everyday experiences (Na'im et al., 2021). The educational process involves interactions between educators (teachers, parents, mentors) and learners (students, children, scholars) with the goal of supporting the holistic development of individuals (Mulyasa, 2022).

The Function of Education. Education serves various crucial functions in the development of individuals and society. Some of the primary functions of education include:

- a. Transfer of Knowledge and Skills
 - The fundamental function of education is to transfer knowledge and skills from one generation to the next (Giri, 2016). Education equips individuals with an understanding of the world, science, technology, and the skills needed in daily life and the workforce."
- b. Character Formation and Values Education plays a role in shaping individual character and aiding in the formation of moral and ethical values. This involves teaching cultural norms, ethics, and expected behaviors in society.
- c. Empowerment of Individuals Through education, individuals are empowered with skills and knowledge that enable them to make informed decisions, actively participate in society, and reach their maximum potential.
- d. Preparation for Economic Life Education assists in preparing individuals to enter the workforce by providing the skills and knowledge necessary to contribute to the economic sector.
- e. Development of Critical and Analytical Capacities Education not only provides information but also develops critical and analytical thinking skills. This enables individuals to evaluate information, solve problems, and make decisions based on a deep understanding.
- f. Social and Cultural Development

Education plays a role in preserving and developing the social and cultural identity of a society. This includes teaching history, arts, and culture as part of the learning process(Karmila et al., 2021).

g. Enhancing Community Well-being

Education has a positive impact on community well-being by improving literacy rates, health, and citizens' participation in social and political life.

h. Social Change and Innovation Education can be an agent of social change by supporting innovation, creative thinking, and a profound understanding of social issues (Sujana, 2019).

These functions contribute integrally to shaping individuals, forming societies, and laying the foundation for progress and sustainability.

The Concept of Education. Every education system or educational institution has a distinctive concept of education, reflecting specific values and priorities in providing education to the younger generation. The concept of education can change over time and evolve in response to changes in society, technology, and our understanding of learning (Fikri, 2017).

III. METHODS

In this study, the author employed an analytic survey method with a Cross-Sectional approach to determine the influence of the application of the principles of the Philosophy of Science in improving the effectiveness of educational management at Madrasah Aliyah Fathur Rahman Batu Sopang. The data collection was conducted through a questionnaire, and subsequently, data analysis was carried out

In this study, the author employs a mixed methods approach, the researcher combines qualitative and quantitative elements. This is done to facilitate the author in obtaining accurate data. This research focuses on the educational institution Madrasah Aliyah Fathur Rahman Batu Sopang, located at Jalan Negara KM 141 RT 021 Batu Kajang, Batu Sopang District, Paser Regency, East Kalimantan

IV. RESULTS AND DISCUSSION

The Implementation of the Philosophy of Science Principles in Enhancing the Effectiveness of Educational Management at Madrasah Aliyah Fathur Rahman Batu Sopang.

Based on the questionnaire results distributed to 16 teachers at Madrasah Aliyah Fathur Rahman Batu Sopang for the academic year 2023/2024, respondents' responses were obtained through statements documented in the questionnaire, consist of (1)

$$X = \frac{f}{n} \times 100\% \tag{1}$$

Information : (1) X = Response f = frequency n = Total

Hifni, H., & Wardhana, K. E. . (2024). Application of Principles of Philosophy of Science in Improving the Effectiveness of Education Management in Madrasah Aliyah Fathur Rahman Batu Sopang. Buletin Poltanesa, 24(2)

| Table 1. Responses on the Understanding of the |
|--|
| Philosophy of Science (X1) |

| Description | | P1 | |
|-------------|----|--------|--|
| | F | % | |
| SB | 10 | 62,5 % | |
| В | 4 | 25 % | |
| С | 2 | 12,5 % | |
| Κ | 0 | 0 % | |
| Total | 16 | 100 % | |

Based on Table 1, the research results indicate that respondents who stated 'very good' were 10 people (62.5%), respondents who stated 'good' were 4 people (25%), respondents who stated 'fair' were 2 people (12.5%), and respondents who stated 'poor' were 0 people (0%) regarding the statement of how well respondents understand the principles of the Philosophy of Science.

Table 2. Responses on the Application of the Philosophy of Science at MA Fathurrahman Batu Sonang (X₂)

| of Science at MA. Pathurannian Datu Sopang (A2) | | | | | | |
|---|----|--------|----|--------|----|--------|
| Description | | P2 | | P5 | | P8 |
| | F | % | f | % | F | % |
| ST | 12 | 75% | 11 | 68,75% | 13 | 81,25% |
| Т | 3 | 18,75% | 4 | 25% | 3 | 18,75% |
| KT | 1 | 6,25% | 1 | 6,25% | 0 | 0% |
| TT | 0 | 0 % | 0 | 0% | 0 | 0% |
| Total | 16 | 100% | 16 | 100% | 16 | 100% |

In the research results presented in Table 2, there are respondents who provided statements, with 12 people (75%) stating that the attitude is highly reflected, 3 people (18.75%) stating that the attitude is reflected, 1 person (6.25%) stating that the attitude is less reflected, and 0 people (0%) stating that the attitude is not reflected towards the statement regarding the application of the Principles of the Philosophy of Science at Madrasah Aliyah Fathurrahman Batu Sopang.

The research results indicate that respondents expressed a highly reflected attitude with 11 people (68.75%), respondents who stated that the attitude is reflected were 4 people (25%), respondents who stated that the attitude is less reflected were 1 person (6.25%), and respondents who stated that the attitude is not reflected were 0 people (0%) regarding the statement that the use of the principles of the Philosophy of Science is reflected in the curriculum of Madrasah Aliyah Fathurrahman.

The research results show that respondents expressing a highly reflected attitude are 13 people (81.25%), respondents stating that the attitude is reflected are 3 people (18.75%), respondents stating that the attitude is less reflected are 0 people (0%), and respondents stating that the attitude is not reflected are 0 people (0%) regarding the statement that the principles of the Philosophy of Science are reflected in the evaluation and measurement process of educational success at Madrasah Aliyah Fathurrahman.

| Table 3. Responses on the Application of the Philosophy | |
|--|--|
| of Science at MA. Fathurrahman Batu Sopang (X ₃) | |

| of Science at Mirt. I and Handham Bata Sopung (13) | | | | |
|--|----|-------|-----|------|
| Description | P3 | | P10 | |
| | F | % | F | % |
| Yes | 15 | 93,75 | 16 | 100% |
| No | 1 | 6,25% | 0 | 0% |
| Totality | 16 | 100% | 16 | 100% |

Based on Table 3, the research results show that respondents expressing a YES attitude are 15 people (93.75%), and respondents expressing a NO attitude are 1 person (6.25%). Regarding the statement about whether there are philosophical values that serve as the basis for determining the educational mission at Madrasah Aliyah Fathur Rahman Batu Sopang, since 93.75% of the respondents stated YES, the author can conclude the reasons for the response with the explanation that Madrasah Aliyah is generally a higher secondary education institution that focuses on Islamic religious education and includes a general curriculum. In formulating the mission of Madrasah, Madrasah Aliyah Fathur Rahman Batu Sopang is not detached from philosophical aspects, consist of;

- Fair and Equal, Madrasah Aliyah Fathur Rahman Batu Sopang applies the principles of justice and equality, which can serve as the basis for formulating the educational mission, including providing educational opportunities to all students regardless of background or social status. Islamic Character Formation, Education at Madrasah Aliyah Fathur Rahman Batu Sopang aims to shape the character of students in accordance with Islamic values, such as honesty, integrity, and responsibility.
 At Madrasah Aliyah Fathur Bahman Batu Sopang
- 2. At Madrasah Aliyah Fathur Rahman Batu Sopang, the Development of Knowledge and Skills: In addition to the spiritual aspect, the madrasah also emphasizes the development of knowledge and skills to prepare students to become individuals who contribute positively to society.
- 3. Community and Parental Response: The implementation of the principles of the Philosophy of Science may require support and understanding from the community and parents of students. If there is resistance or a lack of understanding, this can be a hindrance.

The research results show that respondents expressing a YES attitude are 16 people (100%), and respondents expressing a NO attitude are 0 people (0%). Regarding the statement about whether there are specific challenges faced in implementing the principles of the Philosophy of Science in educational management at Madrasah Aliyah Fathur Rahman Batu Sopang, since 100% of the respondents stated YES, the author can conclude the reasons for the response with the explanation that the challenges faced are :

1. Resource Limitations: Madrasah Aliyah Fathur Rahman Batu Sopang faces limitations in resources, whether it be in terms of funding,

Hifni, H., & Wardhana, K. E. . (2024). Application of Principles of Philosophy of Science in Improving the Effectiveness of Education Management in Madrasah Aliyah Fathur Rahman Batu Sopang. Buletin Poltanesa, 24(2)

facilities, or educators with expertise in their respective disciplines. This can be a hindrance in implementing the principles of the Philosophy of Science, which may require additional investment:

- 2. Integrating the principles of the Philosophy of Science into the curriculum at Madrasah Aliyah Fathur Rahman Batu Sopang can pose a challenge. At times, the curriculum may be more dominated by religious aspects and may not sufficiently consider the philosophical aspects of science.
- 3. Human Resource Development: Madrasah Aliyah Fathur Rahman Batu Sopang needs to ensure that teaching and administrative staff have sufficient understanding of the principles of the Philosophy of Science and can integrate them into everyday educational practices.

Table 4. Responses on the Application of the Philosophy of Science at MA. Fathurrahman Batu Sopang (X₄)

| Description | P4 | | |
|----------------------|----|------|--|
| - | F | % | |
| Implemented Fully | 16 | 100% | |
| Implemented Partiall | 0 | 0% | |
| Not Yet Implemented | 0 | 0% | |
| Total | 16 | 100% | |

Based on Table 4, the research results indicate that respondents stating the statement is fully implemented are 16 people (100%), respondents stating the statement is partially implemented are 0 people (0%), and respondents stating the statement is not yet implemented are 0 people (0%). Regarding the statement on how the principles of the Philosophy of Science are implemented in the teaching methods at Madrasah Aliyah Fathur Rahman Batu Sopang

Table 5. Responses on the Application of the Philosophy of Science at MA. Fathurrahman Batu Sonang (X_{ℓ})

-

| Sopang (AS) | | | | |
|---------------------------|----|------|--|--|
| Description | | P6 | | |
| | F | % | | |
| Providing Positive Impact | 16 | 100% | | |
| Providing Negative Impact | 0 | 0% | | |
| Not Very Influential | 0 | 0% | | |
| Total | 16 | 100% | | |

The research results from Table 5, indicate that respondents expressing their attitudes toward how the principles of the Philosophy of Science influence the role of teachers in the context of educational management at Madrasah Aliyah Fathur Rahman Batu Sopang. Respondents stated that it has a positive impact, with 16 people (100%), respondents stating a negative impact were 0 people (0%), and 0 people (0%) stated that it is not very influential

| Table 6. Responses on the Application of the |
|--|
| Philosophy of Science at MA. Fathurrahman Batu |
| Sopang (X ₆) |

| Description | | P7 |
|----------------------|----|------|
| | F | % |
| Encouraged Actively | 13 | 81% |
| Encouraged Generally | 3 | 18% |
| Not Encouraged | 0 | 0% |
| Total | 16 | 100% |

The research results from Table 6 show that respondents stating actively encouraged are 13 people (81%), respondents stating generally encouraged are 3 people (18%), and respondents stating not encouraged are 0 people (0%). Regarding the statement on how students at Madrasah Aliyah Fathurrahman are encouraged to adopt the values of the Philosophy of Science in the learning process.

Table 7. Responses on the Application of the Philosophy of Science at MA. Fathurrahman Batu Sopang (X₇)

| Description | | Р9 | |
|--------------------|----|-------|--|
| | F | % | |
| Actively Involved | 14 | 87,5% | |
| Involved Generally | 2 | 12% | |
| Not Involved | 0 | 0% | |
| Total | 16 | 100% | |

Based on Table 7, the research results indicate that respondents stating actively involved are 14 people (87.5%), respondents stating generally involved are 2 people (12%), and respondents stating not involved are 0 people (0%). Regarding the statement on how the involvement of parents, the community, and other relevant parties in the context of educational management at Madrasah Aliyah Fathur Rahman Batu Sopang is directed by the principles of the Philosophy of Science.

The research results indicate that the understanding of teachers and staff at Madrasah Aliyah Fathur Rahman Batu Sopang is very comprehensive regarding the principles of the Philosophy of Science, so its application aligns with the school's curriculum.

The research results indicate that from Table 2 to Table 7, there is a significant influence of the application of the principles of the philosophy of science in improving the effectiveness of educational management at Madrasah Aliyah Fathur Rahman Batu Sopang, as clearly reflected in the statements of the school board and staff at Madrasah Aliyah Fathur Rahman Batu Sopang regarding the principles of the Philosophy of Science influencing the role of teachers in the context of educational management at Madrasah Aliyah Fathur Rahman Batu Sopang. Respondents stated that it has a positive impact, with 16 people (100%)." Hifni, H., & Wardhana, K. E. . (2024). Application of Principles of Philosophy of Science in Improving the Effectiveness of Education Management in Madrasah Aliyah Fathur Rahman Batu Sopang. Buletin Poltanesa, 24(2)

V. CONCLUSION

The research results indicate that the application of the principles of the philosophy of science has a significant impact on improving the effectiveness of educational management at Madrasah Aliyah Fathur Rahman Batu Sopang. The research results show that all members of Madrasah Aliyah Fathur Rahman Batu Sopang feel the positive impact of the application of the principles of the philosophy of science in efforts to improve the effectiveness of educational management in the institution."

The research results indicate that the integration of the principles of the philosophy of science, including objectivity, scientific methods, and the interconnectedness between knowledge and reality, has made a significant contribution to various aspects of educational management at Madrasah Aliyah Fathur Rahman. Thus, the application of the philosophy of science in the context of Islamic education at Madrasah Aliyah Fathur Rahman not only strengthens the philosophical foundation of education but also advances efficiency in educational management, encompassing leadership dynamics, decision-making processes, as well as improvements in pedagogical quality and the learning environment. The implications of these findings are expected to provide valuable guidance for policymakers, educational administrators, and relevant stakeholders in formulating further strategies to enhance the quality of Islamic education at Madrasah Aliyah Fathur Rahman Batu Sopang.

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