

Designing a Research-Oriented Curriculum in Islamic Secondary Education: An Analysis of Curriculum Development Components in Madrasah

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Abstract

This research discusses the establishment and implementation of a research curriculum in Islamic secondary education utilizing MAN 2 Tulungagung as a research-oriented madrasah model. The study investigates four major questions: (1) how the curriculum objectives integrate scientific inquiry and Islamic values; (2) how the content of research is organized and presented; (3) how instructional methods support the development of research skills; and (4) how research learning outcomes are evaluated and enhanced by evaluation mechanisms. Data were collected through a qualitative case study comprising in-depth interviews with school administrators, research mentors, and curriculum coordinators; document analysis; classroom observations; and focus group discussions. The data were assessed using a curriculum development framework based on Tyler's model, focusing on the consistency of objectives, learning experiences, content organization, and evaluation. The findings show that the research curriculum is intended as an integral and value-based structure. Curriculum objectives combine scientific rigor and Islamic ethical formation; content provides a balance between theoretical research knowledge and applied inquiry; instructional techniques are student-centered and inquiry-based; evaluation includes thorough formative and summative assessments. This integrative methodology promotes students' research literacy, critical thinking, and moral responsibility. Theoretically, this study demonstrates how Islamic secondary education can create a space for research-based learning in a faith-based framework. In practice, this study provides a curriculum model that madrasahs can replicate to strengthen research culture and global academic competitiveness while maintaining religious identity. The concept also represents an innovation in curriculum administration, particularly in integrating research mentoring, student differentiation, and institutional evaluation mechanisms.

Keywords: curriculum development; curriculum research; educational innovation; madrasah; scientific studies

1. Introduction

The increased focus on research-based learning at the secondary education level is reflective of an international trend in the development of scientific literacy, critical enquiry and problem-solving skills from an early age. Educational theorists are increasingly arguing that research competency should no longer be relegated to higher education but that it should be brought routinely into school curricula to promote epistemic maturity and intellectual autonomy among teenagers (Bruner, 2009). In this sense, research is not just an academic talent, but a transformative activity that develops the students' thinking, questioning and knowledge construction (Alam & Mohanty, 2024; Vygotsky, 1978).

This move has certain epistemological and pedagogical repercussions on Islamic education especially in Indonesian madrasahs. Historically, madrasahs have been anchored on religious transmission and moral formation, with curricular emphasis on scripture literacy, ethical cultivation, and devotional practice (Azra, 2014). The inclusion of structured research education into such institutions involves a fundamental curricular change that necessitates reconciling religious epistemologies with scientific inquiry (Muhaimin, 2001). This change undermines the traditional binary oppositions between religious knowledge (*'ulūm al-dīn*) and scientific knowledge (*'ulūm al-'aql*). It opens up new opportunities for integrative models of learning that reconcile religion, reason and empirical study (al Faruqi, 1989; Ferngren, 2022).

The latest educational changes in Indonesia indicate the increasing institutional acceptance of research as an essential part of madrasah development. The Ministry of Religious Affairs has explicitly invited madrasahs to integrate research into their methods of instruction, thus redefining the role of Islamic secondary education in national human capital development. This policy change represents a shift from madrasahs being moral-religious institutions to venues of knowledge production and scientific interaction (R. Hefner, 2018). Research-based madrasahs have so evolved as not just innovative schools but as epistemic venues where Islamic identity and scientific rationality converge.

However, the growth of research culture in madrasahs is becoming more and more evident via the involvement of students in scientific competitions, publications and innovation programs, but the theoretical foundations of this transition are under-developed. Current procedures tend to highlight the results (e.g., prizes, rankings and institutional recognition) without properly documenting the educational architecture that makes such accomplishments possible. This creates a conceptual divide between the evident success of research madrasahs and the instructional methods through which research competence is built. Without a clear curriculum structure, research education is

likely to remain fragmented, extracurricular and dependent on individual agency rather than an institutionalised activity (Fullan, 2015).

This study fills this vacuum by positioning curriculum as the main analytical lens to comprehend research education in madrasahs. Curriculum is viewed as a coherent system of educational goals, learning experiences, arrangement of information, teaching practices, and systems for evaluation following classical curriculum theory and Ralph W. Tyler in particular (Tyler, 2010). In this approach research education is not an isolated program but an organized curricular process grounded in institutional philosophy, instructional practice and organizational culture (Ornstein & Hunkins, 2018). Such an approach allows for a thorough review of how research learning is consciously developed, executed, and sustained in the setting of the madrasah.

In addition to the technical curriculum design this study also puts research education in a broader sociological, psychological, philosophical, organizational and technological context (Ornstein & Hunkins, 2018). Sociologically, curriculum of research mirror changing society expectations of innovation, competitiveness, and scientific literacy. Psychologically, they respond to adolescents' developmental aptitude for abstract reasoning and inquiry and epistemic investigation (Pedaste et al., 2015; Piaget & Inhelder, 2008). Philosophically, these are assumptions about truth, knowing and the link between revelation and reason (Al-Attas, 1991). Organizationally, they need institutional structures, commitment of leadership and professional growth (Hargreaves & Fullan, 2012). Technologically, they interact with digital technologies, data literacy and information ecosystems that are changing access to and production of knowledge (Castells, 2011).

In this theoretical constellation, Madrasah Aliyah Negeri (MAN) 2 Tulungagung becomes a convincing case for examining research curriculum development of Islamic secondary education. MAN 2 Tulungagung does not consider research to be an extracurricular activity, but has integrated research learning within its official curriculum framework, institutional governance, and teaching culture. This integration represents a move from performative research engagement to curricular institutionalization, where research competency is an educational objective purposefully developed through systematic instructional design.

The study does not just describe activities but attempts to conceptualize how research education is pedagogically formed in a madrasah setting. It questions how research objectives are framed in accordance with Islamic educational philosophy, how learning experiences are designed for adolescent learners, how content is selected and sequenced, how instructional strategies are adapted for novice researchers and how evaluation mechanisms measure both cognitive and epistemic development (Tyler, 2010). In this regard, this study

contributes to curriculum theory by extending and deepening its application to the topic of Islamic secondary education, which has remained underrepresented in worldwide curriculum literature (Ornstein & Hunkins, 2018).

In addition, this study offers a critical review of the literature on madrasah reform, literacy development, and research-based education. Previous studies have discussed literacy practices, institutional innovation and administrative features of research madrasahs (Thoyib, 2021), but have not hypothesized the curriculum architecture underlying research education enough. The research contributes to the area by changing the analytical focus from programmatic descriptions to curricular design and by providing a conceptual framework that may inform policy, teacher training and institutional growth in Islamic secondary education system (McNeil, 1977).

at conclusion, this study frames the evolution of the research curriculum at madrasahs as an educational work of transformation, which transforms not only pedagogical practice, but also epistemological orientations and institutional identities. This research endeavors to establish a research curriculum model that is pedagogically sound, epistemologically integrative, and culturally relevant through systematic examination of the curriculum components of research education at MAN 2 Tulungagung. In so manner, it tries to demonstrate that madrasahs are not just responding to global educational demands but also actively reconfiguring the link between Islamic tradition and scientific research in contemporary education.

2. Method

2.1 Research Design

Research study took a qualitative case study to examine research curriculum development and implementation in Islamic secondary school. This method was selected because it provides a thorough understanding of the intricate educational challenges in actual school environments where it is difficult to distinguish context and practice (Bowen, 2009; Yin, 2018). This investigation was conducted at MAN 2 Tulungagung, Indonesia with data collection between January – June 2025.

2.2 Subjects

The research was conducted on the important personnel who were involved in creating, carrying out and supervising the research program at MAN 2 Tulungagung. They included the principal, vice principal for curriculum, research mentors, curriculum coordinators, five teachers who oversaw research and selected students in the program. Participants were purposefully selected to

ensure that they had direct involvement with the development and implementation of the curriculum (Creswell & Poth, 2018).

2.3 Data Collection Instruments

Data were collected by using several qualitative methods as semi-structured interviews, non-participant observations, document analysis and focus group discussions (FGDs). Interviews questioned about the aims, content, teaching techniques and evaluation of the curriculum. Observations captured what occurred in classrooms, in mentoring sessions and how research-based learning was implemented in practice. Document analysis included school documents, curriculum guides, lesson plans, policy texts, reports and other records. The FGDs with the instructors provided more insights on the strengths, challenges and evolution of the research curriculum (Creswell & Creswell, 2023).

2.4 Procedures of Data Collection Procedures

The data collecting was carried out in various stages. First, the team obtained school permission, designed study equipment, and chose crucial participants. Then, they collected data by interview, observation, FGD and collecting papers in the school. We gathered all the data in genuine circumstances to maintain authenticity. All participants were briefed about the study and granted their consent before to participation. The research team kept all information private and secret (Creswell & Creswell, 2023).

2.5 Data Analysis

Thematic analysis was conducted through the use of the interactive model by Miles, Huberman, and Saldaña, which comprises data condensation, data display, and conclusion drawing/verification (Miles et al., 2014). The team searched for repeated patterns, classifications and relationships across all the data. Curriculum ideas were utilized as a guide to evaluate the data and to enhance the analysis. To ensure trustworthiness, the study used triangulation, member verification, and extensive descriptions to promote credibility, transferability, dependability, and confirmability (Lim, 2025; Lincoln & Guba, 1985).

3. Findings

This section covers the empirical findings obtained from the interviews, observations, focus group discussion, and document analysis carried out at MAN 2 Tulungagung. Results are analyzed in terms of four major areas of the research curriculum: objectives, content, instructional techniques, and evaluation.

3.1 Aims of the Curriculum

The research results show that the research-based curriculum of MAN 2 Tulungagung is planned to enhance research skills of students in an integrated manner, including understanding of methods, analytical skills, and the ability to produce unique scientific work. Interview data said that this goal is repeatedly highlighted by school administrators and research mentors since the program is not only for the sake of academic competitiveness but also for promoting persistent research engagement and intellectual maturity.

Another data said that curriculum objectives are established by a methodical process of identifying students' needs, interests and talents. The madrasah uses diagnostic techniques including psychological aptitude tests and guidance counseling to map students' academic potential. These examinations determine the placement of pupils in specialized programs, such as research, academic and vocational. This technique provides curricular responsiveness to learner characteristics and individualized instruction.

Moreover, the aims include Islamic principles as a fundamental factor. Research activities are presented as a part of students' moral and spiritual growth, emphasizing ethical responsibility and integrity in scientific research. This integration is consistent with the institutional mission to educate students as informed and morally grounded learners.

On a more detailed level, the curriculum is designed to improve students' scientific thinking, knowledge of research techniques, sensitivity to real-world problems and engagement in innovation. These objectives reflect a balance between the cognitive, emotive and ethical elements of learning, indicating a complete approach to research education.

3.2 Curriculum Contents

The findings indicate that the curriculum content is methodically arranged and developmentally sequenced for three grade levels (X, XI, and XII) with varying levels of complexity and autonomy. At Grade X students are exposed to basic concepts of research like types of study, selection of a topic, formulation of a problem and literature review. This level emphasizes conceptual comprehension and supervised practice.

At Grade XI, the curriculum is focused on methodological competency, including research design, data collection, sampling procedures, hypothesis formulation, and data analysis. Students begin to perform field or lab research, indicating a shift toward independent inquiry. At Grade XII students are expected to carry out comprehensive research projects including proposal creation, instrument design, data analysis, report writing and academic presentation. The focus of this stage is on synthesis, communication and

academic accountability. The curriculum is aligned to four categories of competence at all levels: spiritual attitudes, social attitudes, knowledge and skills, Indirect instruction such as habituation and school culture develops spiritual and social capabilities, while structured learning and research practice develops knowledge and skills.

The material is also contextualised with real life concerns. Teachers encourage students to develop research ideas from their social and environmental contexts to make learning more relevant and meaningful. This process, called "idea exploration," gets pupils more invested in and engaged with their study. Structured program planning such as well-defined learning outcomes and accomplishment indicators also enhance the curriculum creation process. They are documented and reviewed on a periodic basis to ensure that they are aligned and continually improved.

3.3 Teaching Methods

The results show that the teaching approaches used in the research curriculum are mostly active, inquiry-based and student-centered. The main technique is Project-Based Learning (PjBL), in which students work on actual research projects, from problem identification to final presentation. This provides the students with the opportunity to apply the academic information in real life situations and to build higher order thinking skills.

Inquiry-Based Learning is also very much in place. The students are encouraged to investigate, experiment and develop knowledge by themselves while the professors function as facilitators who guide the research process. This strategy promotes critical thinking and scientific curiosity. The curriculum also adheres to the principles of Student-Centered Learning, such as letting students choose their research topics and control their learning processes. Teachers give scaffolding and comments to help pupils grow.

The other important characteristic is technology integration. Students are using digital resources such as statistical software, online databases and academic periodicals to support their research endeavors. This improves information literacy and methodological competency. At their core, these instructional strategies encourage active participation, teamwork, and independent study, all of which are crucial for developing research abilities.

3.4 Assessment

The results reveal that the evaluation system is multi-dimensional and development-oriented, including formative and summative approaches. Formative assessment is an ongoing process through observation, discussion and feedback throughout the study process. This enables teachers to track students' development and give timely guidance. Summative assessment will

include examination of final research deliverables (reports, presentations, competitions). The examinations give an overall indication of students' research competencies.

Portfolios capture the students' research processes across time, including proposals, instruments, field notes, and final reports. This method permits the longitudinal assessment of students' development. We also do peer evaluation and self-assessment to stimulate introspection and collaborative learning. Students engage in self-assessment and peer assessment, developing critical thinking and metacognitive skills.

At the institutional level, school leadership does program review periodically. The evaluation is directed at the detection of problems such as decreasing research performance or restricted student creativity and the implementation of corrective measures. For example, there have been changes made to ensure that the research activities are appropriate to the developmental readiness of the pupils, especially concentrating on the basics training in Grade X.

The integration of objectives, content, instructional techniques, and evaluation indicates that the research curriculum at MAN 2 Tulungagung is a unified model and it is systematically integrated. The results point to four main characteristics: Goals that blend scientific proficiency with ethical and spiritual values; Content that is developmentally sequenced and contextually appropriate; Active learning approaches, and Continuous multi-dimensional assessment systems

These results provide empirical evidence that research-based curriculum creation in Islamic secondary education could be effectively implemented through structured design, institutional support and value integration.

4. Discussion

The results of this study indicate that the research curriculum at MAN 2 Tulungagung is a paradigm of coherent and consistently aligned curriculum development. The combination of objectives, content, instructional methods and evaluation is reflective of the classical curriculum design framework by Ralph W. Tyler. This framework is characterized by four fundamental questions in curriculum development: determining objectives, selecting learning experiences, organizing instruction and evaluating outcomes. These components are not mutually exclusive but rather interrelated, providing a whole system that supports meaningful learning outcomes. This alignment is a powerful reflection of the notion of constructive alignment, where the pieces of the curriculum are intentionally arranged to produce targeted learning objectives (Ornstein & Hunkins, 2018; Tyler, 2010). The explanation as below in the figure 1.



Figure 1. Research-oriented Curriculum Design

First, the creation of curriculum objectives at MAN 2 Tulungagung shows a multi-layered structure that includes aims, goals and objectives. At the conceptual level (aims) the curriculum reflects the greater objective of Islamic education, which attempts to educate persons who are intellectually competent and morally and spiritually sound. This is congruent with the view of Syed Muhammad Naquib al-Attas that education in Islam is not just the transfer of knowledge but the development of *adab* (right conduct and ethical consciousness) (Al-Attas, 1991). At the practical level (goals and objectives), the curriculum integrates these philosophical values into measurable competences such as research skills, critical thinking, and problem solving skills. This layered structure facilitates the alignment of short-term instructional outcomes with long-term educational goals, which enhances the coherence of the curriculum design (As'ad et al., 2021; Ornstein & Hunkins, 2018).

Moreover, the incorporation of Islamic principles in research objectives questions the contradiction usually found between religious and scientific knowledge. The findings suggest that research efforts are not only interpreted as cognitive processes, but also as ethical actions anchored in religious precepts. This is in agreement with the epistemological model suggested by Seyyed Hossein Nasr who stresses the unity of knowledge (unity of science and spirituality) in the Islamic intellectual heritage (Nasr, 1996). The integration is also reinforced by the introduction of Qur'anic ideas that encourage inquiry and contemplation on nature, which help to situate research as an intellectual and spiritual activity (Hmelo-Silver et al., 2007). Thus, the curriculum grows not only academic competence but also ethical responsibility and spiritual awareness (Healey & Jenkins, 2009; Yulianto et al., 2025).

Second, the curriculum content is organized with great vertical coherence and developmental sequencing. The shift from basic research concepts in Grade X to independent research projects in Grade XII is a scaffolded learning strategy that promotes incremental cognitive development. This is consistent with constructivist learning theory and in particular the work of Jean Piaget who states that learning occurs in stepwise stages of cognitive growth (Piaget, 2003), the hierarchical sequencing aligns with the spiral curriculum model promoted by Jerome Bruner, where knowledge is revisited and expanded upon at increasing levels of complexity (Bruner, 2009).

The data also suggest that curriculum knowledge is contextualized through students' real life experiences and interests. Such contextualization increases relevance and engagement, important elements of effective learning. The instructional materials should be in accordance with learners' requirements and contextual realities to cover knowledge, skills, and attitudes (Mulyasa, 2006). The inclusion of the spiritual, social, cognitive and skill domains also reflects a holistic approach to the content of the curriculum where learning outcomes are designed to meet several aspects of students' development (Mulyasa, 2006).

Third, the instructional methods used in the research curriculum show a strong commitment to active and student-centered learning. The application of project-based learning (PjBL) and inquiry-based learning allows students to carry out authentic research procedures from identifying problems, analyzing data, and presenting data. The techniques turn students into active producers of knowledge, not passive recipients. This finding is congruent with the work of David A. Kolb, whose theory of experiential learning emphasizes the process of learning through concrete experience, reflection, conceptualization, and experimentation (Hoidn, 2017; Kolb, 1984).

Moreover, the focus on learner-centered education is consistent with current pedagogical paradigms that stress learner autonomy, personalization, and engagement. Teachers are not the exclusive source of knowledge, but facilitators who guide and encourage the learning process. This change is in line with wider educational research which has demonstrated that active learning practices greatly improve student engagement and critical thinking skills (Prince, 2004; Thomas, 2000). The incorporation of technology further aids this model by offering access to digital materials, research tools, and collaborative platforms, increasing learning opportunities beyond the confines of the classroom.

Fourth, the evaluation system applied in the research curriculum shows a multidimensional and formative-oriented approach. The utilization of formative assessment, summative assessment, portfolios, peer assessment and self-assessment indicates a holistic assessment system that encourages learning as

well as accountability. This method corresponds with the concept of assessment for learning, originally introduced by Paul Black and Dylan Wiliam who contend that evaluation should be used as a way to improve learning rather than to measure it (Black & Wiliam, 1998; Panadero et al., 2016).

In addition, the portfolio-based assessment allows for actual documentation of the students' learning process and outcome throughout time. Peer and self-assessment also promote reflective learning, as students are asked to critically review their own and their peers' work. This is in line with Shepard's view (Shepard, 2000) that student involvement in the process of assessment is crucial. The continual improvement of the curriculum at the program level is guaranteed through periodic review by the school administration that embodies the concepts of quality assurance and reflective practice (Wulandari et al., 2025).

The findings together demonstrate that the research curriculum at MAN 2 Tulungagung has reflected the model of constructive alignment backed by strong institutional commitment and methodical design. The blending of ethical, cultural and academic components shows that Islamic secondary education may effectively cultivate research-oriented learning settings without compromising its religious identity. Instead, the incorporation of Islamic values is a value addition to students' motivation, ethical consciousness and learning purpose.

In addition, this work contributes to the wider discourse on values-based and sustainable education. The results indicate that curriculum development with ethical and cultural frameworks adds to the depth and sustainability of learning outcomes. This perspective is also echoed by UNESCO (2017), stressing the need of education that supports not just cognitive development but also the values, attitudes and behaviors for sustainable development. Similarly, Wals and Jickling contend that for education to have a transformative influence, it must be grounded in learners' cultural and ethical contexts (Rijal et al., 2025; Wals & Jickling, 2002).

From a pragmatic point of view, the methodology revealed in this study offers a reproducible blueprint for other Islamic educational institutions trying to institutionalise research-based learning. The main enabling components are: leadership commitment, structured curriculum design, integration of values, student oriented pedagogy and ongoing evaluation. These components jointly contribute to the effective implementation of a research-oriented curriculum (Abdillah et al., 2025).

More broadly for education, the study suggests that curriculum models that integrate values offer viable alternatives to solely instrumental approaches to education. Educational institutions can embed learning within ethical and cultural frameworks that promote greater understanding, critical awareness and sustained behavioural change. Thus, the instance of MAN 2 Tulungagung

provides crucial insights into the successful implementation of curriculum innovation in faith-based educational contexts without sacrificing academic rigor and relevance. Furthermore, the result also shows that the curriculum is a kind of management innovation, where institutional structures such as UP3M (Research Institute), student grouping, and research mentorship systems are deliberately adjusted to facilitate research-based learning.

The findings confirm that MAN 2 Tulungagung's research curriculum is holistically coherent, embodying Tyler's classical framework while aligning with modern curriculum theory. The four elements (objectives, content, pedagogy, and evaluation) form an integrated system, exemplifying constructive alignment (Ornstein & Hunkins, 2018; Tyler, 2010). In other words, each component of the curriculum is intentionally coordinated to reinforce the others (Biggs & Tang, 2011, p. 256). This approach echoes (Rijal et al., 2025), who emphasize Islamic education's "humanistic orientation, dialogical engagement, moral responsibility, and contextual sensitivity" as an ethical mechanism guiding curriculum design. At MAN 2 Tulungagung, broad aims (educate intellectually competent, morally sound individuals) are seamlessly translated into specific goals and measurable objectives (research skills, critical thinking). This layered objectives structure, from philosophical aims to classroom outcomes, ensures that day-to-day instruction serves long-term Islamic educational goals (As'ad et al., 2021; Ornstein & Hunkins, 2018).

In practice, integrating Qur'anic and prophetic values into research objectives bridges faith and inquiry: students learn that scientific inquiry is also an ethical, spiritual practice. Nasr's notion of *tawhīd al-'ilm* (unity of knowledge) is reflected here, as research is framed within divine signs and social responsibility (Nasr, 1996). For example, by embedding values of coexistence and tolerance in the curriculum, Islamic schools can shape attitudes that reject extremism and promote peace (Qadri et al., 2024), similarly argue that "teaching peace, tolerance, and critical thinking" through Islamic curricula counteracts extremist narratives. Thus, curriculum objectives at MAN 2 do not conflict with religious identity but rather enrich it: spiritual and moral aims are part of the same framework as scientific ones (Qadri et al., 2024; Rijal et al., 2025).

The curriculum content is also carefully sequenced and contextualized. Basic research concepts are introduced in Grade X, with successive grades building more complex inquiry skills, a classic scaffolded learning design (Bruner, 2009; Piaget, 2003). This vertical coherence is congruent with Bruner's spiral curriculum, where topics are revisited at higher levels of complexity. Moreover, content is made relevant by linking research topics to students' lives and societal issues. Mulyasa (2006) notes that instructional materials must align with students' needs and contexts, and MAN 2 implements this by encouraging topic exploration based on local problems and interests. The curriculum covers

cognitive, skills, social, and spiritual domains, reflecting a holistic vision of learning. This mirrors, who finds that active, student-centered methods (e.g. project-based or problem-based learning) are effective for internalizing Qur'anic values and promoting character alongside cognition. In other words, content and values are integrated: as students learn research procedures and content knowledge, they simultaneously practice honesty, responsibility, and empathy embedded in Islamic teachings (Kholilah & Taubah, 2026, p. 250).

Pedagogically, MAN 2 Tulungagung emphasizes active, inquiry-based, student-centered learning. Project-Based Learning (PjBL) and guided inquiry allow students to conduct authentic research projects; formulating questions, collecting data, and presenting findings. This "learning by doing" approach is supported by Kolb's experiential learning cycle (Kolb, 1984) is shown by meta-analyses to greatly improve learning outcomes. For instance, Balemén & Keskin report that PBL yields large effect sizes ($d \approx 1.06$) in science education, far outperforming traditional methods (Balemén & Keskin, 2018, p. 849). In line with this, active learning (including inquiry, discussion, and collaboration) has been found to raise student performance substantially (Freeman & Reed, 1983, p. 88) and to engage learners more deeply than passive lectures (Prince, 2004; Thomas, 2000).

At MAN 2, teachers act as facilitators and mentors rather than lecturers, fostering autonomy and critical thinking. Eva Syafaah Hasanah specifically notes that such student-centered strategies "promote active student engagement, independence, and the practical application of character values in daily life" (Hasanah, 2025). The inclusion of technology (online databases, statistics software, etc.) further enriches this pedagogical model, preparing students with digital literacy and 21st-century skills. As Yulianto observe in a similar school, integrating prophetic values with digital and creative competencies produces a learning environment that "preserves the spiritual dimension" while also strengthening "digital literacy, creativity, and twenty-first-century competencies" (Yulianto et al., 2025). In short, MAN 2's methods embody constructivist principles: students actively construct knowledge through experience, reflection, and collaboration. This aligns with broader educational research showing that learner-centered, collaborative pedagogies improve engagement and critical reasoning (Berkowitz & Bier, 2020; Kolb, 1984; Prince, 2004).

Finally, the evaluation system at MAN 2 Tulungagung is both formative and multidimensional. Teachers provide continuous feedback (through quizzes, discussions, and one-on-one mentoring) so that students can iteratively improve their research processes. Assessment-for-learning model, where evaluation is primarily a tool for learning improvement rather than judgment (Black & Wiliam, 1998; Boud & Falchikov, 2006). At the same time, summative

assessments (final reports, presentations, competition results) measure achievement of the stated objectives. Particularly noteworthy is the use of portfolios, peer review, and self-assessment, a comprehensive approach supported in the literature. For example, Shepard argues that involving students in evaluating their own and peers' work fosters deeper learning and metacognition (Shepard, 2000). MAN 2's practice of having students review each other's research not only improves project quality but also builds reflective skills. Periodic program evaluation by the school leadership (identifying issues and adjusting the curriculum) ensures the model stays responsive. These practices collectively reflect the view that "evaluation should determine the extent to which objectives are being achieved" (Tyler, 2010) and exemplify a quality-assurance mindset (Wulandari et al., 2025).

In sum, MAN 2 Tulungagung's model illustrates how a value-integrated curriculum can be coherently designed in a faith-based school. Objectives and content are explicitly aligned with Islamic values (Al-Attas, 1991; Nasr, 1996), teaching methods are active and student-centered (Hasanah, 2025; Kolb, 1984), and assessments support learning (Black & Wiliam, 1998; Shepard, 2000). This integrative model does not treat faith and science as antagonistic; rather it shows they can reinforce each other. Internationally, similar insights have been found: for example, integrating moral values into science and character education has been shown to promote both engagement and ethical awareness. Moreover, by embedding values of tolerance and critical inquiry, Islamic curricula can combat extremism (Qadri et al., 2024).

Practically, this case provides a replicable framework for other Islamic schools: it highlights the importance of strong leadership, clear objectives, scaffolded content, active pedagogy, and continuous evaluation. It also suggests that schooling built on constructive alignment (Biggs & Tang, 2011; Brew, 2013) and prophetic/Islamic values can produce students who are scientifically literate yet ethically grounded. Overall, these findings support the argument that educational models grounded in students' moral and cultural contexts yield deeper and more sustainable learning outcomes (UNESCO, 2017; Wals & Jickling, 2002). In an age of technological change, MAN 2 Tulungagung shows that faith-based education need not forgo academic rigor—instead, by fusing inquiry with ethical purpose, it cultivates responsible researchers ready for both global challenges and local communities.

5. Conclusion

This research indicates that the research curriculum of MAN 2 Tulungagung is systematically developed by aligning the curriculum objectives, content, instructional methods, and evaluation to create a coherent and integrated with the values of research-based education in Islamic secondary

schooling. The results show that the curriculum objectives effectively integrate scientific competencies with Islamic ethical ideals, portraying research as an intellectual and moral activity.

Curriculum content is also arranged in a progressive and contextual manner, integrating basic research knowledge with practical inquiry activities that are relevant to students' real-life experiences. Project-based and inquiry-based learning as instructional methodologies, effectively promote students' critical thinking, autonomy and research competencies. At the same time, the evaluation system with formative, summative, portfolio and reflective evaluations guarantees ongoing learning improvement and alignment with planned learning outcomes.

These findings collectively respond to the four core study questions and illustrate that research-oriented learning may be successfully incorporated in Islamic education without compromising religious identity. The merging of scientific research and Islamic beliefs increases students' academic performance and moral cognition.

Theoretically, this study contributes to the extension of curriculum development discourse into Islamic education contexts. Practically, this study gives a model that may be replicated by madrasah that want to improve research culture and global competitiveness. Future research could examine the scalability of the approach in institutional contexts and across educational levels.

Declaration of AI and AI-Assisted Technologies

In preparing this work the authors employed ChatGPT to assist in providing language refinement, structural organization, and clarity of expression. The AI technology was utilized only to help improve the readability and coherence of the content. The substance of the paper, including research design, data analysis, interpretation of results, and conclusions, was independently written by the authors. All AI-assisted outputs have been checked, edited and verified by the authors. The writers are responsible for the work performed, its accuracy and the fidelity of the data presented.

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