

Quality Map Of Madrasah Aliyah Graduates In Indonesia

Cucu Munawaroh,^{1*} Badrudin,² Undang Syaripudin³, Dadan Fitria Ramdhan⁴

^{1,2,3,4} UIN Sunan Gunung Djati Bandung, Indonesia

*Corresponding author: 3240220004@student.uinsgd.ac.id

Abstract: Graduate quality is a key indicator of the success of Madrasah Aliyah (Islamic Senior High School) education. However, the quality of Madrasah Aliyah graduates in Indonesia exhibits diverse characteristics due to differences in human resources, principal leadership, organizational culture, learning quality, and support from facilities and infrastructure. This study aims to map the quality of Madrasah Aliyah graduates in Indonesia based on various research findings from 2020–2025. The study used a qualitative approach with library research methods. Data were obtained from national and international journal articles relevant to the theme of Madrasah Aliyah graduate quality. Data analysis was conducted through data reduction, categorization, and thematic synthesis. The results indicate that the quality of Madrasah Aliyah graduates in Indonesia can be grouped into three categories: high quality, medium quality, and low quality. Factors influencing graduate quality include principal leadership, teacher competence, religious culture, learning quality, quality management, and educational financial support. These findings suggest that improving the quality of Madrasah Aliyah graduates requires a systemic and sustainable approach through strengthening madrasah governance and improving the quality of the learning process.

Keywords: Graduate quality; Madrasah Aliyah; Quality mapping; Islamic education; Quality management.

Introduction

Improving the quality of human resources is one of the primary goals of education. In the context of national development, education is not only directed at improving students' academic abilities, but also at developing the character, skills, and competencies necessary to face the increasingly dynamic developments in science and technology. Therefore, the quality of graduates is a crucial indicator in assessing the success of an educational institution because it reflects the quality of the overall educational process (Nusaibah et al., 2025).

As part of the national education system, Madrasah Aliyah (Islamic Senior High School) plays a strategic role in producing human resources who possess not only academic competence but also strong religious and moral character. The existence of Madrasah Aliyah is crucial because this institution integrates general education and Islamic education into a single, complementary system. With these characteristics, Madrasah Aliyah is expected to produce graduates who possess a balance between mastery of knowledge, skills, and religious values.

Graduate quality is essentially a reflection of the quality of output produced by an educational institution. Graduate quality is not solely measured by student graduation rates, but also encompasses academic and non-academic achievements, the ability to continue education to a higher level, the ability to adapt to changing times, and the character and competencies of graduates. Thus, graduate quality is the result of the interaction of various interrelated and influencing educational components.

Social change, technological advancement, and increasing global competition have driven a paradigm shift in education. Educational institutions today are required to produce graduates not only with cognitive skills but also with critical thinking, creativity, communication, collaboration, and strong character. This situation has led to increasingly complex demands for graduate quality, necessitating effective educational management oriented toward continuous quality improvement.

In recent years, attention to the quality of Madrasah Aliyah graduates has increased. This aligns with growing public demand for quality Islamic education capable of producing superior and competitive graduates. Madrasahs are no longer viewed as alternative educational institutions, but have evolved into educational institutions that make a significant contribution to the development of Indonesia's human resources. Therefore, improving the quality of graduates is one of the main focuses in developing madrasa education.

Despite this, the quality of Madrasah Aliyah graduates in Indonesia still exhibits varying levels of achievement. Some Madrasah Aliyah have been able to produce graduates with high academic and non-academic achievements, while others still face various challenges related to the quality of human resources, facilities and infrastructure, and suboptimal educational management. This situation indicates that the quality of Madrasah Aliyah graduates in Indonesia remains heterogeneous and is influenced by various factors that differ across educational institutions.

Various studies have shown that the leadership of madrasah principals is a factor influencing the improvement of graduate quality. Effective leadership can create a conducive organizational culture, enhance teacher professionalism, and optimize various educational resources, thus impacting graduate quality (Almuhtarom et al., 2024). Furthermore, teacher competence and the quality of the learning process are also important factors determining students' success in achieving expected competencies.

Research conducted by Khoirudin et al. (2024) shows that the madrasah principal's strategy of developing integrated academic and non-academic programs contributes to improving student achievement and graduate quality. Meanwhile, research by Nusaibah et al. (2025) found that the quality of Madrasah Aliyah graduates is influenced by the leadership of the madrasah principal, teacher competence, and educational funding support. Other research also shows that the implementation of Total Quality Management (TQM) can improve graduate quality through a culture of quality and continuous improvement in educational delivery (Sari et al., 2025).

These various research findings indicate that the quality of Madrasah Aliyah graduates is influenced by numerous interrelated factors, ranging from the leadership of the madrasah principal, teacher competence, learning quality, organizational culture, and the quality management system implemented by the educational institution. Thus, graduate quality cannot be understood solely as the end result of the learning process, but must be viewed as a consequence of the entire educational system within the madrasah.

Although numerous studies have been conducted on the quality of Madrasah Aliyah graduates, most research focuses on the influence of specific variables on graduate quality or is limited to a single educational institution. Consequently, the broader picture of Madrasah Aliyah graduate quality in Indonesia remains under-discussed in the literature. Yet, understanding the characteristics of graduate quality is crucial as a basis for formulating policies and strategies to improve the quality of Islamic education.

Therefore, a study is needed that can more comprehensively describe and analyze the quality of Madrasah Aliyah graduates in Indonesia based on various relevant literature sources. This mapping is expected to provide an overview of the characteristics of graduate quality, the indicators used to assess graduate quality, and the factors influencing Madrasah Aliyah graduate quality. Therefore, this study aims to describe the quality map of Madrasah Aliyah graduates in Indonesia through a literature review approach, utilizing various research results and literature published between 2020 and 2025.

Method

This study employed a qualitative approach with library research. Library research is a research method that utilizes various written sources as the primary source of research data to gain an in-depth understanding of a particular phenomenon or concept. This approach was chosen because the study aimed to describe and analyze the quality map of Madrasah Aliyah graduates in Indonesia based on various research findings and relevant literature, without directly collecting data in the field.

The data sources in this study consisted of secondary data obtained from various scientific publications in the form of national and international journal articles, books, and documents related to the quality of Madrasah Aliyah graduates. To obtain up-to-date and relevant literature for the research focus, the researcher prioritized articles published between 2020 and 2025. This literature was obtained through various scientific databases, including Google Scholar, Garuda, Crossref, Dimensions, and the Directory of Open Access Journals (DOAJ).

Data collection was conducted through documentation techniques by identifying, inventorying, and reviewing various literature related to the quality of Madrasah Aliyah graduates. The literature search was conducted using several keywords, such as "Madrasah Aliyah graduate quality," "graduate quality," "Islamic senior high school," "madrasah principal leadership," "teacher performance," "religious culture," and "learning quality." Furthermore, the various sources obtained were selected based on their level of relevance to the research focus, so that only literature related to the research theme was used as data sources.

In this study, data analysis was conducted descriptively and qualitatively using the Miles and Huberman interactive analysis model, which includes data reduction, data display, and conclusion drawing and verification. During the data reduction stage, the researcher selected and focused on information related to the concept of graduate quality, graduate quality indicators, and factors influencing the quality of Madrasah Aliyah graduates. The data presentation stage was carried out by organizing various findings from the literature into specific themes so that the relationships between concepts could be understood more systematically. Next, in the conclusion-drawing stage, researchers interpreted the analyzed information to obtain a comprehensive picture of the quality map of Madrasah Aliyah graduates in Indonesia.

To ensure data validity, this study employed source triangulation by comparing various sources of information obtained from a number of different literature sources. Furthermore, the researchers conducted repeated reviews of the various sources used to ensure consistency and alignment of interpretations with the research objectives. Thus, the research results are expected to provide an objective and comprehensive picture of the quality characteristics of Madrasah Aliyah graduates in Indonesia and the various factors that influence them.

Results and Discussion

1. The Concept of Graduate Quality from an Educational Perspective

Quality is a crucial concept in education because it serves as an indicator of an educational institution's

success in achieving its stated goals. Essentially, quality is not only defined as conformity to certain standards, but also as an institution's ability to meet the needs and expectations of stakeholders, including students, parents, the community, and the workforce. In the educational context, quality is a measure of the success of all educational components, including input, process, output, and outcome. Therefore, the quality of education cannot be separated from the quality of graduates produced by an educational institution (Syukri & Muammar, 2024).

From an educational management perspective, graduate quality reflects the quality of output produced through the educational process provided by an institution. Graduate quality is measured not only by student graduation rates but also by graduates' ability to master established competencies, their ability to continue their education to a higher level, and their ability to adapt to developments in science, technology, and societal needs. Thus, the quality of graduates is one indicator that shows the effectiveness of the implementation of education as a whole (Rojak, 2022).

The concept of graduate quality has evolved along with changes in the educational paradigm. Initially, graduate quality was primarily measured based on academic achievement, demonstrated through exam scores and student graduation rates. However, developments in 21st-century education have shifted this paradigm toward a more comprehensive approach. Graduate quality is no longer solely oriented toward cognitive aspects, but also encompasses affective and psychomotor aspects, critical thinking skills, creativity, communication, collaboration, and problem-solving skills necessary for social life. Thus, graduate quality represents students' ability to develop their full potential in a balanced manner.

Within the framework of the national education system, graduate quality is closely related to the achievement of Graduate Competency Standards (SKL), a component of the National Education Standards. Graduate Competency Standards are the minimum criteria for the integration of attitudes, knowledge, and skills that students must possess upon completion of a level of education. Therefore, graduate quality can be understood as the level of competency attainment by students in accordance with established standards. The higher the level of competency attainment, the higher the quality of graduates produced by educational institutions.

From a Total Quality Management (TQM) perspective, graduate quality is viewed as the result of a continuous improvement process involving all components of the educational organization. Graduate quality is not solely determined by the quality of the students as input, but is also influenced by leadership quality, teacher competence, organizational culture, management systems, and the effectiveness of the learning process within the educational institution. Therefore, improving graduate quality must be carried out systematically and continuously by strengthening a culture of quality within the educational organization (Sari et al., 2025).

From an Islamic education perspective, graduate quality is measured not only by academic success but also by success in shaping students' character and personality in accordance with Islamic values. Islamic education essentially aims to shape individuals who possess a balance between intellectual intelligence, emotional intelligence, social intelligence, and spiritual intelligence. Therefore, the quality of graduates in Islamic education is not only demonstrated by mastery of science and technology, but also reflected in the quality of morals, integrity, and the ability to practice Islamic values in daily life.

In the context of Madrasah Aliyah (Islamic Senior High School), graduate quality has more complex characteristics because this institution integrates general education and religious education into a single educational system. Madrasah Aliyah graduates are expected to possess not only academic competencies that enable them to compete in higher education and the workplace, but also strong religious, moral, and social character. Therefore, the quality of Madrasah Aliyah graduates reflects the educational institution's success in developing a balance between the intellectual, spiritual, and social aspects of students.

Various studies have shown that the quality of Madrasah Aliyah graduates is influenced by numerous interrelated factors, such as the leadership of the principal, teacher competence, learning quality, religious culture, and the quality management system implemented by the educational institution (Almuhtarom et al., 2024; Nusaibah et al., 2025). This demonstrates that graduate quality cannot be understood as the result of a single factor, but rather is a consequence of the entire, integrated educational process. Therefore, Madrasah Aliyah graduate quality must be viewed as a system involving various educational components that mutually support each other in producing quality graduates.

Based on these various perspectives, graduate quality can be understood as the level of success of an educational institution in producing students with academic competence, skills, character, and the ability to adapt in accordance with the demands of modern developments and the values embraced by society. In the context of Madrasah Aliyah, graduate quality reflects not only academic achievement but also the educational institution's success in producing graduates who are superior, possess noble character, and are competitive at the national and global levels.

2. Madrasah Aliyah Graduate Quality Indicators

Graduate quality is one of the main indicators in assessing the success of education delivery. In the national education system, graduate quality is closely related to the achievement of Graduate Competency Standards (SKL), which encompass the dimensions of attitude, knowledge, and skills. These three dimensions form a

complementary unit in shaping students who possess academic ability, good character, and the skills necessary for social life. Therefore, graduate quality is measured not only by student graduation rates but also by their ability to develop various competencies needed now and in the future.

In the context of Madrasah Aliyah, graduate quality encompasses broader characteristics than academic achievement alone. As an educational institution that integrates general knowledge with Islamic values, Madrasah Aliyah is expected to produce graduates who excel intellectually while possessing strong religious and moral character. Therefore, Madrasah Aliyah graduate quality indicators encompass not only cognitive aspects but also affective and psychomotor aspects, which are reflected in students' behavior and abilities in daily life.

One of the most frequently used indicators to measure graduate quality is academic achievement. Academic achievement reflects students' mastery of the various competencies established in the curriculum. This achievement can be seen through learning evaluation results, critical thinking skills, problem-solving skills, and student success in participating in various academic competitions. Good academic achievement indicates that the learning process at the Madrasah (Islamic Senior High School) has been effective, producing graduates with adequate intellectual abilities (Rojak, 2022).

In addition to academic achievement, non-academic achievement is also an important indicator in assessing graduate quality. Non-academic achievement reflects students' ability to develop their talents, interests, and potential through various extracurricular activities and competitions in sports, the arts, organizations, and other fields. Student success in non-academic areas demonstrates that education is not solely oriented toward mastering knowledge but also toward developing students' overall potential. Therefore, non-academic achievement is an integral part of the quality of graduates produced by Madrasah Aliyah (Islamic Senior High School).

Another characteristic of Madrasah Aliyah (Islamic Senior High School) is the development of religious character and noble morals in students. From an Islamic educational perspective, educational success is measured not only by intellectual intelligence but also by students' ability to internalize Islamic values in their daily lives. This religious character is reflected through spiritual attitudes, integrity, discipline, responsibility, honesty, and the ability to establish good social relationships with their surroundings. Therefore, the development of noble morals is one of the main indicators in determining the quality of Madrasah Aliyah graduates.

The ability of graduates to continue their education to a higher level is also an important indicator in measuring graduate quality. The high number of graduates accepted into higher education institutions, both public and Islamic religious institutions, demonstrates that graduates possess the competitiveness and competencies needed for higher education. Furthermore, the ability of graduates to adapt to the world of work and social life is also a key factor in the success of educational institutions in producing quality human resources.

With the development of 21st-century education, graduate quality indicators are no longer limited to mere knowledge acquisition and character development. Madrasah Aliyah graduates are also required to possess various 21st-century skills, including critical thinking, creativity, communication, and collaboration. These four skills are essential to facing global challenges and increasingly rapid technological developments. Therefore, the success of Madrasah Aliyah in equipping students with 21st-century skills is a crucial indicator in determining the quality of its graduates.

From an educational quality management perspective, graduate quality is ultimately measured by their ability to benefit society and contribute to national development. Quality graduates are not only capable of achieving academic success but also of self-development, adapting to change, and becoming individuals with integrity and social responsibility. Therefore, the quality of Madrasah Aliyah graduates is the result of the integration of academic achievement, non-academic achievements, religious character, the ability to continue their education, and mastery of 21st-century skills, which collectively shape the profile of superior and competitive graduates.

Based on these various studies, the quality indicators of Madrasah Aliyah graduates can be grouped into five main aspects, namely: (1) academic achievement, (2) non-academic achievement, (3) religious character and noble morals, (4) ability to continue education and adapt in society, and (5) mastery of 21st century skills. These five indicators show that the quality of Madrasah Aliyah graduates is not only oriented towards cognitive achievement, but also towards the formation of humans who have a balance between intellectual, spiritual, social intelligence, and the skills needed to face the development of the times.

Table 1. Quality Indicators of Madrasah Aliyah Graduates

Aspects	Indicator
Academic achievement	Mastery of competencies, learning outcomes, critical thinking skills
Non-academic achievement	chievements in sports, arts, organizations, and extracurricular activities
Religious character	Noble morals, integrity, discipline, and spiritual attitudes
Ability to continue education	Competitiveness for university entrance and social adaptation

Aspects	Indicator
21st-century skills	Critical thinking, creativity, communication, and collaboration

3. Quality Map of Madrasah Aliyah Graduates in Indonesia

The quality of graduates is a crucial indicator in assessing the success of educational provision at an institution. In the Madrasah Aliyah context, graduate quality is determined not only by students' academic abilities, but also by their religious character, social skills, non-academic achievements, and their ability to continue their education and adapt to community needs. Therefore, the quality of Madrasah Aliyah graduates essentially indicates the level of success of an educational institution in developing students' potential in a holistic and balanced manner.

Based on various research results published between 2020 and 2025, it is clear that the quality of Madrasah Aliyah graduates in Indonesia varies. These differences in graduate quality are influenced by various factors, such as the leadership quality of madrasah principals, teacher competency, learning quality, religious culture, quality management systems, and the availability of educational facilities and infrastructure (Almuhtarom et al., 2024; Nusaibah et al., 2025; Sari et al., 2025). This condition shows that the quality of Madrasah Aliyah graduates in Indonesia is still heterogeneous and does not yet show an even level of quality across all educational units.

Conceptually, the quality map of Madrasah Aliyah graduates in Indonesia can be grouped into three main categories: high quality, medium quality, and low quality. This classification is not intended to provide an absolute assessment of a particular madrasah, but rather to provide an overview of the general characteristics of graduate quality based on various findings in the relevant literature.

High Graduate Quality

The high quality category is demonstrated by Madrasah Aliyah that are able to produce graduates with superior academic and non-academic achievements, possess a strong religious character, and are highly competitive in continuing their education at university. Graduates in this category generally possess critical thinking skills, good communication skills, and the ability to adapt to developments in science and technology.

Madrasahs that produce high-quality graduates are generally characterized by effective principal leadership, professional teacher competence, a strong culture of quality, and innovative, student-centered learning processes. Furthermore, a conducive religious environment and community support are also factors that strengthen the quality of their graduates. Research by Khoirudin et al. (2024) demonstrated that the madrasah principal's strategy of developing integrated academic and non-academic programs can improve student achievement and produce more competitive graduates.

High quality indicators can be seen in the high student achievement in various academic and non-academic competitions, the increasing number of graduates accepted into reputable universities, and the development of students with noble character and strong social awareness. These conditions demonstrate that the madrasah's success in producing quality graduates is the result of the effective synergy of various educational components.

Average Graduate Quality

The average quality category is the most common condition found in Islamic Senior High Schools (Madrasah Aliyah) in Indonesia. In this category, madrasahs have generally been able to meet National Education Standards and produce graduates with adequate basic competencies. However, the quality of the graduates produced has not yet fully demonstrated significant excellence, both in academic and non-academic aspects.

Madrasahs with average quality generally have a fairly good educational management system, but still face various limitations in developing learning innovations, improving teacher competency, and strengthening a culture of quality. Student achievement in this category tends to be moderate and has not demonstrated high competitiveness at the national or international level.

Nevertheless, madrasahs in this category have significant potential to develop into higher-quality educational institutions if supported by effective leadership, improving teacher quality, and strengthening internal quality assurance systems. In other words, the average quality category indicates that the quality of graduates has met minimum standards, but still requires various efforts for continuous improvement and development.

Low Graduate Quality

The low-quality category is characterized by low student academic achievement, limited non-academic achievements, and suboptimal character and skill development. Graduates in this category generally have relatively low competitiveness and face various difficulties in continuing their education and adapting to the ever-changing demands of society.

The low quality of graduates is generally related to various obstacles faced by madrasahs, such as limited facilities and infrastructure, low teacher competency, a weak culture of quality, and suboptimal leadership by madrasah principals. Furthermore, limited financial support and low community participation can also impact the quality of education delivery, thus impacting the quality of graduates produced (Nusaibah et al., 2025).

This situation demonstrates that improving graduate quality cannot be achieved solely through improvements in one specific aspect, but requires a comprehensive and sustainable approach. Strengthening the leadership of madrasah principals, enhancing teacher professionalism, developing a religious culture, and optimizing the learning process are crucial steps in improving the quality of Madrasah Aliyah graduates.

Overall, the quality map of Madrasah Aliyah graduates in Indonesia shows a diversity of quality influenced by various internal and external factors of the educational institution. These differences indicate that the quality of Madrasah Aliyah graduates is not yet fully equitable across all regions and educational units. Therefore, systematic quality improvement efforts are needed through strengthening leadership, enhancing teacher competency, developing a culture of quality, and implementing quality learning so that Madrasah Aliyah can produce graduates who are superior, possess noble character, and are competitive at the national and global levels.

Table 2. Quality Map of Madrasah Aliyah Graduates in Indonesia

Quality Category	Main Characteristics
High Quality	High academic and non-academic achievement, strong religious character, a developing quality culture, and high competitiveness
Medium Quality	Meets national standards, achieves fairly well, and learning innovations are still developing
Low Quality	Relatively low achievement, teacher competency is not evenly distributed, facilities are limited, and the quality culture is not yet optimal

4. Factors Influencing the Quality of Madrasah Aliyah Graduates

Graduate quality is the end result of the entire educational process within an educational institution. Therefore, graduate quality cannot be viewed as the result of a single factor, but rather the result of the interaction of various interrelated and mutually influencing educational components. In the Madrasah Aliyah context, various studies have shown that graduate quality is influenced by the leadership of the madrasah principal, teacher competence and performance, learning quality, religious culture, quality management, and educational financial support (Nusaibah et al., 2025). These factors collectively form an educational ecosystem that determines the madrasah's success in producing quality graduates.

Madrasah Principal Leadership

Madrasah principal leadership is a strategic factor in improving graduate quality. Madrasah principals function not only as administrators but also as leaders, managers, supervisors, innovators, and motivators in mobilizing all educational resources within the institution. Effective leadership will create a shared vision, build a positive organizational culture, and encourage improvements in the quality of the learning process, thereby impacting graduate quality.

Research by Almuhtarom et al. (2024) shows that a madrasah principal's strategy oriented toward quality improvement can positively influence graduate quality. Madrasah principals with strong leadership skills tend to be more capable of developing a culture of quality, enhancing teacher professionalism, and building collaborations with various parties to support the implementation of education. Therefore, madrasah principal leadership is a key factor in producing superior and competitive graduates.

Teacher Competence and Performance

Teachers are the primary component that directly interacts with students in the learning process. Therefore, the quality of graduates is greatly influenced by their competence and performance. Professional teachers possess strong pedagogical, professional, social, and personal skills, enabling them to conduct effective learning and provide meaningful learning experiences for students.

High teacher competence will foster an active, creative, and innovative learning environment. Conversely, low teacher competence can result in poor learning quality, which ultimately impacts the quality of graduates. Therefore, improving teacher competence and professionalism is a crucial strategy for improving the quality of Madrasah Aliyah graduates.

Learning Quality

The quality of the learning process is a crucial factor in determining students' success in achieving expected competencies. Effective learning is characterized by active student engagement, the use of innovative learning methods, the utilization of educational technology, and the creation of a conducive learning environment. Through a quality learning process, students not only acquire knowledge but also develop critical thinking skills, creativity, communication skills, and the ability to collaborate.

Rojak (2022) explains that good learning management contributes to improving the quality of Madrasah Aliyah graduates. This demonstrates that the success of educational institutions in producing quality graduates is largely determined by the quality of the learning process taking place in the classroom. Therefore, efforts to

improve graduate quality must begin with continuous improvement in the quality of learning.

Religious Culture

As an Islamic educational institution, Madrasah Aliyah (Islamic senior high school) possesses unique characteristics, developing students who excel not only academically but also possess strong religious character. The religious culture that develops within the madrasah environment is a key factor influencing the development of students' personalities and morals. This culture is reflected in various religious activities, the instillation of Islamic values, and social relationships based on mutual respect and upholding moral values.

A strong religious culture fosters the development of students who are disciplined, responsible, honest, and possess a strong social conscience. Therefore, the success of Madrasah Aliyah in instilling religious values in students is an important indicator of producing quality graduates with noble character.

Educational Quality Management

Improving graduate quality is inseparable from the quality management system implemented by educational institutions. Quality management emphasizes the importance of continuous improvement through the involvement of all organizational components in achieving educational goals. The application of Total Quality Management (TQM) principles enables madrasahs to build a quality culture oriented towards stakeholder satisfaction and the continuous improvement of educational services.

Research by Sari et al. (2025) shows that the implementation of Total Quality Management in the management of Madrasah Aliyah (Islamic Senior High School) can improve the quality of the educational process and impact the quality of graduates. Therefore, an effective quality management system is a crucial factor in producing competitive graduates who are able to meet the needs of society.

Education Financing

Another factor influencing graduate quality is education financing. The availability of adequate financial resources enables madrasahs to provide better facilities and infrastructure, improve teacher competency, and support the implementation of various educational programs oriented towards quality improvement. Conversely, limited funding can be a barrier to developing the quality of educational services.

Nusaibah et al. (2025) found that educational financing support has a positive relationship with improving the quality of Madrasah Aliyah graduates. This indicates that the success of educational institutions in producing quality graduates is also influenced by the institution's ability to manage and utilize its resources effectively and efficiently.

Overall, the quality of Madrasah Aliyah graduates is influenced by various factors that interact with each other and form an integrated system. Madrasah principal leadership, teacher competency, learning quality, religious culture, quality management, and education financing do not work in isolation but mutually support each other in creating an educational environment conducive to student development. Therefore, improving graduate quality requires a comprehensive and sustainable approach through integrated strengthening of all educational components.

Table 3. Factors Influencing the Quality of Madrasah Aliyah Graduates

Factors	Contributing to Graduate Quality
Madrasah Principal Leadership	Directing the vision, quality culture, and organizational effectiveness
Teacher Competence and Performance	Improving the quality of the learning process
Learning Quality	Developing students' academic competencies and skills
Religious Culture	Shaping students' character and morals
Quality Management	Encouraging continuous improvement in education delivery
Education Financing	Supporting the availability of educational resources and programs

5. Implications of Improving Graduate Quality for the Development of Islamic Education

Improving the quality of Madrasah Aliyah graduates not only impacts the quality of educational institutions' output but also has broader implications for the development of Islamic education in Indonesia. High-quality graduates reflect the success of educational institutions in producing human resources with academic competence, religious character, and the ability to adapt to changing times. Therefore, efforts to improve graduate quality should be viewed as part of a strategy to continuously strengthen Islamic education in facing increasingly complex global challenges.

One important implication of improving graduate quality is the increased competitiveness of Madrasah Aliyah within the national education system. For decades, madrasahs have often been viewed as alternative

educational institutions with a greater emphasis on religious aspects. However, developments in Islamic education have demonstrated that Madrasah Aliyah has significant potential to produce graduates who excel not only in religious fields but also possess academic abilities and skills that can compete with graduates from other secondary schools. Therefore, improving graduate quality will strengthen Madrasah Aliyah's position as an educational institution capable of making a significant contribution to the development of Indonesian human resources.

Another implication is the increasing importance of strengthening the leadership of madrasah principals as agents of change within educational organizations. Madrasah principals play a strategic role in building a culture of quality, developing educational innovation, and optimizing the institution's various resources. Therefore, improving leadership quality is a crucial prerequisite for realizing effective madrasahs focused on improving graduate quality. Visionary and transformational leadership will foster a conducive educational environment for optimal development of students' potential.

Furthermore, improving graduate quality also implies the need to strengthen teacher professionalism. Teachers are a factor that directly determines the quality of the learning process and the success of students in achieving expected competencies. Therefore, the development of teachers' pedagogical, professional, social, and personal competencies needs to be carried out continuously through various education and training programs. Strengthening teacher capacity will impact the quality of learning, which ultimately contributes to improving the quality of Madrasah Aliyah graduates.

In the context of Islamic education, improving graduate quality also emphasizes the importance of strengthening religious culture as a distinctive characteristic of Madrasah Aliyah (Islamic Senior High School). Islamic education aims not only to produce intellectually intelligent students but also to shape individuals with noble morals, integrity, and social responsibility. Therefore, developing a religious culture through the instillation of Islamic values, character building, and the creation of a conducive educational environment is a crucial strategy for producing quality graduates with Islamic personalities.

The increasingly rapid development of science and technology also implies the need for a transformation of the learning process in Madrasah Aliyah. Learning is no longer solely oriented toward mastery of material but must be directed toward the development of 21st-century skills, including critical thinking, creativity, communication, and collaboration. Therefore, improving graduate quality requires learning innovations that are more adaptive to the changes and needs of global society.

Improving the quality of Madrasah Aliyah graduates also has implications for strengthening the education quality assurance system. A quality culture oriented towards continuous improvement needs to be part of the governance of educational institutions. The implementation of an effective internal quality assurance system will assist madrasahs in conducting ongoing evaluation and improvement across all aspects of education delivery. This way, graduate quality can be continuously improved in line with the demands of societal developments and the needs of stakeholders.

Furthermore, improving the quality of Madrasah Aliyah graduates has implications for the development of Islamic education policies at the national level. Results from the graduate quality mapping indicate that there are still gaps in quality between madrasahs, which require attention from the government and various stakeholders. Therefore, policies are needed that focus on equitable distribution of educational quality, improving human resource competencies, strengthening facilities and infrastructure, and optimizing quality management systems in Islamic educational institutions. Policies based on continuous quality improvement will have a positive impact on improving the quality of Islamic education overall.

Based on these various implications, it is understandable that improving the quality of Madrasah Aliyah graduates is not solely the responsibility of each educational institution, but is a shared responsibility of all educational stakeholders. Synergy between the government, madrasah principals, teachers, students, parents, and the community is a crucial factor in achieving quality Islamic education. Therefore, improving the quality of Madrasah Aliyah graduates will ultimately contribute to the realization of superior, adaptive Islamic education, capable of producing a generation with noble character and competitiveness at the national and global levels.

Table 4. Implications of Improving Graduate Quality for the Development of Islamic Education

Development Aspects	Implications
Madrasah Institutions	Improving the competitiveness and image of Islamic Senior High Schools
Leadership	Encouraging transformational leadership from madrasah principals
Teacher Professionalism	Improving teacher quality and competence
Religious Culture	Strengthening students' character and morals
Learning	Developing 21st-century skills
Quality Assurance	Encouraging a culture of quality and continuous improvement
Education Policy	Supporting equity and improving the quality of Islamic education

Conclusion

Based on the results of the literature review, it can be concluded that the quality of Madrasah Aliyah graduates represents the success of educational institutions in producing students who possess a balance between academic competence, religious character, social skills, and the ability to adapt to changing times. From an educational perspective, graduate quality is measured not only by cognitive achievement but also by affective and psychomotor dimensions, reflected in critical thinking, creativity, communication, collaboration, and the development of noble character. Therefore, the quality of Madrasah Aliyah graduates is the result of the integration of mastery of knowledge and internalization of Islamic values, which are the main characteristics of madrasah education.

The results of the study indicate that indicators of Madrasah Aliyah graduate quality include academic achievement, non-academic achievement, religious character, ability to continue education, and mastery of 21st-century skills. Based on the various literature analyzed, the quality map of Madrasah Aliyah graduates in Indonesia can be conceptually grouped into three categories: high quality, medium quality, and low quality. These differences in graduate quality indicate that the quality of Madrasah Aliyah education in Indonesia remains heterogeneous and is influenced by various interrelated factors, including principal leadership, teacher competence and performance, learning quality, religious culture, quality management systems, and educational funding support. Therefore, improving graduate quality requires a comprehensive approach through integrated and sustainable strengthening of all educational components.

The findings of this study imply that improving the quality of Madrasah Aliyah graduates not only contributes to improving the quality of educational institutions' output but also has strategic significance for the development of Islamic education in Indonesia. Strengthening principal leadership, enhancing teacher professionalism, developing a religious culture, innovating learning, and implementing an effective quality assurance system are crucial steps in realizing superior and competitive Madrasah Aliyah. Therefore, synergy is needed between the government, educational institutions, educators, parents, and the community to support efforts to continuously improve graduate quality so that Madrasah Aliyah can produce a generation with noble character, adaptable to change, and competitiveness at the national and global levels.

This study has limitations due to its use of a library research approach, resulting in the study results being based on interpretations of various relevant literature sources without involving direct empirical data from the field. Furthermore, the study's focus is still limited to conceptual mapping of the quality of Madrasah Aliyah graduates based on scientific publications published in the 2020–2025 period. Therefore, further research is recommended to use an empirical approach through surveys, case studies, or mixed methods involving Madrasah Aliyah in various regions of Indonesia. This follow-up research is expected to produce a more comprehensive picture of the condition of Madrasah Aliyah graduate quality and strengthen the conceptual findings generated in this study.

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