

The RE-STEAM Approach in Learning for Enhancing Students' Moral Character and Communication Skills at MTs Negeri 2 Wonosobo

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ABSTRACT

Conventional approaches in *Aqidah Akhlak* learning tend to limit the contextualization of Islamic teachings in students' real-life experiences, resulting in weak internalization of moral values and communication skills. The RE-STEAM (Religion, Science, Technology, Engineering, Art, and Mathematics) approach is considered a potential solution to this issue. This study aims to analyze the implementation of RE-STEAM-based *Aqidah Akhlak* learning in strengthening students' moral character and communication skills at MTs Negeri 2 Wonosobo. This research employed a descriptive qualitative field study. Informants consisted of the madrasa principal, vice principal for curriculum affairs, and three Islamic education teachers, while the research subjects included one *Aqidah Akhlak* teacher and Grade VIII students. Data were collected through observation, interviews, and documentation, and analyzed using data reduction, data display, and verification techniques. Data validity was ensured through source, technique, and time triangulation. The findings reveal that the RE-STEAM approach was implemented through integrated in-class and out-of-class activities combining religious values with science, technology, engineering, art, and mathematics. The approach fostered transformative learning experiences reflected in improved student behavior, self-reflection practices, and commitment to moral improvement. Furthermore, learning became more interactive and communicative, as evidenced by active discussions, presentations, and the creation of digital flowcharts, infographics, and posters integrating Islamic messages with technology. This study contributes empirical evidence on integrated RE-STEAM learning to strengthen moral values and communication skills in madrasa education.

Keywords: *aqidah akhlak learning, communication skills, moral values, RE-STEAM approach*



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INTRODUCTION

Learning of *Aqidah Akhlak* based on conventional approaches tends to limit the contextualization of religious teachings within students' real-life experiences (Wara Wulan Sari & Muhamad Nazib, 2022). Instructional practices frequently emphasize the transmission of textual and doctrinal knowledge, positioning students as passive recipients rather than active participants in meaning-making processes. As a result, religious values are often understood only at the cognitive level without being internalized in daily attitudes and behavior. The absence of integration between religious learning and contemporary developments in science, technology, and social life further contributes to the gap between theoretical understanding and practical application. Consequently, students experience difficulties in translating Islamic moral teachings into ethical decision-making, social interaction, and responsible communication practices in modern contexts.

Contemporary education is expected to develop human resources who are competent in mastering technological advancement and possess strong moral character and religious identity to respond to increasingly complex global challenges (Andreas, 2025). Within this framework, *Aqidah Akhlak* learning should be implemented holistically by integrating cognitive, affective, and behavioral dimensions to foster faith, noble character, and social responsibility among students. Such an approach enables learners to connect religious principles with real-life situations, encouraging reflective understanding, ethical awareness, and meaningful social engagement. Therefore, transforming *Aqidah Akhlak* learning into a contextual and integrative process becomes essential to ensure that religious education contributes to knowledge acquisition and to the formation of morally grounded and socially competent individuals.

Recent incidents reflecting moral degradation among students further emphasize growing concerns regarding the effectiveness of moral education in schools and madrasahs. Various cases reported in Indonesia reveal declining ethical behavior among students, ranging from verbal abuse toward teachers to acts of aggression occurring within educational environments (Amalia Afifah et al., 2023; S. N. Kholifah et al., 2024; Sofyana & Haryanto, 2023). These incidents not only illustrate violations of social norms and educational ethics but also signal deeper challenges related to students' moral awareness and emotional regulation. The emergence of such behaviors suggests that moral instruction has not been fully internalized as guiding principles shaping students' attitudes and interactions in daily life.

Moreover, these phenomena reflect weaknesses in communication ethics, particularly in how students express opinions, manage disagreements, and interact respectfully with teachers and peers. In the digital era, where communication increasingly occurs through social media and online platforms, the lack of ethical communication competence further exacerbates misunderstandings and conflicts. This condition indicates that moral education should not merely focus on normative instruction but must also cultivate responsible communication skills grounded in ethical and religious values. Strengthening both moral character and communication competence therefore becomes an urgent priority to foster respectful, empathetic, and socially responsible student behavior within educational settings.

In addition, limited communication skills remain a significant challenge within madrasah learning contexts (Firdaus et al., 2023). Many students experience difficulties in expressing ideas clearly, participating actively in classroom discussions, and engaging in respectful interpersonal communication with their peers. These challenges are often linked to instructional practices that remain teacher-centered, where learning activities primarily emphasize memorization and knowledge transmission rather than dialogue, collaboration, and student participation (Woods & Copur-Gencturk, 2024). As a result, students have fewer opportunities to develop confidence, articulate arguments, or practice constructive communication, which are essential competencies for meaningful learning interactions.

At the same time, the demands of 21st century education require students to master a broader set of competencies beyond academic knowledge. This knowledge includes critical thinking (Izza et al., 2024; Setiawan et al., 2025), creativity (Avifatun & Firdaus, 2024; Firdaus et al., 2025; I. N. Kholifah et al., 2024), collaboration (Mufarohah et al., 2024), communication (Khoirunisak et al., 2023), and strong character development (Tafrichan et al., 2025). Communication skills, in particular, play a central role in enabling students to exchange ideas, collaborate in problem-solving, and adapt to dynamic social and technological environments. Therefore, learning approaches that encourage active engagement, interaction, and interdisciplinary experiences are urgently needed to bridge the gap between current instructional practices and the competencies required in contemporary education.

Addressing these challenges requires an integrative learning approach capable of bridging the long-standing dichotomy between religious knowledge and scientific disciplines. The separation between these domains often results in fragmented learning experiences, where religious education is perceived as normative and theoretical, while science and technology are viewed as purely empirical and value-neutral. Such conditions limit students' ability to understand religion as a guiding framework applicable to contemporary life. Therefore, an educational model that harmonizes spiritual values with

scientific and technological development is essential to promote holistic learning that supports both intellectual growth and character formation.

One promising framework that accommodates this need is the RE-STEAM (Religion, Science, Technology, Engineering, Art, and Mathematics) approach. This approach integrates religious principles with interdisciplinary learning processes, enabling students to connect moral teachings with real-world problem-solving activities. Through RE-STEAM-based learning, students are encouraged to explore knowledge creatively, collaboratively, and contextually while maintaining ethical and spiritual awareness. Consequently, learning becomes more meaningful, interactive, and transformative, fostering academic competence, moral responsibility, and effective communication skills relevant to the demands of contemporary education (Mawarni et al., 2024; Rosana et al., 2022).

Preliminary observations conducted at MTs Negeri 2 Wonosobo revealed issues related to students' moral behavior and communication skills, including impolite language use, low classroom participation, limited confidence during presentations, and minimal engagement in collaborative discussions. The madrasa principal also emphasized the necessity of innovative learning that integrates science and technology while maintaining religion as the foundational value system.

Despite growing discussions on STEAM-based learning, studies specifically examining the implementation of an integrated RE-STEAM approach in *Aqidah Akhlak* learning at the madrasah level remain limited. Therefore, this study aims to analyze the implementation of the RE-STEAM approach in strengthening students' moral values and communication skills at MTs Negeri 2 Wonosobo. The findings are expected to contribute to the development of innovative and contextual Islamic learning models that support the formation of morally grounded and communicatively competent students.

METHODS

This study employed a field research design, in which the researcher directly engaged with the research setting to observe and examine the phenomenon under investigation (Subagyo, 2015). Based on the research objectives and the nature of the data, this study adopted a descriptive qualitative approach aimed at systematically describing the implementation of the RE-STEAM approach and its implications for students' moral values and communication skills. Qualitative research emphasizes interpretative understanding through the use of multiple data collection techniques to obtain a comprehensive and holistic description of social phenomena (Creswell, 2018).

The primary data sources consisted of three Grade VIII-A students of MTs Negeri 2 Wonosobo, while supporting informants included teachers involved in the learning process. The research focused on examining the implementation of the RE-STEAM approach in *Aqidah Akhlak* learning, students' moral values, and their communication skills. Data were collected through participant observation, semi-structured interviews, and documentation. Participant observation enabled the researcher to directly observe classroom learning activities and student interactions. Interviews were conducted to obtain in-depth information from participants regarding learning practices and behavioral changes. Documentation techniques were used to analyze relevant institutional records, learning materials, and supporting documents.

The research instruments included observation and interview guidelines. Data analysis followed the interactive model consisting of data collection, data reduction, data display, and conclusion drawing or verification (Miles et al., 2014). Data validity was ensured through triangulation of sources, techniques, and time to enhance the credibility and trustworthiness of the findings.

RESULTS AND DISCUSSION

The implementation of *Aqidah Akhlak* learning at MTs Negeri 2 Wonosobo using the RE-STEAM approach consisted of three main stages: learning planning, implementation, and evaluation.

Learning Planning

The preparation of learning planning documents in *Aqidah Akhlak* subjects at MTs Negeri 2 Wonosobo refers to the Decree of the Director General of Islamic Education Number 3302 of 2024 concerning Learning Outcomes (*Capaian Pembelajaran*) of Islamic Religious Education and Arabic Language within the *Kurikulum Merdeka* framework for madrasahs. The regulation outlines the scope,

essential elements, and Phase D learning outcomes covering grades VII, VIII, and IX at the Madrasah Tsanawiyah level. Learning planning documents examined in this study consist of Learning Outcomes, Learning Objectives, Learning Objective Flow, and Teaching Modules as the primary instructional framework guiding classroom implementation.

Based on interview data with the *Aqidah Akhlak* teacher, learning devices are systematically prepared at the beginning of each academic year following institutional coordination meetings organized by the madrasah. These meetings include task distribution, academic program planning, extracurricular assignments, and administrative preparation. Teachers are required to develop instructional documents according to assigned teaching responsibilities, which are subsequently validated by the principal and reviewed periodically through academic supervision conducted each semester. In addition, the madrasah facilitates professional collaboration through Subject Teacher Deliberation (*MGMP*) activities at both institutional and district levels to ensure curriculum alignment and instructional quality improvement.

The preparation process of learning planning follows several sequential stages: (1) analyzing Learning Outcomes; (2) formulating Learning Objectives derived from the analyzed competencies; (3) designing Learning Objective Flow to structure learning progression; and (4) developing Teaching Modules integrating CP, TP, and ATP as core instructional components. Documentation analysis indicates that Phase D *Aqidah Akhlak* learning consists of four major competency domains encompassing faith (*aqidah*), morality (*akhlak*), behavioral practice, and exemplary conduct. These competencies function as expected student achievements at the completion of each learning phase.

The analyzed CP is further translated into measurable learning objectives emphasizing students' expected competencies after participating in learning activities. The ATP is designed based on principles of simplicity, contextual relevance, continuity, adaptability, independence, and operational clarity. Subsequently, the Teaching Module serves as the main pedagogical guideline for classroom implementation. In the Grade VIIIA Teaching Module entitled "*Islamic Ethics in Social Media Use*," the formulated Learning Outcome emphasizes students' ability to analyze and implement ethical social media behavior based on Islamic teachings while integrating perspectives from religion, science, technology, engineering, art, and mathematics through creative problem-solving activities.

These learning outcomes are operationalized into specific learning objectives formulated within the RE-STEAM approach, including students' ability to identify Islamic ethical principles in communication, analyze positive and negative impacts of social media using scientific and mathematical perspectives, design technology-based creative solutions to digital ethical problems, apply Islamic communication ethics in daily life, and communicate project outcomes through systematic digital presentations. This formulation demonstrates the integration of moral education with interdisciplinary competencies and communication skill development.

Interview results with the Vice Principal for Curriculum Affairs further revealed that learning implementation at MTs Negeri 2 Wonosobo integrates RE-STEAM elements through the Project-Based Learning (PjBL) model. Although the RE-STEAM terminology is not explicitly written in teaching modules, interdisciplinary integration is embedded within learning design emphasizing student-centered activities. Learning activities are directed toward strengthening students' noble character alongside the development of 21st-century competencies, including character, critical thinking, collaboration, creativity, communication, and citizenship.

Furthermore, curriculum management emphasizes that RE-STEAM implementation does not solely depend on technological infrastructure but rather on instructional design that integrates scientific inquiry with religious values. The integration of science, technology, engineering, art, and mathematics within *Aqidah Akhlak* learning is considered compatible with Islamic educational principles, enabling students to develop analytical thinking, problem-solving abilities, collaboration skills, and creativity while maintaining adherence to Islamic moral teachings. Consequently, learning planning at MTs Negeri 2 Wonosobo reflects an adaptive pedagogical transformation aimed at preparing students to face future challenges without compromising religious identity and ethical foundations.

Implementation

The implementation of *Aqidah Akhlak* learning in Grade VIIIA at MTs Negeri 2 Wonosobo was conducted through three main instructional stages consisting of preliminary activities, core learning activities, and closing activities. Learning was carried out once a week with an allocation of two instructional periods (2 × 35 minutes). The duration required to complete each learning topic varied depending on material complexity and project completion within the RE-STEAM-based Project-Based Learning (PjBL) framework. The learning process integrated RE-STEAM principles systematically through student-centered project activities under the topic “*Islamic Ethics in Social Media Use.*” The implementation emphasized interdisciplinary integration between religious values, scientific reasoning, technological utilization, creativity, and collaborative inquiry.

- (1) The preliminary stage reflected the integration of the religion component within the RE-STEAM framework as a foundational learning orientation. Learning activities began with Islamic habituation practices including greetings, collective prayers, recitation of *Asmaul Husna*, *shalawat*, and supplications. These activities functioned not merely as ritual routines but as processes of value internalization aimed at strengthening students’ spiritual awareness and learning discipline. Classroom observations and interview data indicate that religious habituation conducted prior to academic activities contributes to students’ emotional readiness, behavioral regulation, and respectful interaction patterns. Institutional religious culture, including routine *Dhuha* prayer practices, supports character formation through discipline, self-regulation, and social responsibility. Following spiritual preparation, the teacher introduced learning objectives and connected prior knowledge with real-life digital experiences. A short diagnostic quiz was administered to explore students’ initial understanding regarding ethical behavior in social media usage. The integration of religious content with digital presentation technology was demonstrated through the use of PowerPoint slides displaying Qur’anic verses (QS. Al-Fajr: 27–30). Students were guided to read, translate, and interpret the verses collaboratively, linking the concept of a “tranquil soul” with responsible information sharing behavior in digital environments. This stage illustrates how religious literacy was contextualized within contemporary technological issues, encouraging students to interpret Islamic teachings as ethical guidance for modern digital interaction rather than abstract doctrinal knowledge.
- (2) The core learning phase represented the primary implementation of RE-STEAM integration through Project-Based Learning. Students were organized into heterogeneous discussion groups to promote collaboration and social inclusivity. Each group was assigned different analytical topics related to digital ethics, including news verification procedures, Islamic digital etiquette, social media impacts, and responsible posting behavior. Learning activities combined empirical inquiry with religious reflection. Students analyzed statistical data showing smartphone usage frequency and conducted real-time calculations of their own screen-checking intensity across weekly, monthly, and yearly periods. Mathematical reasoning and data interpretation stimulated critical awareness regarding digital habits, often leading to reflective responses among students concerning time management and spiritual practices. Religious reinforcement was subsequently introduced through prophetic traditions emphasizing ethical communication. Students analyzed the meaning of hadith related to responsible speech and connected it with online communication behavior. Case-based discussions involving cyberbullying scenarios further encouraged ethical reasoning grounded in both scientific evidence and Islamic moral principles. These findings demonstrate that moral learning occurred through analytical engagement rather than prescriptive instruction, aligning ethical understanding with evidence-based reasoning. During project planning stages, students independently explored learning resources through textbooks, internet searches, and environmental observations using smartphones. Group members collaboratively divided responsibilities such as literature searching, identifying Qur’anic references, designing project concepts, documenting findings, and developing solution prototypes. Projects produced by students included: (a) verification flowcharts for social media information, (b) Islamic digital ethics posters, (c) infographics on social media impacts, and (d) responsible posting campaign designs. Teacher involvement was intentionally minimized, positioning the teacher primarily as a facilitator. This approach fostered learner autonomy, critical thinking, creativity, and interpersonal communication skills—core competencies emphasized within 21st-century learning frameworks.

Students utilized various digital applications such as Canva, ChatGPT, and online design platforms to finalize creative products. Technology functioned as a medium for knowledge construction rather than passive information consumption. Completed projects were presented before the class, allowing students to assume roles as presenters and moderators. Presentation sessions encouraged peer questioning, argumentation, and constructive feedback, thereby strengthening communication competence and confidence in expressing ideas publicly. To reinforce conceptual understanding, the teacher implemented a gamified evaluation using the WordWall platform. Students demonstrated high engagement levels, suggesting that interactive digital assessment contributed positively to motivation and participation. Reflection activities further deepened moral internalization as students wrote personal commitments related to ethical social media behavior on sticky notes. This reflective exercise facilitated self-awareness and personal responsibility toward digital conduct.

- (3) The closing stage emphasized reflective learning and value consolidation. The teacher guided students through *muhasabah* (self-reflection), encouraging them to evaluate past behaviors related to social media ethics. Students then formulated individual improvement commitments, demonstrating affective engagement beyond cognitive learning outcomes. Concept reinforcement highlighted Islamic principles such as *tabayyun* (information verification), avoidance of *ghibah* and bullying, ethical communication (*qaulan sadida*), and responsible digital privacy management. Learning concluded with collaborative summarization, motivational reinforcement, and closing prayer rituals.

Evaluation

The results of the document analysis of the teaching module indicate that the evaluation of *Aqidah Akhlak* learning in Class VIIIA was implemented using the Re-STEAM approach through three forms of assessment, namely knowledge assessment, skills assessment, and attitude assessment. Knowledge assessment was conducted through testing techniques, skills assessment through performance assessment, and attitude assessment through observation techniques.

The knowledge assessment was administered through written tests in the form of multiple-choice questions developed by the teacher using the WordWall application. Students completed the quiz using their smartphones via a link shared by the teacher. The assessment indicators included students' ability to: (1) analyze ethical behavior in social media according to Islamic teachings; (2) analyze appropriate utilization of social media; (3) analyze Islamic textual evidence related to digital ethics; (4) analyze the impacts of social media based on real societal phenomena; (5) evaluate beneficial and harmful digital applications; (6) identify appropriate online behavior aligned with Islamic values; (7) write self-reflection (*muhasabah*) as a commitment to improving social media behavior; and (8) design creative solutions to avoid the negative impacts of social media use. The results of the written assessment showed that all students achieved scores above the Minimum Learning Achievement Criteria.

Skills assessment was conducted through performance evaluation using an assessment rubric that measured students' activities during group discussions and presentations. The assessed indicators focused on students' communication skills, including: (1) active participation in expressing ideas during discussions; (2) ability to listen attentively to others; (3) responsiveness during conversations; (4) systematic and coherent presentation skills; (5) use of polite and clear language; (6) avoidance of interrupting others inappropriately; (7) willingness to apologize when realizing mistakes; and (8) task completion according to teacher instructions.

The performance assessment results demonstrated active student engagement according to their respective roles within discussion groups. Participation was reflected through various academic activities, such as exploring online information sources, designing project concepts, observing empirical phenomena in the surrounding environment, documenting findings, and examining Qur'anic verses and Hadith as theoretical foundations. Students also demonstrated effective collaboration through idea exchange and positive responses toward peers' opinions. Several students actively asked spontaneous questions during material explanations and discussions of Islamic references delivered by the teacher.

During presentation sessions, each group successfully presented their projects using polite, clear, structured, and comprehensible language while providing opportunities for other groups to ask questions. These questions were answered respectfully and concisely. Another significant finding was the emergence of spontaneous reflective responses when students realized inaccuracies in their explanations or inappropriate language use. Students immediately apologized and corrected their statements. All groups demonstrated compliance with teacher instructions, both in project procedures and time management for task submission.

Muhammad Anwar, a teacher of Islamic Cultural History, stated in an interview: “In my opinion, learning using the Re-STEAM approach is interesting. It represents an innovation that does not contradict the essence of Aqidah Akhlak itself. Project-based activities encourage collaboration, communication, and analytical thinking among students. Integrating religious aspects with science, technology, arts, and mathematics helps students understand that Aqidah Akhlak is inseparable from modern life. For example, in learning *Asmaul Husna*, students do not merely memorize concepts but explore Allah’s attributes through observations of nature, fostering reflection and gratitude.”

Attitude assessment was conducted using an observation sheet throughout all stages of learning activities, including introductory, core, and closing sessions. Observed indicators covered both classroom behavior and students’ attitudes within the broader madrasa environment. These indicators included religious discipline, obedience to teachers, respect for elders, polite communication, honesty, responsibility, openness to differing opinions, punctuality, academic integrity, cooperation, and willingness to assist peers experiencing difficulties.

Observation results indicated that students demonstrated strong religious awareness during routine worship activities such as *Dhuha* prayer, recitation of *Asmaul Husna*, *Nadhom Kalamun Qodim*, *Sholawat Nariyah*, and *Dhuhr* prayer conducted calmly and attentively. Students also showed readiness before lessons began, practiced respectful communication by asking permission politely, obeyed teacher instructions, and displayed respectful attitudes toward teachers and school staff, including canteen personnel.

During group discussions, students actively expressed ideas using polite language while listening respectfully to differing opinions. Students were also observed reminding peers politely when inappropriate behavior occurred. Academic solidarity was evident as students helped peers facing difficulties in understanding learning materials or operating technological applications. In terms of academic responsibility, students demonstrated discipline by submitting assignments within the established deadlines.

Dessy Rizka Fitriyanti, a teacher of Qur’an–Hadith studies, stated: “The Re-STEAM approach provides a new dimension to Aqidah Akhlak learning. Although initially it seems incompatible, deeper examination shows that each Re-STEAM element can be aligned with Aqidah Akhlak content. Technology and general sciences should support—not replace—the main objective of moral formation.” Consistent with the analyzed documents, in an interview that learning evaluation using the Re-STEAM approach encompasses knowledge, skills, and attitude domains. Knowledge is evaluated through written quizzes, skills through performance assessment during discussions and presentations, and attitudes through continuous observation both inside and outside the classroom environment.

The findings demonstrate that the RE-STEAM approach effectively bridges the long-standing dichotomy between religious and scientific knowledge within madrasah education. This integration aligns with the concept of holistic education, which emphasizes the unity of cognitive, affective, and spiritual development in learning processes (Mahmudulhassan et al., 2025). By integrating Islamic moral values with interdisciplinary inquiry, students experience learning not only as intellectual engagement but also as spiritual formation. Such integration supports the Islamic educational philosophy asserting that knowledge should simultaneously develop faith (*iman*), character (*akhlak*), and intellectual competence (Briliant & Mustofa, 2025).

The implementation of Project-Based Learning (PjBL) within the RE-STEAM framework is consistent with constructivist learning theory proposed by Piaget and further developed by Vygotsky, which emphasizes active knowledge construction through social interaction and authentic experiences (Vygotsky, 1978). In this study, students were actively involved in analyzing ethical challenges related

to social media use rather than passively receiving moral instruction. Similar findings were reported by Widyaningrum & Hartarini (2024), who stated that project-based learning enhances students' critical thinking and problem-solving abilities through contextual learning experiences. The present findings indicate that students developed moral reasoning alongside communication competence as they collaboratively explored real-life digital ethics issues.

Technology integration also played a crucial role in enhancing student engagement and learning motivation. The use of digital platforms for designing posters, infographics, and presentations reflects technology-enhanced learning environments that support 21st-century competencies. According to Mishra and Koehler's Technological Pedagogical Content Knowledge (TPACK) framework, meaningful learning occurs when technology, pedagogy, and subject matter are integrated simultaneously (Mishra & Koehler, 2006). Previous studies by Achmad Basari Eko Wahyudi et al. (2024) further confirm that STEAM-based learning improves student creativity, collaboration, and engagement through interdisciplinary technological applications. The findings of this research similarly demonstrate increased student participation and collaborative interaction during RE-STEAM-based activities.

Importantly, moral development observed in this study occurred through reflective and experiential learning rather than doctrinal transmission alone. This finding supports Kolb's Experiential Learning Theory, which emphasizes learning as a cyclical process involving experience, reflection, conceptualization, and application. Activities such as data analysis, group discussion, presentation, and self-reflection enabled students to internalize Islamic ethical values through lived experiences. Effective character education requires moral knowing, moral feeling, and moral action; the RE-STEAM approach appears to facilitate these three dimensions simultaneously.

Furthermore, improvements in students' communication skills were evident through increased confidence in expressing opinions, respectful listening behavior, and active participation in discussions. These outcomes align with 21st-century skill frameworks highlighting communication and collaboration as essential competencies for modern learners (Partnership for 21st-Century Skills, 2015). Research conducted by Mustamin et al. (2024) also indicates that interdisciplinary and project-based learning environments significantly enhance students' communication and teamwork abilities. The collaborative nature of RE-STEAM learning encouraged students to negotiate ideas, present arguments, and engage in ethical dialogue grounded in Islamic values.

The implementation of RE-STEAM in *Aqidah Akhlak* learning demonstrates strong potential as an innovative pedagogical model for madrasah education in addressing contemporary moral challenges while simultaneously developing communication competence and higher-order thinking skills. The findings reinforce previous research suggesting that integrating religious values with interdisciplinary learning approaches can create meaningful, contextual, and transformative educational experiences suitable for 21st-century Islamic education.

CONCLUSION

Based on the previous discussion and analysis, it can be concluded that the implementation of the Re-STEAM approach in *Aqidah Akhlak* learning was carried out through activities integrating elements of religion, science, technology, engineering, art, and mathematics in both in-class and out-of-class learning contexts. This approach has demonstrated its potential in creating transformative learning experiences that contribute to the improvement of students' moral values. Such improvement is reflected in observable behavioral changes, including students' acknowledgment and remorse regarding inappropriate digital behavior inconsistent with Islamic teachings, the development of meaningful reflective practices such as *muhasabah* (self-reflection), the emergence of personal commitments toward behavioral improvement, and the realization of meaningful learning that connects theoretical understanding with real-life application.

Furthermore, the Re-STEAM approach has contributed to more interactive and communicative learning environments, as evidenced by the development of students' verbal communication skills through group discussions, active participation in expressing ideas, and classroom presentations. Students' creativity was also demonstrated through the production of flowcharts, infographics, and digital posters that integrate Islamic moral messages with modern technological media. Studies specifically examining the implementation of an integrated Religion-STEAM learning approach to

strengthen moral values and students' communication skills within the *Aqidah Akhlak* discipline at the madrasa level remain relatively limited. Therefore, the significance of this study lies in its contribution as an academic reference for exploring the correlation between the Re-STEAM approach and the enhancement of students' moral values and communication skills in Islamic secondary education contexts.

CONFLICT OF INTEREST

The authors confirm that they have no conflicts of interest related to the publication of this study. They have no financial, personal, or professional interests that could be perceived as influencing the research outcomes or interpretations presented in this publication.

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