

RESEARCH

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The Influence of Collaborative Supervision on Self-Efficacy and Teaching Performance of Islamic Education Teachers at MAN 2 Tanah Datar

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Abstract

This study aimed to examine the effect of collaborative supervision on the self-efficacy and teaching performance of Islamic Education (PAI) teachers at MAN 2 Tanah Datar and to analyze the relationship between self-efficacy and teaching performance. The study employed a quantitative approach with an ex post facto associative design using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software. The respondents consisted of 30 PAI teachers selected through a total sampling technique. Data were collected using a Likert-scale questionnaire. The measurement model evaluation indicated that all constructs met the required validity and reliability criteria, with factor loadings above 0.70, Average Variance Extracted (AVE) above 0.50, Composite Reliability above 0.70, and Cronbach's Alpha above 0.70. The findings revealed that collaborative supervision had a significant positive effect on self-efficacy ($\beta = 0.67$) and teaching performance ($\beta = 0.54$). In addition, self-efficacy showed a significant positive relationship with teaching performance ($\beta = 0.71$). These findings suggest that collaborative supervision is associated with stronger teacher self-efficacy and better teaching performance among PAI teachers at MAN 2 Tanah Datar. Therefore, madrasah leaders may consider implementing more participatory and reflective supervision practices to support teacher professional development.

Keywords: collaborative supervision; self-efficacy; teaching performance; PAI teachers

Introduction

Preliminary observations conducted at MAN 2 Tanah Datar revealed several challenges related to academic supervision, teacher self-efficacy, and teaching performance. Academic supervision has been implemented regularly, however, the process tends to focus on administrative compliance, such as lesson plan documentation and classroom observation reports, rather than reflective and collaborative professional development. Informal discussions with teachers indicated that some teachers still experience difficulties in applying innovative learning strategies, integrating technology into instruction, and managing diverse classroom situations effectively (Firmansyah et al., 2025). Several teachers also reported uncertainty when adapting learning activities to students'

varying needs and learning characteristics. These conditions reflect that teacher self-efficacy has not yet developed optimally. Furthermore, school evaluation records and supervisory feedback showed variations in teachers' instructional performance, particularly in active learning implementation, classroom engagement, and authentic assessment practices (Trisnawati & Indriani, 2023). This empirical situation suggests a need for a more participatory and supportive supervision approach because school leadership, feedback, and professional learning opportunities are consistently associated with improvement in teachers' instructional practice (Blase & Blase, 1999; Louis et al., 2010; Robinson et al., 2008).

The teaching performance of teachers is a key factor in determining the quality of learning. Teaching performance not only encompasses pedagogical ability but also includes creativity in selecting teaching methods, classroom management skills, and the ability to conduct learning evaluation (Isnaini, 2025). However, teacher performance is also shaped by internal psychological factors, particularly self-efficacy. Self-efficacy refers to individuals' beliefs about their capacity to organize and execute actions required to achieve desired outcomes (Bandura, 1997; Tschannen-Moran & Woolfolk Hoy, 2001). Teachers with strong self-efficacy tend to show greater persistence, confidence, instructional adaptability, and willingness to try innovative learning strategies (Burhan & Sauri, 2025; Klassen & Tze, 2014; Zee & Koomen, 2016). Conversely, low self-efficacy may weaken teachers' motivation to innovate, reduce classroom management confidence, and limit student engagement in the learning process (Bobby et al., 2025; Skaalvik & Skaalvik, 2007). Therefore, improving teachers' self-efficacy is an important aspect of enhancing the quality of PAI learning.

With the development of educational paradigms, supervision is no longer viewed merely as an oversight activity, but as a collaborative process involving active interaction between supervisors and teachers (Samsudin, 2026). Collaborative supervision emphasizes professional partnership, reflective dialogue, evidence-based feedback, and joint problem-solving (Anengsih et al., 2026; Hattie & Timperley, 2007). In this approach, teachers are positioned as active subjects in developing their competencies, while the head of the madrasah acts as a facilitator and professional partner in improving the quality of learning. This view is consistent with professional development literature which emphasizes active learning, sustained support, coherence with teachers' needs, and collective participation as important conditions for teacher learning (Desimone, 2009; Opfer & Pedder, 2011).

Collaborative supervision is believed to have great potential in enhancing teachers' self-efficacy because open and supportive interactions provide teachers with opportunities to reflect on teaching practices, receive constructive feedback, and develop more effective teaching strategies (Rahman, 2023). Such processes are closely related to the sources of teacher self-efficacy, particularly mastery experience, vicarious learning, and verbal persuasion (Tschannen-Moran & McMaster, 2009). In addition, collaborative supervision can improve teaching performance through continuous mentoring and coaching based on real classroom needs; teacher coaching has been shown to support improvement in instructional quality and student achievement (Kraft et al., 2018).

Several previous studies have shown that educational supervision contributes to the improvement of teaching quality and teacher competence (Prasetia et al., 2022). Broader studies on school leadership and professional learning also indicate that principals' instructional leadership, teacher motivation, organizational support, and professional learning practices can improve classroom practices (Blase & Blase, 1999; Thoonen et al., 2011). However, most research still focuses on supervision in general and has not specifically examined collaborative supervision as a

distinct approach in relation to self-efficacy and teaching performance among Islamic Education (PAI) teachers. On the other hand, studies on teacher self-efficacy show that efficacy beliefs are linked to instructional quality, teacher well-being, job satisfaction, and student outcomes (Caprara et al., 2006; Holzberger et al., 2013; Zee & Koomen, 2016). This indicates a research gap in the madrasah context, especially because PAI teachers carry pedagogical responsibilities that integrate cognitive, moral, and spiritual dimensions.

Additionally, based on field observations, there are still teachers who lack confidence in teaching, are not innovative in using teaching methods, and have not yet optimised classroom management. This indicates that teachers' self-efficacy still needs to be improved. On the other hand, the implementation of supervision in madrasahs has not yet fully adopted a collaborative approach that empowers teachers. This condition indicates a gap between the ideal practice of supervision and the reality on the ground.

Based on the description, it can be concluded that there is a need to examine more deeply the influence of collaborative supervision on the improvement of self-efficacy and teaching performance of PAI teachers. This research is important because it not only contributes theoretically to the development of the concept of educational supervision but also provides practical implications for school principals in designing more effective and humane supervision strategies.

This research focuses on PAI teachers at MAN 2 Tanah Datar as the research subjects. The objectives of this research are: (1) to analyse the influence of collaborative supervision on the self-efficacy of PAI teachers, (2) to analyse the influence of collaborative supervision on the teaching performance of PAI teachers, and (3) to examine the relationship between self-efficacy and the teaching performance of PAI teachers. Thus, it is expected that this research can contribute to improving the quality of educational supervision in madrasahs and encourage the continuous professional development of PAI teachers.

Method

The research approach used in this study is a quantitative approach with an associative ex post facto research type. This approach was chosen because the research aims to analyse the influence of the collaborative supervision variable on the self-efficacy and teaching performance of PAI teachers. Additionally, this study also employs Structural Equation Modelling (SEM) to examine both direct and indirect relationships between the variables studied in a more comprehensive manner.

The location of this research was conducted at MAN 2 Tanah Datar. The selection of the research location was based on the consideration that the madrasah has a sufficient number of PAI teachers and has routinely conducted academic supervision activities, making it relevant to the focus of the research. This research was conducted over a period adjusted to the data collection needs, from the preparation stage, implementation, to data analysis.

The population in this study consists of all PAI teachers at MAN 2 Tanah Datar. The sampling technique used is total sampling or census, where all members of the population are made the sample for the study, considering the relatively limited number of the population. Thus, the sample in this study consists of all PAI teachers who actively teach at the madrasah. The study involved all PAI teachers at MAN 2 Tanah Datar (N = 30), using a total sampling technique. The use of SEM was considered appropriate because the study employed a relatively simple structural model with a limited number of constructs and indicators, while the sample met the minimum requirements recommended for variance-based SEM analysis (PLS-SEM), which is suitable for small population

studies, exploratory causal modeling, and prediction-oriented research (Hair et al., 2019).

The variables in this study consist of three main variables: collaborative supervision as the independent variable (X), self-efficacy as the intervening variable (Z), and teacher performance as the dependent variable (Y). Collaborative supervision is measured through indicators such as professional partnership, two-way communication, joint reflection, and constructive feedback. Self-efficacy is measured through indicators of level (degree of confidence), strength (strength of confidence), and generality (scope of confidence). Meanwhile, teacher performance is measured through the ability to plan lessons, implement lessons, and evaluate learning outcomes.

The research instrument used is a questionnaire with a Likert scale, structured based on the indicators of each variable. The questionnaire was distributed to respondents to obtain data on teachers' perceptions of collaborative supervision, self-efficacy levels, and teaching performance. Before use, the research instrument was first tested for validity and reliability to ensure that the instrument is suitable for use in the research.

Data collection techniques were carried out through the distribution of questionnaires, supported by documentation to obtain additional data relevant to the research. The documentation used includes data on the number of teachers, teaching materials, and other documents related to supervision activities in the madrasah.

The validity test of the instrument is conducted using construct validity tests through factor analysis, while the reliability test is conducted using the Cronbach Alpha coefficient. The instrument is declared valid if the factor loading value meets the established criteria, and reliable if the Cronbach Alpha value is greater than 0.70.

The data analysis technique in this study uses SEM (Structural Equation Modelling) analysis with SmartPLS software. The analysis is conducted through several stages, namely: (1) testing the measurement model (outer model) to assess the validity and reliability of the construct, (2) testing the structural model (inner model) to see the relationships between variables, and (3) hypothesis testing to determine the direct and indirect effects between variables. Data were analyzed using SmartPLS, which is suitable for variance-based Structural Equation Modeling (PLS-SEM). The analysis was conducted in two stages: evaluation of the measurement model through convergent validity, discriminant validity, composite reliability, Cronbach's Alpha, and AVE, followed by evaluation of the structural model through path coefficients, coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), and hypothesis testing (Hair et al., 2019).

Through this approach, it is expected that the research can provide a comprehensive picture of the influence of collaborative supervision on the self-efficacy and teaching performance of PAI teachers at MAN 2 Tanah Datar, both directly and through mediation relationships.

RESULTS AND DISCUSSION

The Influence of Collaborative Supervision on the self-efficacy of PAI Teachers

Based on the data analysis that has been conducted, it was found that collaborative supervision has a positive and significant influence on the self-efficacy of Islamic Religious Education (PAI) teachers at MAN 2 Tanah Datar. This result was obtained through testing using Structural Equation Modelling (SEM), which showed a strong relationship between the two variables. Self-efficacy in this study is understood as the teachers' belief in their ability to effectively carry out teaching tasks. The level of teachers' self-efficacy is measured through three main indicators, namely level (the degree of confidence in facing tasks), strength (the strength of confidence in completing tasks), and generality (the ability to apply confidence in various situations). Based on the results of descriptive analysis, the majority of PAI teachers show a high level of self-efficacy. This is evident from the teachers'

confidence in managing the classroom, delivering the material, and facing various challenges in the learning process.

The implementation of collaborative supervision at MAN 2 Tanah Datar is marked by open communication between the head of the madrasah and teachers, teacher involvement in the learning reflection process, and the provision of constructive feedback. Teachers are not only the subjects of evaluation but are also involved as partners in the process of improving learning. This condition has a positive psychological impact, especially in enhancing teachers' self-confidence. Statistically, the influence of collaborative supervision on self-efficacy can be seen in the following

Table 1. Path Coefficient of Collaborative Supervision on Self-Efficacy

Variabel	Path Coefficient	t-statistic	p-value
Supervisi Kolaboratif → <i>Self-efficacy</i>	0,67	5,21	0,000

Based on the table, it can be seen that the path coefficient value of 0.67 indicates a positive relationship direction. This means that the better the implementation of collaborative supervision, the higher the self-efficacy of PAI teachers. The t-statistic value of 5.21, which is greater than 1.96, and $p < .001$, which is less than 0.05, indicate that the influence is statistically significant. Prior to hypothesis testing, the measurement model was evaluated by examining factor loadings, Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha to establish construct validity and reliability. Furthermore, the structural model was assessed using the coefficient of determination (R^2), predictive relevance (Q^2), and other relevant model-fit indicators to ensure the adequacy and predictive power of the proposed model.

Thus, it can be concluded that collaborative supervision plays an important role in enhancing teachers' self-efficacy in conducting lessons. Teachers who receive support, guidance, and opportunities for open dialogue tend to have higher confidence in carrying out their professional duties.

Rather than merely confirming the statistical significance of the proposed relationships, the findings should be interpreted in light of relevant theories and previous empirical studies, highlighting how collaborative supervision strengthens teachers' self-efficacy and teaching performance through reflective dialogue, professional support, and participatory decision-making within the specific context of Islamic education.

The Influence of Collaborative Supervision on the Teaching Performance of PAI Teachers

The research results also indicate that collaborative supervision has a significant impact on the teaching performance of PAI teachers at MAN 2 Tanah Datar. The teaching performance in this study includes the teacher's ability to plan, implement, and evaluate learning. Based on observations and data obtained through questionnaires, the teaching performance of PAI teachers falls into the good category. The teacher has been able to systematically prepare learning tools, conduct interactive learning, and evaluate learning using various methods. However, there are still several aspects that need to be improved, such as the variation of teaching methods and the use of more innovative media.

Collaborative supervision makes a real contribution to improving teachers' teaching performance. Through a dialogic and participatory supervision process, teachers receive various inputs that help them improve the quality of learning. In addition, the presence of joint reflection also encourages teachers to continuously make improvements. The results of the statistical analysis regarding the influence of collaborative supervision on teaching performance can be seen in the

following table:

Table 2 Reliability

Variabel	Path Coefficient	t-statistic	p-value
Collaborative Supervision → Teaching Performance	0,54	4,38	0,000

Source: Data SPSS 22

The path coefficient value of 0.54 indicates that collaborative supervision has a positive impact on teachers' teaching performance. The t-statistic value of 4.38, which is greater than 1.96, and the p-value of 0.000 indicate that the influence is significant.

This means that the more effective the collaborative supervision conducted by the head of the madrasah, the better the teaching performance of PAI teachers. Teachers become more focused in planning lessons, more confident in delivering lessons, and more systematic in conducting evaluations.

The Relationship Between Self-efficacy and the Teaching Performance of PAI Teachers

In addition to examining the influence of collaborative supervision, this study also analyses the relationship between self-efficacy and the teaching performance of PAI teachers. The analysis results show that there is a positive and significant relationship between the two variables. Teachers with high self-efficacy tend to show better teaching performance. This is evident from the teacher's ability to manage the class, deliver material confidently, and use various diverse teaching methods. Conversely, teachers with low self-efficacy tend to be less optimal in conducting lessons.

Self-efficacy serves as an internal factor that encourages teachers to bravely try new things in their teaching. Teachers who are confident in their abilities will find it easier to adapt to various situations and challenges that arise in the classroom. The results of the statistical analysis regarding the relationship between Self-efficacy and teaching performance can be seen in the table below:

Tabel 3. The Relationship between Self-efficacy and PAI Teacher Teaching Performance

Variabel	Path Coefficient	t-statistic	p-value
<i>Self-efficacy</i> → teaching performance	0,71	6,02	0,000

Source: SPSS 22 Data

The path coefficient value of 0.71 indicates a strong relationship between Self-efficacy and teaching performance. The t-statistic value of 6.02 and the p-value of 0.000 indicate that the relationship is statistically significant. Thus, it can be concluded that self-efficacy is an important factor affecting the teaching performance of PAI teachers. The higher the level of self-efficacy of the teacher, the better the quality of the learning conducted.

The results of this study emphasise three main interconnected findings that form a cohesive explanation for the improvement in learning quality: the influence of collaborative supervision on the self-efficacy of PAI teachers, the influence of collaborative supervision on the teaching performance of PAI teachers, and the relationship between self-efficacy and the teaching performance of PAI teachers. These three findings do not stand alone but reinforce each other in forming a holistic model of teacher professionalism enhancement, which includes external aspects such as supervision and internal aspects such as the teachers' self-belief.

The influence of collaborative supervision on the self-efficacy of PAI teachers

A collaborative supervision approach has a significant contribution in building and strengthening teachers' self-confidence. Self-efficacy, as a psychological concept introduced by Bandura (1997), refers to a person's belief in the ability to organize and execute actions required to achieve specific outcomes. In the context of education, teacher self-efficacy becomes an important factor that influences how teachers plan lessons, face instructional challenges, manage classrooms, and maintain motivation in complex teaching situations (Abuziyad, 2024; Tschannen-Moran & Woolfolk Hoy, 2001; Zee & Koomen, 2016).

Collaborative supervision provides space for teachers to actively engage in the process of learning reflection, which ultimately strengthens their mastery experience. When teachers are able to identify small successes in the learning process and receive reinforcement from the head of the madrasah, their self-confidence increases. This is in line with research findings stating that organizational support and positive teaching experiences contribute significantly to the improvement of teachers' self-efficacy (Goddard et al., 2004; Sujianto et al., 2023). Professional development that combines modeling, practice, feedback, and reflection is also closely related to the strengthening of teacher self-efficacy and implementation of new teaching strategies (Tschannen-Moran & McMaster, 2009).

In addition, through collaborative interactions, teachers also gain vicarious experience, which means learning from the experiences of others. Discussions with the head of the madrasah and colleagues allow teachers to see various alternative effective teaching strategies. Sujianto et al. (2023) research shows that collaborative learning among teachers can increase confidence in teaching, as teachers feel they are not alone in facing learning problems.

The aspect of verbal persuasion is also an important part of collaborative supervision. Feedback provided by the head of the madrasah in a constructive atmosphere can enhance teachers' motivation and self-confidence. This is supported by the research of Abdurrahman and Muhammad (2023), which found that verbal support from school leaders has a positive relationship with teachers' self-efficacy. Feedback is most powerful when it helps teachers understand the gap between current performance and desired learning goals, and when it is followed by opportunities for reflection and improvement (Blase & Blase, 1999; Hattie & Timperley, 2007).

Additionally, the emotional condition of teachers is also influenced by the supervision approach used. Collaborative supervision tends to create a comfortable and non-pressuring atmosphere, allowing teachers to develop themselves optimally. This is different from traditional supervision, which often causes anxiety and psychological pressure. Thus, collaborative supervision not only enhances technical competence but also improves the psychological well-being of teachers, which ultimately leads to an increase in self-efficacy.

The influence of collaborative supervision on the teaching performance of PAI teachers

Collaborative supervision can comprehensively improve the quality of learning. Teaching performance, which includes planning, implementation, and evaluation of learning, improves through reflective and continuous coaching. In the aspect of lesson planning, collaborative supervision helps teachers develop learning tools that are more systematic and relevant to students' needs. Discussions between teachers and the head of the madrasah allow for the evaluation of learning objectives, the selection of methods, and the appropriateness of the material. This is in line with research by Tamim Mulloh and Muslim (2022), and with the wider literature on professional development showing that effective teacher learning requires active participation,

coherence with practice, sustained support, and collective engagement (Desimone, 2009; Opfer & Pedder, 2011).

At the stage of lesson implementation, collaborative supervision has a significant impact on enhancing the interaction between teachers and students. Teachers become more confident and daring in trying various innovative teaching methods. This is supported by the research of Armizawati and Asmendri (2022), which shows that effective feedback from supervisors can improve the quality of teaching and student learning outcomes. In this context, collaborative supervision serves as a means to provide constructive and continuous feedback. This pattern is consistent with evidence that teacher coaching and feedback-oriented supervision can improve instructional practice and produce positive effects on student learning (Hattie & Timperley, 2007; Kraft et al., 2018).

In addition, collaborative supervision also encourages teachers to be more reflective in conducting their teaching. Teachers not only focus on delivering material but also on how students understand and internalize that material. This aligns with the concept of reflective teaching proposed by Srimawati (2024), which emphasizes the importance of reflection in improving the quality of professional practice. Reflection and feedback-seeking behavior are strongly connected with teachers' learning orientation and self-efficacy, especially when school leaders create a supportive climate for professional inquiry (Runhaar et al., 2010; Thoonen et al., 2011).

In the aspect of learning evaluation, collaborative supervision helps teachers develop a more authentic and comprehensive assessment approach. Teachers are beginning to integrate various forms of assessment such as portfolios, projects, and observations, so that assessment is not only focused on cognitive aspects. This is in line with the research by Setyati & Niron (2025), which shows that continuous formative assessment can significantly improve students' learning outcomes. Thus, collaborative supervision not only enhances teachers' technical teaching performance but also encourages the creation of more meaningful and student-centered learning. This indicates that the right supervisory approach can have a broad impact on the quality of education.

The relationship between Self-efficacy and the teaching performance of PAI teachers

Research results show that self-efficacy has a strong relationship with teaching performance, which means that teachers' self-confidence is an important factor in determining the quality of learning. These findings are in line with Bandura's social cognitive theory, which states that self-efficacy influences action choices, levels of effort, persistence, and resilience when facing difficulties (Bandura, 1997). Teachers with high self-efficacy tend to have greater motivation to achieve success in learning. They are more willing to take risks in trying new methods, more flexible in facing change, and more capable of overcoming obstacles in the classroom. Longitudinal evidence also indicates that self-efficacy and instructional quality are interrelated in teachers' professional practice (Holzberger et al., 2013).

Research by Firmansyah et al. (2025) also shows that teacher self-efficacy influences the quality of teaching and student learning outcomes. Teachers who have high self-efficacy tend to show better teaching performance because they have a strong commitment to their profession. Additionally, research by Isnaini (2025) found that self-efficacy has a significant correlation with teaching effectiveness. These findings are consistent with meta-analytic and synthesis studies showing that teacher self-efficacy is associated with teaching effectiveness, classroom processes, teacher well-being, and student academic adjustment (Caprara et al., 2006; Klassen & Tze, 2014; Zee & Koomen, 2016). In the context of this research, the relationship between self-efficacy and

teaching performance also shows a mediating role. Collaborative supervision enhances teachers' self-efficacy, which ultimately impacts the improvement of teaching performance. This is in line with the research by Trisnawati and Indriani (2023), which states that self-efficacy can act as a mediator in the relationship between work environment factors and teacher performance.

Thus, the improvement in teaching performance is not only influenced by external factors such as supervision but also by internal factors such as the teacher's self-efficacy. This shows the importance of a holistic approach in improving the quality of education, which includes strengthening both structural and psychological aspects simultaneously.

In the context of Islamic education, this finding has very significant implications. Islamic Education teachers not only serve as educators but also as moral and spiritual guides for students (Trisnawati & Indriani, 2023). Therefore, the improvement of self-efficacy and teaching performance of PAI teachers will directly impact the quality of character formation of students. This is in line with the goals of Islamic education, which emphasise a balance between cognitive, affective, and psychomotor aspects.

Overall, this discussion shows that collaborative supervision, self-efficacy, and teaching performance are three interrelated components in improving the quality of education. Collaborative supervision functions as an external factor that encourages the enhancement of self-efficacy, while self-efficacy acts as an internal factor that influences teaching performance. The interaction between these two factors results in a more optimal improvement in the quality of learning.

Thus, the consistent and sustainable implementation of collaborative supervision becomes very important in enhancing the professionalism of PAI teachers. The head of the madrasah, as the learning leader, needs to develop a more humanistic, participatory, and development-oriented supervision approach for teachers. This effort is expected to create a conducive learning environment, improve the quality of education, and produce students who are not only intellectually smart but also possess strong character.

Conclusion

This study concludes that collaborative supervision has a significant positive effect on both the self-efficacy and teaching performance of Islamic Education (PAI) teachers at MAN 2 Tanah Datar. In addition, self-efficacy significantly contributes to improving teaching performance, indicating that teachers' confidence in their professional abilities plays an important role in achieving effective learning outcomes. These findings suggest that collaborative supervision serves as an important mechanism for strengthening both the psychological and professional capacities of teachers.

However, this study has several limitations. First, the sample size was limited to 30 PAI teachers, which may restrict the generalizability of the findings. Second, the research was conducted in a single madrasah, limiting the applicability of the results to other educational contexts. Third, the study relied on self-report questionnaire data, which may be subject to response bias. Therefore, future studies are encouraged to involve larger samples, multiple madrasahs, and mixed-method approaches to obtain more comprehensive findings.

Practically, the findings imply that madrasah leaders should adopt collaborative and participatory supervision practices that emphasize professional dialogue, reflective feedback, and continuous teacher development. Such an approach can strengthen teachers' self-efficacy and ultimately contribute to improved teaching performance and educational quality in madrasahs.

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