



LEARNING QUALITY MANAGEMENT SCIENCE IN ISLAMIC BASED ELEMENTARY EDUCATION

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Abstract

Students in Indonesia are facing a lag in science skills based on PISA and TIMSS rankings, this is a serious problem that still requires a sustainable solution. This condition is caused by science learning activities that have been carried out so far still revolving around memorizing materials and working on test questions in student worksheets. Students should have high-level thinking skills.

The study attempts to answer how the quality management of science learning in Islamic-

based elementary education institutions that have a double burden on subject matter. This study uses a qualitative approach with a multi-site design that has a similar background of the study object. The researcher determined SDIT Al Badr Ploso Kediri and MIN 2 Tulungagung which are considered to meet the qualifications of the required research objects. The conclusion of the study (1) planning the quality management of science learning begins with the preparation of a learning plan, preparation of learning devices by ensuring innovation and practice of science material. Schools through the principal's policy provide full support for the preparation of learning plans; (2) the implementation of quality management of science learning is carried out through the support of the principal for the smooth implementation of learning carried out through clear policies and definite funding support. In the implementation of science learning, teachers must often practice relevant science material. (3) evaluation of quality management of science learning is carried out through several stages such as evaluation at certain times by visiting classes directly, weekly evaluation, monthly evaluation and end of semester.

Keywords: Islamic Elementary Education, Learning Quality Management, Science Concepts.

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Introduction

The demand for quality education that is able to produce superior, innovative, collaborative human resources and have noble morals is a great hope for every parent in educational institutions. This condition is a form of demand for life in the 21st century which requires students to have a cultural literacy provision since elementary education (Latief et al., 2022). One of the basic literacies recommended by the World Economic Forum among the six literacies that students should have is science literacy in addition to five other literacies such as reading and writing, numeracy, digital, financial, cultural and citizenship literacy (Narut & Supradi, 2019).

The seriousness of the government in building an education system that is responsive to change certainly does not need to be doubted. Changes in the substance of the curriculum give real meaning to the world of education from the transition from teaching low-level thinking skills to learning that emphasizes high-level thinking skills (Karli, 2019). This condition is to answer the solution to improve the quality of education in Indonesia which is still lagging behind, consistently occupying the bottom ten in the fields of science, mathematics, and reading skills used by PISA (Programme for International Student Assessment) (I. Pratiwi, 2019). A similar study conducted by TIMSS targeting fourth grade elementary school students concluded that the achievement of science literacy was still low, the abilities of Indonesian students were below the international average (Hadi & Novaliyosi, 2019).

The low science and mathematics abilities of students in Indonesia are caused by the low quality of learning (Tilaar, 2002). Specifically, science learning in schools is considered to have



problems in its implementation (Sabda, 2006). Students say that science lessons are difficult, confusing, and almost all students agree that their perception of science subjects is influenced by the way teachers teach science (Aditomo & Felicia, 2018).

The very heavy task of making comprehensive changes to improve the quality of science learning lies on the shoulders of the principal. The principal must be able to implement leadership to the entire community of the institution in accordance with the procedures that have been set in the regulations, place the right resources, and have a well-structured and neat work mechanism (Zaini, 2016). With the hope of ensuring an increase in quality in educational institutions that is represented through the quality of learning that is guaranteed (Abadi et al., 2019).

Maintaining quality assurance in educational institutions has been clearly mandated in the education law, which clearly outlines the components of quality education at all levels of education from elementary to higher education. So it is not wrong if Sallis says that the quality of education is composed of three important components, namely input, process and output produced by educational institutions (Dione et al., 2021). The leadership function of the principal must be ensured to run optimally, the ability to lead and manage institutions effectively and efficiently is a requirement that must be met (Zaini, 2016). The principal has the responsibility to increase the effectiveness of performance so as to improve the quality of education (Putra et al., 2023). There is a very strong correlation between the role of the principal as a manager, supervisor, leader, innovator and educator in improving education quality management (Muflihah & Haqiqi, 2019).



Science learning activities in elementary schools should emphasize the process of observation, collection, and data collection (King, 2002), not just memorization and working on test questions that have traumatic implications. Science process skills are procedural, experimental and systematic skills as the basis for science literacy (Dogan & Kunt, 2016). These science process skills must be trained continuously, taught continuously (Udayanti & Riastini, 2017) the position of students in learning is not only a passive recipient of information but students can also independently search for facts that are related to the material (Zeidan & Jayosi, 2015).

Elementary school students have a very high dependence on the figure of the teacher. The better the teacher manages science learning, the more likely it is that the delivery of science material will be achieved perfectly (Rahman & Limatahu, 2020). The teacher's weak understanding of science material also contributes to the failure of science learning (Awang, 2015). Teachers are the key to directing students to be able to learn with nature through effective learning methods and strategies (King, 2002). So it is right if teachers must have ethics in order to achieve a conducive learning situation so that students are comfortable in learning (Aziz, 2022). Although these conditions are complicated by limited facilities and infrastructure, low innovation, low quality of management resources, learning routines only run as ritual obligations (Nikita et al., 2023).

So far, most elementary school classroom teachers have only relied on theoretical learning and worksheets to work on. In fact, learning theoretically only provides students with the basics of abstract problem solving, without understanding the actual concept of the material (S. N. Pratiwi



et al., 2019). Science learning should be more in the form of scientific work exercises than delivering scientific knowledge, just lectures (Chaille & Britain, 2003). Many teachers still have difficulty choosing the right learning strategy (Bahari, 2020). Elementary school science teachers should manage the science learning climate according to the character of the students, design scientific work practices (Carre & Ovens, 2006). However, there are still many teachers who lack understanding of the function of practical work which is useful for encouraging critical thinking skills (Sudargo & Asiah, 2010).

Students who receive science learning with a scientific approach have been shown to be superior in having better understanding of the material (Lumbantobing & Azzahra, 2020). The use of appropriate learning models will significantly improve high-level thinking skills in science learning at the elementary school level (Irmawati et al., 2018). Through appropriate science learning, students can understand the impact of science in everyday life to solve real-life problems in the 21st century (S. N. Pratiwi et al., 2019).

This study attempts to prove the existence of an empirical gap which is also the basis for guiding this research as a study conducted by Iqbal and Shayer in Pakistan stated that the cognitive abilities of private school students are higher than those of public schools because the facilities they have are better (Iqbal & Shayer, 2014). However, these findings contradict the Indonesian context conducted by the Ministry of Education and Culture which found that students in public schools have higher scores in the field of science competency than students in private schools (Ministry of Education and Culture and OECD, 2019).



Methods

Qualitative research is chosen based on considerations of the situation at the research location which is natural, runs as it is, without manipulation or experiments on research subjects (Nasution, 2011). Researchers determine the multi-site design in depth and interpret the management of science learning quality in Islamic-based elementary education institutions and the achievement of science competencies that students can achieve at the school (Bungin, 2015). Multi-site studies according to Bogdan and Biklen are one of the qualitative studies used to develop theories from several backgrounds that have similarities, with the hope of producing theories that can be derived in a broader context (Bungin, 2015). Qualitative research suggests researchers as key instruments in the data collection process (Moleong, 2016). The success of the research will be largely determined by the ability of the researcher to collect and give meaning to the data obtained (Yusuf, 2019). Data checking in this study was carried out with various research feasibility procedures including credibility, dependability, confirmability and transferability tests (Creswell & Creswell, 2018). In this study, the selection of primary data sources in the form of informants was selected purposively (Sugiyono, 2019), namely informants who have the qualifications of information sources according to the focus and have structural qualifications and authority to answer the material in the research focus.

Table 1 Research Informant Data

No	Focus	SDIT Al Badr Ploso Kediri	MIN 2 Tulungagung
1	Principal	Titik Rosidah, M.PdI (TR/SDIT/1)	H. Sutyono, M.Pd (S/MIN/1)
2	Teacher	1. Khoirul Anwar Homeroom teacher for grade 5 (KA/SDIT/3)	1. Tipuk Sulistyani Homeroom teacher for grade 4A (TS/MIN/3)





Results

This section presents the results of data obtained based on data mining through various channels, including the results of interviews, observations and documentation that have been carried out in both schools.

Planning of Science Learning Quality Management at SDIT Al Badr Ploso Kediri and MIN 2 Tulungagung

The ability to plan programs that will be implemented in the coming year each year will be proof of the principal's ability to determine the vision and mission in the long term. The principal ensures that the learning planning process runs well and in accordance with standard references, ensures that teachers will compile and prepare learning tools properly, ensures the syllabus, RPP, prepares learning resources, teaching materials and evaluation tools used by teachers. A complete explanation of the Principal and teachers at SDIT Al Badr Ploso Kediri and MIN 2 Tulungagung is presented as follows: “Perencanaan itu merupakan tahapan penting pada rangkaian proses pembelajaran, pada proses perencanaan maka sekolah akan memanfaatkan sumber daya secara maksimal untuk menunjang kegiatan yang akan dilaksanakan nantinya secara efektif untuk mencapai standart acuan. Dalam konteks pembelajaran maka biasanya kami akan menyusun segala komponen yang terkait dengan proses pembelajaran dengan mengacu pada aturan yang ditetapkan kementerian pendidikan. Perencanaan tersebut akan menjadi panduan bagi guru sebagai pendidik profesional yang memberikan pelayanan pembelajaran kepada peserta didik” (Responden TR/SDIT/1)

"Learning planning is a reference for teachers when conducting learning later, so the presentation must be considered carefully so that when the activity is carried out it can be



carried out according to the plan. The design is not just a formality that eliminates the obligation to make RPP or other learning tools. So that's where supervision from the principal will be important to do later" (Respondent S/MIN/1)

"The essence of learning planning is designing all the material to be delivered referring to basic competencies and the objectives to be achieved, selecting materials, learning resources, determining learning methods according to the objectives to be achieved so as to achieve maximum learning outcomes. In choosing a learning method, of course, teachers have considerations according to the conditions and objectives of learning, as well as the expected results in learning later. Only then will the learning method be determined based on complete information regarding the real conditions in learning" (Respondent DS/SDIT/2)

"A good lesson plan must be in accordance with the provisions that have been set, such as components of the formulation of learning objectives, selection of teaching materials, learning resources and learning media used, in addition to the description of the learning scenario is described in detail, up to the component of assessing student learning outcomes, all of these components must be completed in the preparation of the lesson plan" (Respondent DL/MIN/2)

Junior high schools that have subject teachers, while in elementary schools almost all subjects are held by class teachers so that quality learning management is needed to ensure that students receive educational services that are in accordance with standards fairly. The existence of these schedule components will make it easier for teachers to plan learning such as compiling syllabuses and also learning implementation plans appropriately according to references.

"Teachers at the elementary school level have the burden of teaching almost all subjects in class, only certain subjects such as religion and sports are taught by other teachers. So in preparing the RPP, we must think carefully about the availability of time and available teaching hours, whether the science material delivered in one semester can reach the target or not. Often the material is not delivered well, or is only delivered using the help of LKS. This is where it is important for teachers to think carefully about the learning design that will be carried out" (Respondent TR/SDIT/3)

"For planning, teachers prepare thematic lesson plans, before teaching, of course teachers must have designed and prepared materials and resources to support it, in the lesson plan, the core competencies and basic competencies that are the learning objectives are



described, for the lesson plan that is designed to integrate between science, social studies and Indonesian subjects, each subject will describe the KD and indicators to be achieved, the learning objectives, including describing the learning activities that will be carried out by the teacher" (Respondent S/MIN/1)

"Every teacher who will teach must make a lesson plan, it is a form of planning that will later be implemented by the teacher when entering the classroom, including in science subjects, from the lesson plan that is made, the learning objectives to be achieved, competency standards, time available, learning activities carried out, learning resources, learning media used, the form of evaluation that will later be used by the teacher, and a summary of the material that will later be taught to students, there it will be seen how the teacher is planning the learning" (Respondent TR/SDIT/1 and Respondent KA/SDIT/3)

"RPP yang baik itu harus sesuai dengan ketentuan yang telah ditetapkan, seperti komponen perumusan tujuan pembelajaran, pemilihan materi ajar, sumber belajar maupun media pembelajaran yang digunakan, selain itu uraian mengenai skenario pembelajaran diuraikan secara rinci, sampai dengan komponen penilaian hasil belajar peserta didik, keseluruhan komponen tersebut harus dilengkapi dalam penyusunan RPP tersebut" (Respondent TS/MIN/3)

Implementation of Science Learning Quality Management at SDIT Al Badr Ploso Kediri and MIN 2 Tulungagung

The implementation of learning quality management has an important role in the success of learning management. During the implementation of learning, the principal must ensure that teachers implement the learning plan that has been prepared, and ensure that the RPP that has been prepared is not just a formality. The existence of disturbances in the form of non-academic activities that often cause effective lesson hours to be cut, empty hours and students who are sent home early outside the schedule should be minimized so that students' rights are not fulfilled. "

"Support for teachers in the smooth implementation of learning must be done through policies or support in the form of funds, such as providing equipment to facilitate teachers in preparing learning devices. Schools also provide printer facilities or replace photocopying costs if needed for the procurement of RPP, syllabus and learning device needs. The point is that there is adequate support so that teachers can concentrate on providing learning materials to students "(Respondent TR/SDIT/1)

"To achieve the quality or quality control that we implement, we have implemented a madrasah management pattern based on MPM, namely a school-based pattern or MPS,



which is usually called, if the madrasah MPS. So we implement it from the beginning, from planning, compilation, then division of tasks, and evaluation, we implement it according to the existing mechanism there and we involve all parties from the preparation of the plan to accountability, so we must apply a pattern like that, not only from the principal who makes policies, we involve all parties so that later we can implement it together" (Respondent S/MIN/1)

"Success is indeed in the hands of teachers, but support for the success of learning is the task of the principal who should provide adequate support for the implementation of good learning. As a leader, the principal must be clear in giving instructions to teachers regarding plans and programs, especially related to targets for achieving science learning. The term is not only there are orders, but there is adequate support for financial resources that are also needed by teachers for the smooth running of the learning activities" (Respondent DS/SDIT/2)

"For the implementation of learning activities, each teacher has their own creations that can be innovated when delivering science materials, but the guidelines used remain on the learning plan that has been made, according to the theme discussed, the learning strategies used, the media used that have been listed. The implementation of learning can be grouped into three activities, namely introduction, core activities, and closing. In the core activities, it becomes an important activity because it can be seen whether the learning process is in accordance with the scenario that has been designed or not. Whether the designed scenario is able to involve the active participation of all students can be known. With this implementation, it can later be used as evaluation material for the next learning" (Respondent DL/MIN/2)

"Class teachers in elementary schools must be versatile, with a fairly high teaching load, of course it is a challenge to prepare various learning designs in one day for two to three different subjects. Often the design of science learning is designed to be very interesting with good learning media for example, but often constrained by technical matters such as time constraints, every week there are three times the science subjects, in one time it is two hours for 70 minutes, then the teacher must find a way to teach material that requires a long duration, because science when practiced definitely requires a longer duration than the available time portion. So for the practice, assignments are usually given so that in the available time the students can usually present the results of their work, that's one example" (Respondent KA/SDIT/3)

An important component in the implementation of quality learning is also inseparable from adequate funding support, talking about quality management without adequate funding support is the same as a vehicle without fuel. The principal as the manager of institutional operations at the



highest level must be able to be a role model, providing an example of transparency in managing finances, this is a prerequisite for teachers to have a high level of trust in the policies implemented.

“The point is that funding in the implementation of quality management is very important, coincidentally our school has two funding channels, so there are also two treasurers. There is a foundation treasurer and a boss treasurer. They are the ones who regulate the funding needs in this institution, because it is clear that when planning funding needs, when implementing quality management, it must be appropriate and implemented properly. Those directly related to science learning are usually related to the budget for the procurement of learning media, or if there are field visits to study certain materials” (Respondent KA/SDIT/3)

“So we convey any budgeting needs. Then fairness, this is also very important. Fairness is in order to adjust the responsibilities of each component. We must also convey it at the beginning of each budget year and the beginning of the school year. So every teacher, every employee, we give relatively the same tasks and responsibilities, none of which are too many and none of which are too few, well that's what I call fair earlier, with that, the responsibility of all components can be formed, they can respect each other, not feel jealous, not end up being alone like that.. the term is blocking, I always do that, and I am responsive, meaning if there is any input and so on, I will always follow up immediately and we will discuss it, not partially, not individually” (Respondent H/MIN/1)

“The concept is openness, talking about good quality certainly requires the support of adequate facilities and infrastructure. In education, it is not possible to talk about quality but with very limited conditions. Simply put, without adequate funds for the procurement of good learning media, it will be difficult. Our principal has indeed been good at outlining the program, since the planning, the funding has been clear, so the needs for one budget year have been measured, including in supporting science learning” (Respondent DS/SDIT/2)

“What about funding? Yes, in support. In general, we have allocated the funding support in the annual madrasah budget plan, RKAT and RKM madrasah. Yes, we have managed everything well, we have planned there to achieve these targets, the funding method has been budgeted through our RKTm, which we have prepared according to the mechanism, all madrasah residents know, so for learning targets, of course it is enough there, we have prepared it” (Respondent TS/MIN/3)

Based on the results of observations in learning activities carried out by class teachers who are conducting science learning also utilize the school environment as a place of learning. What is interesting in science subjects that have a direct relationship with natural phenomena, teachers can utilize available resources as part of the material that can be learned as done by teachers at SDIT



Al Badr Ploso Kediri who utilize learning resources and media in the surrounding nature as a natural laboratory to support teaching and learning activities.

"Yes, usually going outside the classroom, in the school environment, we can also observe certain plants and animals that are related to science material. The teacher is very good at explaining the material, I like being taken outside the classroom because I can breathe fresh air, if I study outside the room it's nice to be explained directly by the teacher" (Respondent IP/SDIT/4)

"Indeed, for certain science materials, sometimes the teacher takes us outside the classroom to study science materials. Usually to the rice fields near the school, we are told to take notes and observe after being given an introduction and explanation of what will be done and what targets the students must achieve. Well, that's basically how learning in nature is" (Respondent SH/MIN/4)

Science learning will train students' reasoning skills in scientific activities at a basic level

and also become a driver to open up insights logically to explain things that happen in the natural environment, students can explain concepts that occur around them in a scientific way making the learning process interesting.

"Actually, activities around it can be part of the process that can be observed so that it becomes part of the science material, of course in the material that is appropriate in the curriculum it can be related to what happens in the environment and everyday events. Children are happier if they do direct, easy, and fun practice. Teachers only facilitate the learning process, because often the children already know about the incident but do not understand that it can be explained scientifically, such as the existence of solar energy and its relationship to natural phenomena around them" (Respondent TR/SDIT/1)

"For experiments on science material, teachers must have prepared well all the needs for practice, and the available media can be sufficient so that all students can participate well. So that's where group learning is useful. Often, students who are still waiting for their turn are noisy and uncontrolled, that's what needs to be considered. then based on the results of the experiment, each group wrote a report on the results of the experiment, followed by presenting it in front of other groups" (Respondent S/MIN/1)

"I myself also utilize learning media through videos on YouTube, there is material about the solar system for example, it is very good for providing explanations to students about the condition of the solar system through videos. They prefer to watch videos than just see



pictures in books, this is what I have prepared the day before, for example I bring a laptop and use a projector so that the video can be seen clearly" (Respondent KA/SDIT/3)

As an Islamic educational institution, the discussion of science material cannot be separated from the values contained in the teachings of God so that as a Muslim, students have an understanding that all life in this world is connected to the owner and creator, namely Allah SWT.

"Science learning must contain religious values, the term is related, so teachers will relate directly or indirectly when delivering the material. For example, in the sub-theme material of energy sources, there is a discussion of solar energy, so it will be related to creation, for example related to the signs of night and day which are also often mentioned in the Qur'an. By teaching this relationship, students will understand well that the creation of the sun has a purpose and goal, as a Muslim who has reason, it is an obligation to utilize it well" (Respondent TR/SDIT/1)

"Our motivation is quite large because it is one of the learning materials of course. The main thing is, science is one of the mothers of knowledge. So there are two mothers of knowledge in general. Worldly sciences, religious sciences too. That's science and mathematics. When someone or our students are equipped with these two sciences, then in the future they will have a sufficient scientific foundation to be able to excel in other sciences, that is the main motivation" (Respondent S/MIN/1)

"Actually there is integration that is included in science learning, in the learning carried out by the teacher, religious values are inherent in the material both directly and indirectly. The goal is so that the scientific knowledge learned by students is not uprooted from the value of the oneness of the creator Allah SWT. This is what distinguishes science learning in Islamic-based schools. That scientific findings in the universe are signs of the greatness of Allah SWT, talking about science without a religious basis in it only describes holistic material knowledge that leads to separation from religious values, which is often used in education in the West" (Respondent KA/SDIT/3)

"In madrasahs, because this material is not always like character material, like religious learning material. Like we have to differentiate. If the others are like what We try to make a difference so that the character of the subject can be seen, it does provide its services according to the character of the subject. Not the same but we do have to combine it because science does not mean that only nature has a relationship with religious subjects so the basic verses that are related to science are always conveyed so that children can still realize, believe that nature is also part of the Oneness of Allah Rahman, Rahim, Gusti Allah they will not be separated from the Creator. The natural process is also from the process created by Allah SWT Which is our religion has taught from the beginning about the scientific process that exists in nature around us. The hope is that later children, even though they are smart in natural sciences, will not be separated from religious knowledge which is based



on and is indeed the most basic source of creation of nature from Allah SWT" (Respondent TS/MIN/3)

"Biasanya memang guru menjelaskan materi sains itu ada sisipan materi mengenai nilai ajaran Islam mengenai kebesaran Allah SWT. Saya senang sekali, sehingga bisa memahami dan mengaitkan materi sains itu ternyata dalam al Qur'an juga sudah dijelaskan dengan baik, cara guru mengajar juga menyenangkan sekali, serasa bermain namun mendapatkan ilmu-ilmu yang baik sekali" (Responden IP/SDIT/4)

Evaluation of Science Learning Quality Management at SDIT Al Badr Ploso Kediri and MIN

2 Tulungagung

Evaluation is carried out in stages according to the needs and agreements that have been set starting from weekly, monthly, and end of semester evaluations. The evaluations carried out are useful for knowing the achievements that have been made during the implementation of the program that has been passed. There are two forms of evaluation carried out in maintaining the quality of science learning carried out by the principal, first, evaluation of the learning process that has been carried out by the teacher carried out by the principal even since the planning of the learning program that was prepared by the teacher received direct supervision from the principal, this condition is considering that at the elementary school level there is no curriculum deputy so that the principal is the teacher's direct superior. Second, teacher evaluation of students to assess the achievement of learning outcomes that have been passed.

"In our school, sir, there is a kind of class supervision (of teachers, when teachers are teaching). But when there is supervision, if there is supervision, I will inform the teachers there later. What I usually supervise is the teaching method. Teaching methods. Well, Well, the message that I will supervise is usually, in terms of teaching, teaching methods. Teaching methods such as in lesson methods are also in assessment, assessments carried out by teachers to students" (Respondent TR/SDIT/1)

"We always carry out evaluations in stages. If academically, there is already an evaluation system like what has been done. In terms of management, we always evaluate activities



that are monthly, then semester, then annually. We always do it and we record it, then we look for solutions, then we carry it out in the coming year. If it is in the teacher area, technically we always conduct teacher evaluations through teacher performance assessments once every semester, so every two years or two performance assessments” (Respondent S/MIN/1)

“The principal usually visits the class during the learning process, sees the learning process, of course the hope is not to judge the teacher but rather to provide guidance if there may be something lacking and needs improvement. The principal usually also sees the condition of the class, what the students are like in participating in the learning activities, later if there is something lacking, improvements can be made” (Respondent DS/SDIT/2)

Evaluation of learning activities is also carried out in the form of weekly meetings, as an effort to build communication while evaluating activities for one week for all teachers. If there are problems or obstacles faced during the week, opinions or suggestions can be asked from other teachers. Evaluation of learning on the teacher's side carried out on students procedurally, the teacher will carry out the stages of evaluating the learning that has been carried out, of course there are several paths taken by teachers in conducting evaluations for science learning.

"In the assessment of learning outcomes as a form of evaluation carried out by teachers, children are usually not only assessed through written tests alone because the actual achievement of the entire learning process will not be seen, this is because it does not show the actual achievement of competence. Often the ability of scientific competence is not yet visible from the assessment model, so the assessment is also on the side of the process during learning which consists of knowledge assessment and attitude, in addition, the assessment is also carried out for experimental activities or joint projects, of course the assessment process is expected to provide opportunities for all students to achieve maximum results" (Respondent TR/SDIT/1)

"The science learning assessment model is quite diverse to measure the achievement of basic competencies of students, indeed teachers have the authority to know the extent of the success of the learning process that has been carried out, so an evaluation model is needed that is in accordance with the provisions, such as evaluation in the form of written tests, now the form of behavioral evaluation is also included, assessment through rubrics for reports on experimental results is also included" (Respondent DL/MIN/2)

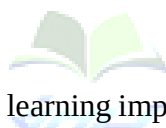
"Assessment of children is indeed important to measure the achievement of understanding of scientific concepts that have been learned. Usually teachers do not only assess from the ability to answer questions on the student's worksheet, there is an assessment from the



project work carried out by the students. This is also an important assessment for students, especially when students provide explanations about the projects they work on, it shows an understanding of the concept of the material being studied. So that children not only memorize science material but also understand the concept of the material itself "(Respondent KA/SDIT/3)

"The evaluation model is carried out in various forms as an effort to encourage students to show their full potential, not only cognitive abilities, but psychomotor and affective abilities are also assessed so that not only at the end of the delivery of the material but during the learning process the teacher also assesses attitudes. At the end of the delivery of the material, a written test is also given as usual in the form of multiple choice or fill-in-the-blank. For the results of the written test, the average is above the completion value of 74. If some have not reached it, only a few need to be remedied" (Respondent TS/MIN/3)

Implications of Quality Management of Science Learning at SDIT Al Badr Ploso Kediri and MIN 2 Tulungagung



The quality management of science learning implemented by Islamic elementary education institutions is an effort to improve students' mastery of science concepts with various serious efforts. Institutionally, the success of institutions in achieving academic achievements in the field of science has increased the school's reputation in the eyes of the community. The more prestigious the achievements of science that can be achieved, the higher the increase in quality "school branding" in the eyes of the wider community. This condition provides double benefits for Islamic-based elementary education institutions as a means of promotion as well as attracting new prospective students in the upcoming academic year.

"Teachers play an important role in science learning, considering that at the elementary school level, science teachers are the class teachers themselves, the demand to provide a quality learning process encourages teachers to develop teaching skills. This has an impact on how to guide children to learn science, so that in several science competitions that we participated in, we managed to achieve proud achievements, such as science competitions at the sub-district level, as well as district level competitions" (Respondent TR/SDIT/1)



“Yes, that was what I said earlier. Starting from the basic to the tiered stage, we always participate. For example, in Madrasah Tsanawiyah which holds Olympiad competitions, we participate and some of our activities have been able to achieve quite encouraging results. If it is official, from the Ministry of Religion, yes, that was KSM, starting from the madrasah level to the national level, it is carried out in stages. "Yes, we also apply it like what is in the mechanism, so we don't play by pointing fingers (to represent the competition), we carry out selection when we are going to take part in science competitions, both from the madrasah level, then sub-district level up to the district level, we follow it there" (Respondent S/MIN/1)

Discussion

Planning of Science Learning Quality Management at SDIT Al Badr Ploso Kediri and MIN

2 Tulungagung

The research findings found that the principal determines the policies and strategies implemented including on the structured curriculum side, namely the national curriculum and the integration of very strong Islamic values, the curriculum must include basic competency standards set by the government and integrate Islamic values (Misbah et al., 2024). Science learning taught by teachers must include science themes that are linked to the verses of the Qur'an and Hadith. In the planning phase, the principals of SDIT Al Badr Ploso Kediri and MIN 2 Tulungagung took a very strategic role in determining relevant policies to ensure that teachers had prepared a science learning implementation plan (RPP) that complied with the provisions. Of course, the principal can ensure that the preparation of the learning plan made by the teacher meets the expected standards and meets the quality qualifications set by the institution.

The important role of the principal in carrying out supervision from planning to implementation is also recorded in the findings of Febriansyah who also conducted a study on learning quality management in Integrated Islamic Elementary Schools (Febriansyah, 2017). This



is in line with the opinion of Barnawi and Arifin who stated that the important role that lies on the shoulders of the principal as an institutional manager determines the success of the institution in achieving the desired quality of learning and maintaining quality consistently in the long term, the principal manages learning quality management well by ensuring that teachers in carrying out the tasks assigned in learning are carried out according to the established reference standards (Barnawi & Arifin, 2021). Strategic management efforts carried out by institutions in improving quality through neatly arranged work programs both internally and externally starting from the right structural arrangement, the tasks assigned, so as to form a school culture by actively and sustainably involving stakeholders in determining the direction of the institution's goals (Habibulloh Habib et al., 2023).

The role of the principal is very important in supervising the planning prepared by teachers. Ensuring that the planning is appropriate and ensuring that teachers have adequate readiness to deliver science material. The planning process standard in the initial step is carried out by forming a syllabus review team, followed by RPP, then on teaching materials, evaluation tools carried out by each teacher with guidance from the principal (Arianto, 2019). Good learning planning is expected to be an advantage for educational institutions in determining the implementation of learning that will be carried out when teachers are in the classroom (Susila, 2023).

The principal's leadership is a determinant in the smooth running of the planning process, including adequate funding support. Planning without funding support will cause the program not to run optimally (Muhibbudin Muhibbudin et al., 2022). The quality of well-prepared planning



provides an early indication that the implementation of learning will be carried out seriously. This condition represents the professionalism of teachers who carry out the work program initiated by the principal which is the implementation of the tasks carried out (Suhardan, 2019). Teachers at school are expected to be able to educate students who have high competence and are ready to face challenges and are confident (Sulton & Maunah, 2022).

Implementation of Science Learning Quality Management at SDIT Al Badr Ploso Kediri and MIN 2 Tulungagung

Findings on the implementation of science learning quality management found that the smooth running of the science learning process must receive adequate full support from the principal as the leader of the institution. Principals who are able to apply leadership in educational institutions will quickly develop organizational capacity that has a direct impact on student achievement, even specifically the transformational leadership model can be directed to build organizational capacity to determine goals and support the development of teaching and learning practices carried out by teachers (Nasukah & Maunah, 2021).

The implementation of science learning carried out by the two schools, namely SDIT Al Badr Ploso and MIN 2 Tulungagung, has a common thread that is almost similar in the leadership of the principal who plays a major role in the smooth implementation of science learning. The principal's efforts in encouraging science learning quality management are in teaching supervision, ensuring the availability of supporting facilities for science learning activities, providing freedom in determining the right learning method. The principal has a clear and measurable policy to



achieve science learning goals. Educational institutions have a way of placing science materials according to the conditions of the institution and the availability of resources they have.

The educational institutions of SDIT Al Badr Ploso and MIN 2 Tulungagung have similar learning support through discussion forums even though they have different regulations and models in the practices carried out. Of course, by considering the abilities and capabilities of teachers according to their fields of expertise and commitment to loyalty to the institution so that they can be relied on (Haq & Maunah, 2023). The success of quality management lies in the ability of the principal to display visionary leadership, be actively involved directly, and have compact stakeholder participation with adequate support (Oktavani & Patimah, 2023).

Of course, the reality of the backwardness of Islamic educational institutions deserves to be evaluated in the future, the existence of limitations, deficiencies and limited access to all resources is a classic problem that has occurred for a long time, this is also in line with the findings of Zulaikah et al., who conducted a study on the theme of access and equal distribution of potential in Islamic educational institutions (Zulaikah et al., 2024). So if all access is open and available so that it can be utilized properly, it will be faster to implement consistent learning quality management.

Evaluation of Science Learning Quality Management at SDIT Al Badr Ploso Kediri and MIN 2 Tulungagung

The success of management in an organization can be known through the evaluation carried out so that the components that have been achieved can be detected or become obstacles in the implementation of the implementation. The ability of the principal to be adaptive in reading the



changes of the times so that the school is able to compete with other educational institutions is a must to maintain the continuity of the institution's operations (Tanzeh et al., 2021).

The role of the principal in evaluating science learning in both schools found several different styles, although in substance they have similar intentions, the evaluation step is a means for the principal to ensure that all science learning operations carried out by teachers are in accordance with the established learning design. An important factor in the success of developing learning quality management lies in the visionary leadership of the principal in determining policies (Oktavani & Patimah, 2023). A prophetic leadership style is a model that is appropriate and suitable to be implemented in leading an Islamic educational institution (Zulaikah et al., 2024). There are similarities displayed by both principals in displaying the leadership style of Islamic elementary education institutions, Nuha's findings concluded that the strategy to ensure quality is to develop programs together and be monitored together, improve school programs and ask for innovation and input (Nuha, 2022).

Determining the evaluation time span carried out by both institutions, SDIT Al Badr Ploso holds evaluations and coordination every Saturday after students go home. The school also holds evaluations at the end of each month, as a follow-up to the weekly evaluation. At the end of the school year, a comprehensive evaluation of the school's achievements in the predetermined plan is also carried out, including achievements in the field of science involving the foundation and the school committee. The Principal of MIN 2 Tulungagung said that if the evaluation is carried out with a gradual model, the evaluation is carried out in a span of every month, followed by evaluation every semester and at the end of each school year.

The ultimate goal of evaluating learning quality management is to provide the best service to maintain consistency in learning services, the highest hope is the achievement of student achievement in science competitions as proof that Islamic educational institutions are able to compete. This condition is in line with the findings that Islamic-based educational institutions are still far behind in achieving achievements in science and mathematics (Rohman et al., 2023).



Implications of Quality Management of Science Learning at SDIT Al Badr Ploso Kediri and MIN 2 Tulungagung

Educational institutions on the outskirts of a district are able to demonstrate good science learning achievements if managed with consistent learning quality management. Educational institutions that have good educational quality will create extraordinary charisma in the eyes of the wider community, especially in Islamic educational institutions (Putraningsih et al., 2023). The better the quality of the graduates produced, the higher the selling value and interest in entering the institution, and vice versa, the lower the quality produced will have an impact on low interest and absorption in entering educational institutions (Umar & Ismail, 2017). Achievements in the field of science are strong evidence that institutions are able to compete among educational institutions. This reputation has a positive impact in the eyes of the community, including prospective new students who intend to join to attend school. The implementation of proper quality management will encourage increased achievements that can be achieved by schools (Rohman et al., 2023).

Conclusion and Recommendation

Science learning quality management planning begins with the preparation of learning plans and learning tools needed by teachers by referring to the education calendar and lesson schedules and school work programs by involving all components in the school, the principal provides support in the form of instructions and adequate funding support, the preparation of learning plans must be ensured to be updated. Coordination and communication through joint



forums at the beginning and end of the semester to discuss the science learning process. Teachers must often practice relevant science materials. Analysis of resource needs to support learning activities so that they can run optimally by considering the burden of teacher teaching hours.

Evaluation of science learning quality management is carried out through several stages such as the principal making direct visits to science learning activities. The school also conducts evaluations of teaching and learning activities carried out in the span of every month, semester and at the end of each school year. The implications of science learning quality management in improving science learning include increasing school achievement in the field of science so as to improve the school's reputation, the understanding of class teachers in maintaining the quality of science learning is getting better through continuous innovation.

Suggestions that can be given to related parties include, it would be better for the principal to make relevant policies through support for very important science learning regulations and adequate funding for the smooth running of science learning activities. Class teachers should continuously improve their abilities and skills in teaching science material.



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