



Management Of Madrasah Research Development In Enhancing Educational Competitiveness

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Abstract: This study aims to analyze the management of research madrasah program development in enhancing educational competitiveness at MTsN 2 Kota Kediri and MTsN 1 Kota Malang. The study employed a descriptive qualitative approach with a multi-site study design. Data were collected through in-depth interviews, participatory observation, and documentation, and were analyzed using the Miles and Huberman model, which includes data reduction, data display, and conclusion drawing. The findings reveal that the development of the research madrasah program was carried out through four main stages: planning, implementation, evaluation, and institutionalization. During the planning stage, the madrasahs mapped the potential of teachers and students and established a research development team. The implementation stage was conducted through strengthening facilities, project-based learning, and the cultivation of a research culture. The evaluation stage was continuously carried out through monitoring, supervision, and program achievement assessment. Meanwhile, the institutionalization stage was realized through scientific publication, strengthening external networks, and developing a research-based academic culture. The study found that the research madrasah program was able to improve learning quality, academic achievement, scientific culture, and public trust in madrasahs. Therefore, the research madrasah program has become an effective strategy for sustainably enhancing the educational competitiveness of madrasahs.

Keywords: Research Madrasah, Educational Competitiveness, Educational Management, Educational Innovation, Madrasah Development

INTRODUCTION

Educational competitiveness is one of the key indicators in determining the quality of a nation's human resources. In the era of globalization and rapid technological advancement, educational institutions are required not only to produce academically excellent graduates but also individuals who are creative, innovative, critical, and adaptive to societal changes. Education with strong competitiveness is capable of producing generations who are prepared to face global challenges, master scientific and technological developments, and solve social problems constructively (Trilling & Fadel, 2009; Wagner, 2008). Therefore, improving the quality and competitiveness of education has become a strategic necessity for all educational institutions, including Islamic educational institutions such as madrasahs (Mulyasana, 2012).



The reality indicates that the quality of education in Indonesia continues to face complex challenges. Various international reports demonstrate that Indonesia's educational competitiveness still lags behind several developed and developing countries in Asia (Worldtop20.Org, 2023). The relatively low quality of education is influenced by several factors, including unequal learning quality, limited research and innovation culture, inadequate human resources, and disparities in educational access between urban and disadvantaged regions (Sujianto et al., 2024; Al Faruqi & Nurwahidah, 2025). These conditions indicate that the Indonesian education system still requires continuous reform and innovation to compete globally (Rizvi & Lingard, 2010).

One of the aspects considered weak within the Indonesian educational system is the development of a research culture in schools and madrasahs. In fact, research culture plays a significant role in fostering students' critical, creative, and innovative thinking skills (Umar, 2017). Through research activities, students are not only encouraged to understand theories but are also trained to identify problems, seek solutions, and produce scientific works beneficial to society (Kolb, 1984; Brew & Saunders, 2020). Therefore, research-based education has become an important strategy for improving educational quality and competitiveness (Hinton & Fischer, 2020).

As an integral part of the national education system, madrasahs hold a strategic position in producing intellectually, spiritually, and socially competent generations (Azra, 2012). In recent years, the Ministry of Religious Affairs has continuously promoted the improvement of madrasah quality through various innovative policies, one of which is the National Research Madrasah Program (Promadrina) ("Minister of Religious Affairs Launches the National Research Madrasah Program," 2013). This program was designed to establish a scientific culture within madrasahs by integrating research activities into the learning process (Decree of the Director General of Islamic Education No. 6989 of 2019). Through this initiative, madrasahs are expected to create academic environments that encourage teachers and students to actively engage in research, produce innovative works, and participate in scientific competitions (Hidayati, 2019).

The research madrasah program functions not only as a medium for academic development but also as a strategy for strengthening institutional competitiveness. Madrasahs that successfully



cultivate a research culture tend to gain a positive image within society because they are perceived as capable of producing outstanding, creative, and high-achieving graduates (Harsoyo & Dian, 2023). In addition, successful research programs can strengthen learning quality, improve teacher professionalism, and expand partnerships with universities, research institutions, and industry sectors (Etzkowitz & Leydesdorff, 2000; Bryson, 2018).

Within this context, MTsN 2 Kota Kediri and MTsN 1 Kota Malang are two madrasahs that are worthy of further investigation. Both institutions are officially recognized as national research madrasahs and have successfully developed sustainable research innovation programs (Decree of the Director General of Islamic Education No. 5767 of 2020). Although both institutions are located within the same province, they possess different characteristics and strategies in implementing research madrasah programs according to their respective institutional cultures and needs.

MTsN 2 Kota Kediri is recognized as a madrasah that has successfully integrated a research curriculum into its learning process through intramural programs, extracurricular activities, and intensive scientific writing guidance (“History of MTsN 2 Kota Kediri,” 2017). The institution has established a Research-Based Madrasah Program Development Team (PMBR), which actively plans, implements, and evaluates research programs systematically. Through this program, students are guided to produce innovative works capable of competing at regional and national levels (Rahman et al., 2024).

The successful implementation of the research program at MTsN 2 Kota Kediri is reflected in numerous achievements gained by students in scientific competitions. These achievements include awards in student innovation competitions, robotics contests, scientific writing competitions, and national-level research events. Such accomplishments have strengthened the madrasah’s image as an educational institution excelling in research and innovation. Consequently, public interest in enrolling children at MTsN 2 Kota Kediri has increased significantly.

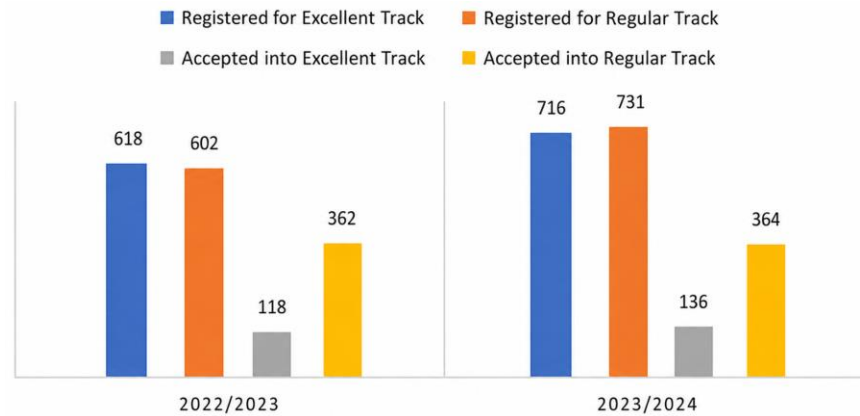


Figure 1. Student Admission Statistics at MTsN 2 Kota Kediri for the 2022/2023 and 2023/2024 Academic Years

The increase in student enrollment indicates that the research madrasah program has enhanced public trust in the quality of madrasah education. Furthermore, the research culture developed within the institution has become an important attraction for prospective students and parents.

Similarly, MTsN 1 Kota Malang has also demonstrated its existence as a leading madrasah in research and technology. This success is supported by adequate facilities and infrastructure, including research laboratories, science laboratories, and computer laboratories (“History of Establishment,” 2024). In addition, the madrasah has established the Matsanewa Research Madrasah Development Team, which actively assists students in developing scientific research projects (Nujulah, 2022).

Students of MTsN 1 Kota Malang have also consistently achieved awards in regional and national scientific competitions. Achievements in scientific writing contests, student research competitions, digital innovation events, and young researcher competitions demonstrate the successful implementation of the institution’s research program. These accomplishments have strengthened the madrasah’s image as an institution capable of optimally developing academic culture and innovation.

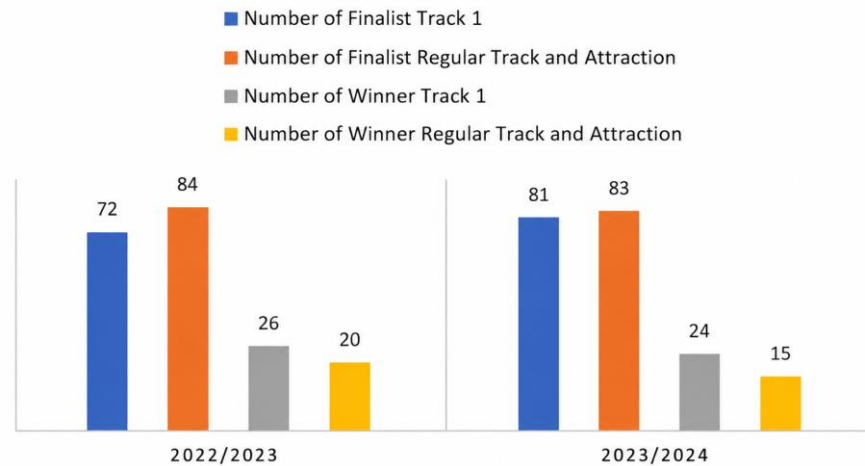


Figure 2. Student Admission Statistics at MTsN 1 Kota Malang for the 2022/2023 and 2023/2024 Academic Years

The increasing number of applicants at MTsN 1 Kota Malang indicates that the research madrasah program positively contributes to institutional competitiveness. Society increasingly recognizes that madrasahs are not only excellent in Islamic education but are also capable of producing academically and scientifically competitive graduates.

Based on these phenomena, this study is important to investigate how the management of research madrasah program development is implemented in enhancing educational competitiveness at MTsN 2 Kota Kediri and MTsN 1 Kota Malang. The study focuses on the planning, implementation, evaluation, and institutionalization of research madrasah programs as strategies for strengthening educational quality.

Accordingly, the research questions are formulated as follows: (1) how is the planning of research madrasah program development implemented in enhancing educational competitiveness at MTsN 2 Kota Kediri and MTsN 1 Kota Malang; (2) how is the implementation of research madrasah programs conducted in enhancing educational competitiveness; (3) how is the evaluation of research madrasah programs carried out in enhancing educational competitiveness; and (4) how is the institutionalization of research madrasah programs implemented in enhancing educational competitiveness at both institutions?. In line with these research questions, this study aims to formulate a model for planning, implementation, evaluation, and institutionalization of research madrasah programs that is adaptive, innovative, and sustainable in enhancing educational competitiveness at MTsN 2 Kota Kediri and MTsN 1 Kota Malang.



METHOD

Research Approach and Type

This study employed a descriptive qualitative approach using a multi-site study design. A qualitative approach was selected to gain an in-depth understanding of the process of developing research innovation programs in madrasahs within their natural settings (Moleong, 2016; Sugiyono, 2008). The multi-site design enabled the researcher to identify similarities, differences, and patterns in the management of research madrasah programs at two institutions, namely MTsN 2 Kediri City and MTsN 1 Malang City (Hasiara, 2018).

Researcher's Presence

In qualitative research, the researcher functions as the primary instrument or *human instrument* (Moleong, 2016). Therefore, the researcher was directly involved in the field through observation, interviews, and document collection activities. The researcher's presence was conducted openly while maintaining research ethics, including protecting participants' confidentiality, ensuring informed participation, and maintaining objectivity throughout the research process (Spradley, 1997; Salim & Syahrur, 2012).

Research Sites

The research was conducted at MTsN 2 Kediri City and MTsN 1 Malang City. These two madrasahs were selected because they are recognized as leading research-based madrasahs at the junior secondary level and have demonstrated excellence in developing research innovation programs. In addition, both institutions have achieved various academic accomplishments and research-based innovations that contribute to strengthening educational competitiveness ("Sejarah MTsN 2 Kota Kediri," 2017; "Sejarah Pendirian," 2024).

Data Sources

The study utilized both primary and secondary data sources. Primary data were obtained through interviews and observations involving madrasah principals, teachers, research program coordinators, alumni, and students. Secondary data were collected from institutional documents such as curricula, program guidelines, activity reports, and archives of students' achievements (Rahmadi, 2011; Syaodih, 2013).



Data Collection Techniques

Data collection techniques included:

1. **In-depth interviews**, conducted to obtain comprehensive information regarding the development and implementation of research madrasah programs.
2. **Participatory observation**, conducted to observe learning activities and the implementation of research programs directly within the madrasah environment.
3. **Documentation**, conducted to collect supporting data in the form of archives, reports, photographs, and institutional documents relevant to the study (Spradley, 1997; Moleong, 2016).

Data Analysis Techniques

Data analysis employed the interactive model developed by Miles and Huberman (1994), which consists of four stages: data collection, data reduction, data display, and conclusion drawing/verification. This analytical model allows data to be interpreted systematically and continuously throughout the research process.

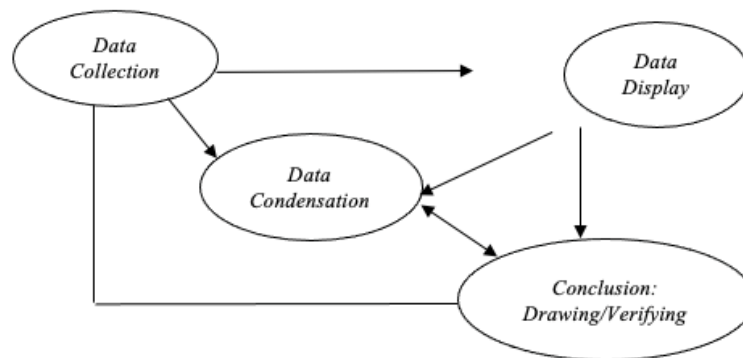


Figure 3. Qualitative Data Analysis Model According to Miles and Huberman

The analysis was conducted through both single-site analysis and cross-site analysis. Single-site analysis was used to understand the implementation of research programs in each madrasah individually, while cross-site analysis was employed to compare findings between the two research locations in order to identify broader conceptual patterns (Miles & Huberman, 1994; Hasiara, 2018).

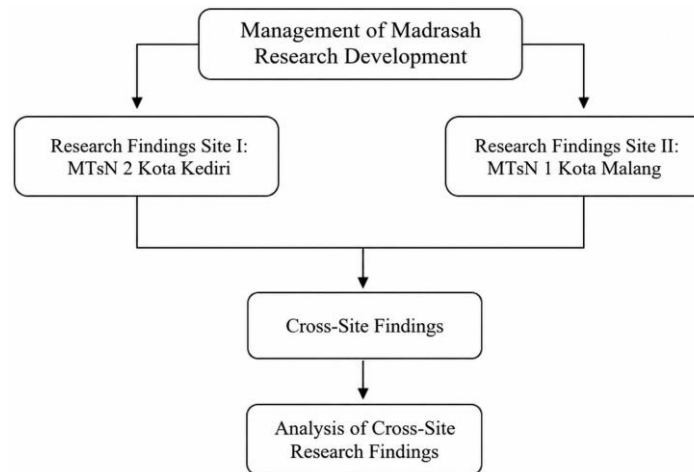


Figure 4. Cross-Site Research Analysis

Trustworthiness of Data

The trustworthiness of the data was examined using four criteria proposed in qualitative research methodology:

1. **Credibility**, established through source triangulation and technique triangulation.
2. **Transferability**, achieved through detailed and comprehensive descriptions of the research context.
3. **Dependability**, ensured through auditing the entire research process.
4. **Confirmability**, conducted through member checking with participants and consultation with academic supervisors (Moleong, 2016; Sugiyono, 2008).

Research Procedures

The research procedures consisted of three stages:

1. **Pre-field stage**, including proposal preparation, literature review, and obtaining research permits.
2. **Field implementation stage**, including data collection through interviews, observations, and documentation.
3. **Report-writing stage**, including data analysis, preparation of research findings, and revision of the final research report (Rahmadi, 2011; Salim & Syahrums, 2012).

RESULTS AND DISCUSSION



Planning For The Development Of Research Madrasah Programs In Enhancing Madrasah Competitiveness

The planning of research madrasah development programs at MTsN 2 Kediri City and MTsN 1 Malang City demonstrates a strong institutional orientation toward research-based educational innovation. The development process was not carried out instantly; rather, it was conducted systematically, participatively, and sustainably. The development model implemented in both madrasahs reflects the educational transformation framework proposed by Michael Fullan, which includes the stages of initiation, implementation, and institutionalization (Fullan, 2007). In this context, the planning stage serves as a crucial foundation for building a scientific culture within the madrasah environment.

The initial stage of planning began with exploring ideas related to research innovation through mapping the potential of teachers and students. Both madrasahs applied a participatory top-down approach, a planning model that involves active participation from madrasah stakeholders while remaining under the visionary leadership of the madrasah principal. The principal acted not only as a facilitator but also as a catalyst for change in developing a research culture. This approach aligns with the concept of transformational leadership, which positions educational leaders not merely as decision-makers but also as agents of empowerment within the school community (Leithwood & Jantzi, 2004; Danim & Suparno, 2009).

The mapping process was conducted by identifying the interests, talents, and competencies of both teachers and students in the field of research. The results of this mapping then became the basis for determining the direction of the research program development according to the characteristics and needs of each madrasah. This strategy reflects the concept of context-responsive school development, where educational policies are designed based on local conditions and institutional potential (Hopkins, 2001). Consequently, the research programs developed were not standardized uniformly but were adjusted to the academic culture and educational needs of students in each institution.

To support the success of the program, both madrasahs established Research Madrasah Development Teams consisting of teachers with adequate research competencies. These teams played strategic roles in designing, developing, and overseeing the implementation of research



programs within the madrasah environment. The existence of these development teams reflects the application of instructional leadership and distributed leadership concepts, where program development does not solely depend on the principal but also actively involves teachers as agents of change in fostering a sustainable research culture (Hallinger, 2005; Spillane, 2005).

Team collaboration became an important factor in supporting the success of the research madrasah program. The development teams functioned as connectors between institutional policies and program implementation in classrooms and extracurricular activities. Through effective collaboration, each team member could share responsibilities, experiences, and competencies in mentoring students in scientific research activities. This finding supports the perspective of organizational teamwork theory, which emphasizes that collaboration is an essential element in achieving organizational goals effectively (Fauzan, 2023).

After the process of idea exploration, the next stage involved evaluating and determining the research programs to be developed. The research programs in both madrasahs were designed based on local needs and students' characteristics. Research development was directed toward social, technological, and environmental themes relevant to students' daily lives and the surrounding community challenges. This strategy indicates the integration of curriculum and local context, as explained in the concept of Contextual Teaching and Learning (CTL), where learning activities are connected to real-life situations experienced by students (Johnson, 2002).

The planning of research programs also demonstrates the implementation of School-Based Management (SBM), where madrasahs possess the authority to develop programs according to their vision, institutional needs, and local potential (Suryosubroto, 2004). In this regard, the principals together with the Research Madrasah Development Teams formulated various innovative programs, including intraclass research learning, Youth Scientific Writing extracurricular activities (*Karya Ilmiah Remaja/KIR*), research camps, and intensive mentoring programs for students with strong research potential.

These programs were systematically designed to establish a sustainable scientific culture within the madrasah environment. Furthermore, the development of research programs was also directed toward strengthening institutional competitiveness through academic and non-academic achievements. This strategy is consistent with Porter's theory of competitive advantage, which



emphasizes that organizational strategies play a significant role in creating sustainable competitiveness (Porter, 1994).

The next stage in planning involved formulating achievement indicators for the program. The determination of indicators aimed to measure the extent to which the research madrasah program could achieve its predetermined objectives. The primary target of the research program was to establish a research culture and develop students' critical thinking abilities. Through the habituation of scientific thinking, students were encouraged to become sensitive to various social and environmental issues around them and to provide research-based solutions to these problems.

The achievement indicators covered several aspects, namely input, process, output, and outcome indicators. Input indicators included the resources used in the program, such as research mentors, laboratory facilities, and financial support. Process indicators involved the implementation of research activities, training sessions, and student mentoring programs. Output indicators were measured through the number of scientific papers produced, participation in competitions, and students' achievements. Meanwhile, outcome indicators were related to the long-term impact of the program on improving the quality and competitiveness of the madrasah.

The final stage in planning was decision-making regarding the designed programs. At this stage, the Research Madrasah Development Teams presented the mapping results, needs analyses, and program designs to the madrasah principals to obtain policy approval and institutional support. The decision-making process was conducted collectively by considering resource readiness, students' needs, and program sustainability.

The outcomes of the initiation stage were then implemented through various integrated research development programs in intraclass, extracurricular, and special mentoring activities. Intraclass programs were implemented through research-based local content subjects, while extracurricular programs were realized through KIR activities and research camps. In addition, the madrasahs also provided special mentoring programs for students preparing to participate in scientific competitions at regional and national levels.

Based on the findings of this study, it can be understood that the planning of research madrasah development programs at MTsN 2 Kediri City and MTsN 1 Malang City was not merely oriented toward program implementation. Rather, it was directed toward establishing a sustainable



scientific culture and enhancing institutional competitiveness. The success of the planning process was supported by transformational leadership from the madrasah principals, effective teamwork, the integration of curricula with local contexts, and the existence of clear and measurable achievement indicators

Implementation Of Research Madrasah Development Programs In Enhancing Madrasah Competitiveness

The implementation of the research madrasah development program at MTsN 2 Kediri City and MTsN 1 Malang City was carried out systematically through the establishment of implementation structures, the utilization of supporting facilities, and the alignment of vision among all members of the madrasah community. This implementation stage became a crucial component in ensuring that the research program planning could be executed effectively and sustainably. The implementation process focused not only on students' research activities but also on strengthening scientific culture and enhancing the overall competitiveness of the madrasah.

The first stage of implementation involved the formation of a research program implementation team. Both madrasahs established special task units responsible for managing and developing the research madrasah program. The teams consisted of teachers who possessed competencies in research and scientific writing supervision. The establishment of these implementation teams reflected a professional and structured management system, enabling every research activity to be conducted in accordance with the predetermined objectives.

The existence of the implementation team is consistent with the perspective of Wheelen and Hunger, who argue that the success of program implementation is highly influenced by the presence of individuals directly responsible for executing organizational innovations (Wheelen & Hunger, 2012). The research development team functioned as the primary driving force in coordinating research activities, mentoring students, organizing programs, and evaluating the implementation of research activities within the madrasah.

In addition to establishing implementation teams, the program was also implemented through the optimal utilization of supporting instruments and facilities. MTsN 2 Kediri City and MTsN 1 Malang City utilized various facilities such as science laboratories, computer laboratories, libraries, internet access, and research and robotics equipment as part of the madrasah research



ecosystem. The utilization of these facilities demonstrates that the development of research programs relies not only on curriculum aspects but is also supported by adequate infrastructure readiness.

The utilization of supporting facilities is in line with the resource-based view theory, which emphasizes the importance of optimizing internal resources as the primary organizational strength in creating competitive advantage (Barney, 1991). In the context of research madrasahs, educational facilities function not only as learning tools but also as creative spaces that support students in developing ideas, innovations, and research skills.

Furthermore, the implementation process also reflects the application of the theory of affordances proposed by Shaw and Bransford, which explains that an environment rich in facilities expands opportunities for action and creativity among users (Shaw & Bransford, 2017). Through the availability of laboratories, technological devices, and research facilities, students are provided with greater opportunities to conduct scientific exploration and produce innovative works relevant to societal needs.

The next stage of implementation was carried out through vision alignment and the strengthening of academic culture within the madrasah environment. In practice, teachers, research development teams, and students formed active learning communities through youth scientific writing activities, research mentoring, scientific discussions, and research assistance programs. These activities reflect the implementation of the concept of communities of practice, which refers to the formation of learning communities that facilitate the sharing of knowledge, experiences, and continuous professional development (Wenger, 1999).

These learning communities functioned not only as media for knowledge transfer but also as instruments for building a scientific culture within the madrasah. Through intensive interaction between teachers and students, the research learning process became more participatory, collaborative, and contextual. This condition supports the creation of a learning organization as proposed by Senge, in which all organizational members actively participate in collective learning processes and institutional development (Senge, 1990).

To ensure program sustainability, both madrasahs also conducted regular monitoring and evaluation of research activities. Monitoring was carried out to ensure that all activities aligned



with the vision and objectives of the research madrasah program. In addition, evaluation processes were used to identify obstacles arising during program implementation so that continuous improvements could be undertaken.

The monitoring and evaluation processes indicate the implementation of adaptive school management, a model of educational management emphasizing the importance of adjusting programs according to actual needs and conditions in the field. Through this approach, the research madrasah program could develop dynamically in accordance with the challenges and needs of both students and institutions.

Based on the research findings, the implementation of the research madrasah development program at MTsN 2 Kediri City and MTsN 1 Malang City demonstrates that program success is strongly influenced by the existence of a clear implementation structure, adequate facility support, and the active involvement of all members of the madrasah community in building a scientific culture. Well-organized program implementation not only improves the quality of research-based learning but also strengthens madrasah competitiveness through academic achievements, student innovation, and increased public trust in Islamic educational institutions.

Evaluation Of Research Madrasah Development Programs In Enhancing Madrasah Competitiveness

The evaluation of the research madrasah development program at MTsN 2 Kediri City and MTsN 1 Malang City was conducted systematically and continuously to ensure that all programs operated in accordance with the vision and objectives of the madrasah. The evaluation process focused not only on students' academic achievements but also on the effectiveness of program management, the quality of research-based learning, the strengthening of scientific culture, and its contribution to enhancing madrasah competitiveness.

The initial stage of evaluation was carried out through the establishment of evaluation indicators used as the basis for measuring the success of the research madrasah program. Both madrasahs implemented regular monitoring and supervision of research activities in both intracurricular and extracurricular programs. Monitoring was conducted by the principals, vice principals for academic affairs, Research Madrasah Development Teams, and supervising teachers



to ensure that program implementation remained aligned with the predetermined vision and targets.

This evaluation process reflects the practice of collaborative inquiry, namely the collective involvement of madrasah administrators, teachers, and students in reflecting upon the ongoing research learning process. Such an approach allows each stakeholder to provide input, identify obstacles, and seek solutions collectively. This is consistent with Senge's concept of the learning organization, which emphasizes the importance of collective learning in improving the quality of educational institutions (Senge, 1990).

Program evaluation was also conducted by assessing the effectiveness of research learning methods implemented by teachers and tutors. The development team evaluated students' abilities to understand research materials, critical thinking skills, and their experiences throughout the research program. In addition, evaluation was directed toward the quality of students' scientific works, participation rates in scientific competitions, and achievements obtained at regional and national levels.

To support evaluation effectiveness, both madrasahs implemented a monitoring system based on data and documentation. Each program achievement was recorded and analyzed periodically as a basis for decision-making in future program development. This approach reflects the concept of evidence-based education, namely educational management grounded in data and concrete evidence of program success (Slavin, 2002). Outstanding student and teacher research works were also encouraged to be published in scientific journals or registered for Intellectual Property Rights (IPR) as a form of appreciation and reinforcement of academic culture.

The evaluation of the research madrasah program emphasized not only academic aspects but also the integration of character values and spirituality into research activities. Religious activities and character development remained integral components of the research development process within the madrasah. This approach reflects the concept of integrative character education proposed by Lickona, which integrates intellectual, emotional, and spiritual intelligence within the learning process (Lickona, 1992).

The success of the research madrasah program is also evident in the existence of a structured and sustainable program management system. The research program was developed through the



integration of curricula based on local characteristics, the strengthening of project-based learning, and the establishment of Research Madrasah Development Teams actively involved in mentoring, coaching, and publishing students' scientific works. This approach strengthened the position of the madrasah as an educational institution possessing competitive advantages, as conceptualized by Porter (1994).

In addition to internal strengthening, program evaluation also included the development of external networks with various research institutions and universities. MTsN 2 Kediri City and MTsN 1 Malang City established collaborations with research communities, scientific mentors, and higher education institutions to support students' research activities. These partnerships were not incidental but were developed continuously through coaching, training, research mentoring, and scientific publication programs.

This approach is aligned with the theory of relational capital, which emphasizes the importance of networks, trust, and reputation in building organizational competitiveness (Edvinsson & Malone, 1997). Collaboration with external institutions enabled the madrasahs to broaden access to knowledge, improve the quality of research supervision, and strengthen institutional reputation among the public and educational stakeholders.

The success of the research madrasah program can also be observed through the increasing quality and quantity of students' scientific works. Each year, the number of scientific projects and student achievements in research competitions continued to increase. This demonstrates that the research program successfully fostered students' academic performance and scientific literacy in a tangible manner. From the perspective of intellectual capital, students' scientific works became knowledge assets capable of enhancing the value and reputation of educational institutions.

Despite these achievements, the study also identified several inhibiting factors in the implementation of the research madrasah program. These obstacles included the limited availability of supporting research facilities, such as dedicated research rooms, greenhouses, compost houses, applied laboratories, and specialized laboratory assistants. In addition, budget limitations, the insufficient number of competent research supervisors, and uneven research interest among members of the madrasah community also became challenges in program development.



Nevertheless, both madrasahs demonstrated a strong commitment to continuously developing a research culture. Through systematic evaluation, strengthening of human resources, development of external networks, and adaptive management support, the research madrasah program has proven effective in enhancing the competitiveness of madrasah education. The program not only produced academic achievements and innovative works but also shaped the identity of the madrasah as an Islamic educational institution that is excellent, adaptive, and oriented toward the development of research-based knowledge.

Institutionalization Of Research Madrasah Development Programs In Enhancing Madrasah Competitiveness

The institutionalization or continuation stage represents the concrete commitment of the madrasah to maintaining the sustainability of the research program as part of its institutional culture and identity. At this stage, MTsN 2 Kediri City and MTsN 1 Malang City not only sustain the implementation of research programs but also expand their impact on improving educational quality and competitiveness. One of the strategic initiatives undertaken is facilitating the publication of students' scientific works in academic journals and encouraging the registration of Intellectual Property Rights (IPR) for students' innovative works.

This strategy demonstrates an orientation toward knowledge dissemination and knowledge capitalization, in which research outcomes are treated as knowledge assets with academic and social value. Through scientific publications and IPR registration, the madrasahs not only enhance students' academic visibility but also strengthen institutional reputation at regional and national levels. This approach differs from most research development practices in other madrasahs, which still focus primarily on competition achievements without encouraging publication and legal recognition of students' research outputs.

The research madrasah program also reflects the implementation of the student agency concept by providing students with opportunities to actively determine their learning directions, construct scientific arguments, and present their research findings publicly. Students are no longer positioned as passive recipients of learning but as knowledge producers with critical, creative, and innovative thinking abilities. This condition fosters the formation of scientific identity while strengthening students' intrinsic motivation to continue producing scholarly work.



Institutionally, program institutionalization is carried out through the continuous strengthening of organizational capacity within the madrasah. The madrasahs develop academic culture through project-based learning, the strengthening of external networks, teacher capacity enhancement, and the establishment of structured research mentoring systems. This approach aligns with the capacity building model, which emphasizes the importance of developing institutional structures, cultures, and practices to support the sustainability of educational innovation.

Research activities are developed through both intracurricular and extracurricular pathways. In the intracurricular pathway, research-based learning is implemented through local content subjects oriented toward research activities. Meanwhile, in the extracurricular pathway, programs are conducted through Youth Scientific Writing Clubs (KIR), Research Camps, and scientific competition mentoring. This strategy is consistent with experiential learning theory, which emphasizes the importance of direct experience in the learning process, allowing students to learn through actual research practice.

Overall, the research program development strategy demonstrates the integration of transformational leadership, resource management, and the formation of participatory learning communities. Michael Fullan's stages of educational change, consisting of initiation, implementation, and continuation, are implemented in an integrated manner, resulting in a sustainable and adaptive research development system capable of responding to contemporary educational challenges.

To support the sustainability and quality of the research program, the madrasahs implement various systematic improvement efforts. One of these efforts includes organizing workshops on the development of research-based teaching modules involving academics and practitioners from outside the madrasah. These activities form part of continuous professional development for teachers to ensure that the learning strategies applied remain academically relevant and practically applicable within the context of research-based learning.

The madrasahs also strengthen learning quality through a project-based learning approach in both intracurricular and extracurricular activities. Project-based learning encourages students to



become active subjects in the knowledge creation process, ensuring that learning is not merely theory-oriented but also focused on practical and experiential research activities.

The success of the research madrasah program is also supported by adequate facilities, infrastructure, and funding. Both madrasahs utilize science laboratories, computer laboratories, libraries, internet access, robotics equipment, and environmentally friendly waste-processing tools to support students' research activities. In addition, the madrasahs allocate special budgets from DIPA funds to finance research implementation and student participation in various scientific competitions.

These efforts demonstrate institutional commitment to building a planned and sustainable research ecosystem. This condition contrasts with findings from several previous studies indicating that many madrasahs have not seriously allocated resources and budgets to systematically support innovation and research development.

In addition to internal strengthening, the madrasahs also establish collaborative networks with various external institutions such as BRIN, Rumah KIR Indonesia, LP2M UIN Malang, Universitas Negeri Malang, and other research communities. These collaborations are implemented through research methodology training, mentoring, research assistance, scientific publication, and mentoring programs involving academics and alumni.

This approach reflects the concepts of networked learning and triple helix, which emphasize the importance of synergy among educational institutions, universities, research communities, and society in creating sustainable educational innovation. Alumni involvement as research mentors further strengthens students' learning processes through a socio-cultural learning approach, in which real-life experiences become relevant and inspirational learning resources.

To maintain program sustainability, the madrasahs implement regular monitoring systems and follow-up evaluations of research achievements. Outstanding student works are encouraged to be published or granted IPR protection as a form of appreciation and motivation. This approach reflects the concept of outcome-based education, which emphasizes the importance of tangible outcomes resulting from the learning process.

All of these strategies ultimately contribute to the formation of a scientific culture integrated with Islamic values. Programs such as Islamic Camp and Arabic Camp become important



components in building students' religious character alongside their academic abilities. This approach reflects the concept of integrative education, which combines intellectual, spiritual, and moral dimensions in a balanced manner.

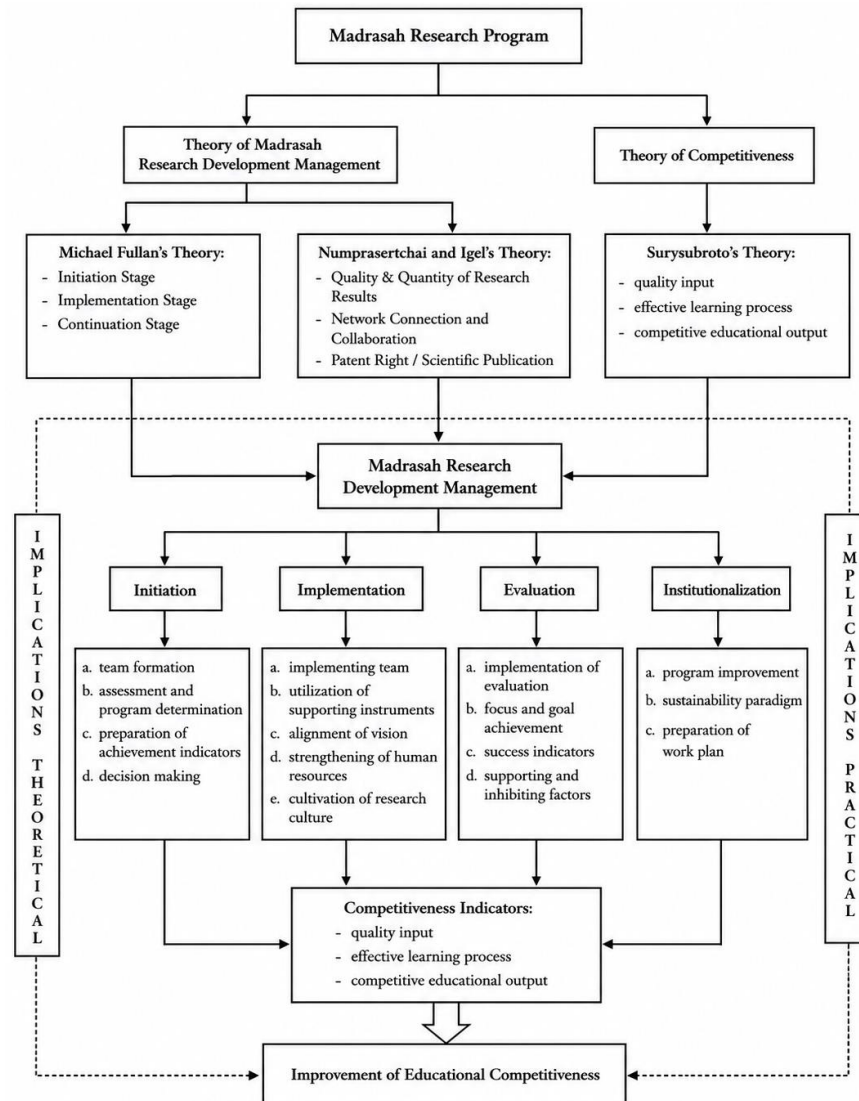


Figure 5. Conceptual Model of Development Management

The figure illustrates that the development of the research madrasah program is grounded in theories of research madrasah development management and educational competitiveness. The initiation stage includes team formation, program assessment and determination, preparation of achievement indicators, and decision-making. The implementation stage consists of forming implementation teams, utilizing supporting instruments, aligning institutional vision,



strengthening human resources, and cultivating a research culture. The evaluation stage is conducted through evaluation implementation, measurement of goal achievement, identification of program success, and analysis of inhibiting factors. Furthermore, the institutionalization stage is realized through program refinement, sustainability assessment, and the preparation of sustainable work plans.

These four stages produce indicators of educational competitiveness in the form of high-quality inputs, effective learning processes, and competitive educational outputs. Therefore, this conceptual model demonstrates that the development of research madrasahs can become an effective strategy for enhancing educational competitiveness when managed systematically, collaboratively, and sustainably.

CONCLUSION

The development of the research madrasah program at MTsN 2 Kediri City and MTsN 1 Malang City demonstrates that research-based educational management can serve as an effective strategy for enhancing madrasah competitiveness. The program development was carried out through four main stages: planning, implementation, evaluation, and institutionalization. During the planning stage, the madrasahs mapped the potential of teachers and students, established Research Madrasah Development Teams, and designed programs based on local needs and characteristics. The implementation stage was realized through the strengthening of project-based learning, the utilization of research-supporting facilities, the development of learning communities, and the cultivation of scientific activities within the madrasah environment. The evaluation stage was conducted systematically through monitoring, supervision, program reflection, and the measurement of both academic and non-academic achievements. Meanwhile, the institutionalization stage was implemented through scientific publication, Intellectual Property Rights (IPR) registration, the strengthening of external networks, and the development of a sustainable academic culture. These four stages indicate that the success of the research madrasah program is strongly influenced by the transformational leadership of madrasah principals, effective teamwork, adequate infrastructure support, and the active involvement of all members of the madrasah community.



The research madrasah program has proven to contribute positively to improving educational quality and madrasah competitiveness. These impacts are reflected in the increased academic achievements of students in various scientific competitions, the development of critical and innovative thinking cultures, the improvement of learning quality, and the growth of public trust in madrasah institutions. In addition, the program has strengthened teachers' capacities as research mentors and encouraged the establishment of collaborative networks with universities, research institutions, and scientific communities. Therefore, sustainable institutional commitment is required through strengthening human resources, increasing budgetary support, improving facilities, and expanding external collaboration so that research madrasah programs can develop optimally. Consequently, the research madrasah development management model can serve as a best practice for enhancing the competitiveness of madrasah education in Indonesia.

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Keputusan Direktur Jenderal Pendidikan Agama Islam Nomor 6989 Tahun 2019 tentang Petunjuk

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