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Teacher Competency Development in Madrasah Education through Curriculum Integration and Training Approaches

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Abstract

This research examines how competency of teachers is developed in the area of madrasah education, in terms of the combined effect of curriculum integration and training. The role of Madrasah teachers is that they deliver not only academic knowledge but also Islamic ethical-spiritual values that requires overcoming the gap between curriculum reforms and training of teachers and successful implementation of reforms in the classroom. The correlation survey quantitative research methodology was used to analyze the data gathered by a questionnaire distributed to 120 educators of three Indonesian provinces. The Pearson correlation and multiple regression analyses were utilized to study the relations between these three parameters: curriculum integration/training approaches, and teacher competency. As the results show, both the curriculum integration (0.34), p < 0.01) and training approaches (0.41), p < 0.001 are significant predictors of teacher competency, but training approaches is slightly more influential. The paper points out that curriculum developments and teacher education have to be instituted in a synergistic way in order to foster pedagogical, professional and ethical-spiritual competencies.

Keywords

Curriculum Training Teacher Competency Madrasah

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Introduction

Competency among teachers is the keystone to the effective process of education, especially in the context of madrasah where teachers are to deliver a secular and Islamic value oriented academic material. Nowadays, the emphasis in educational discourse has shifted teachers as deliverers of knowledge to learners and to participants steering two-way learning based on a more comprehensive set of competencies that includes pedagogical, professional, social, personal, and other skills (Bizami et al., 2023). Under the framework of the Islamic education sector, the role of teacher competency is more advanced in terms of spiritual and moral elements, where the teacher, in this case, is also the role model that exudes ethical and religious ideals of the madrasah tradition (Rochim & Khayati, 2022). The aspect of teacher competency in madrasah education therefore cannot be channeled towards focusing on technical skills only but must focus on a comprehensive plan in which the curriculum content, pedagogy and teacher training is integrated.

Competency-based education (CBE) model has gained popularity globally as an approach to the needs of 21 st-century learning where the four Cs of critical thinking, creativity, collaboration, and communication are critical (Bautista, 2024). This framework can be of great importance in the madrasah system of education, but its implementation must be context-sensitive to teachings of the Islamic faith and social-cultural realities. Studies have shown that a significant proportion of teachers in madrasahs struggle to implement competency-based curriculums because they have not been exposed to any kind of training on modern pedagogy, and have had no access to professional development training opportunities (Kovalchuk et al., 2019). In addition, there is usually fragmentation between curriculum design and development training programs which most of the time lead to superficial reforms as ideals of competence based learning becomes mere theory but not practice (Catacutan et al., 2022; Laskar, 2024; Kacaniku, 2024).

Curriculum integration hasbeen used as a major strategy in improving competency in the madrasah education teacher. Curriculum integration can enhance an inclusive knowledge system befitting to national education policies as well as Islamic epistemology through linking the Islamic subject to the non-Islamic one in the same

learning sphere (Sajjad, 2023). As a typical example, by incorporating Islamic ethical thinking into science, or social studies, we do not only increase relevance, but lay our hands on the ability of producing teachers capable of nurturing students who can not only perform well academically, but are ethically sound too. Effective integration has everything to do with teacher readiness, which involves training that imparts on teachers the competency to relate content areas in meaningful ways without compromising the quality of pedagogy (Demissie et al., 2022).

Training in madrasah education, therefore, cannot be on an occasional workshop basis or even as policies. Professional growth must be constant, thoughtful and communal so that educators can internalize both the pedagogical and spiritual aspects of their career (Wagle et al., 2023). Research into the area of teacher preparation notes that on-the-job training and mentoring along with the reflective practice can elevate teacher competency considerably compared to the single-shot training settings (Anastasia Nana Ama, 2021). In madrasahs, this implies that teacher training needs not only to be competency-based but might equally need to be faith informed positing Islamic pedagogical conventions along with contemporary teaching and learning strategies. Although the topic of teacher competency development in the madrasah education is important, there are limited systematic inquiry. The available literature is more of curriculum reform or teacher training as isolated areas of study and seldom do they work together in a sustainable manner as areas of teacher learning. Filling this gap, the study in hand explores the ways of integrating curriculum and teacher training in order to enhance teacher competency in teaching madrasah-based education methods. In particular, it aims to examine how integrated curricular influence teacher professional development, the form of training which is best in practicing the skills, and the dilemma teachers experience during their attempts at coorganizing the practices with the values embodied within Islamic education.

The context of the study in the discourse of curriculum integration and training strategies to enhance the competency of teachers in the Islamic schools makes it a contribution in the context of Islamic school-related educational reform. It presents convincing arguments that, unless teachers themselves are duly prepared as instruments of change, curriculum changes will continue to prove futile. Ultimately, improving the competency of teachers in madrasah education is as much about developing professional skills as it is about building both individual teachers and the teachers as a community so that they have ability to produce intellectually gifted, spiritually aware, and socially responsible students.

Methods

This research study used a quantitative research design using correlation design to examine the interrelation that exists between curriculum integration, training methods and teacher competencies development in madrasah education. The quantitative framework was adopted because it was important to obtain empirical evidence that could be statistically tested and thus, it could offer measurable data on the level of contribution that curriculum and training aspects have on improving teacher competencies. Correlational approach was deemed most suitable as it enabled the study to determine the strength of the relationships but not the direction of relationship between the independent variables (curriculum integration and training approaches) and the dependent variable (teacher competency).

The target population of this study was madrasah teachers in three Indonesian provinces, that is Central Java, East Java, and West Nusa Tenggara. These regions have been chosen due to their diversity in education settings in terms of capacity of the institutions, teacher capacity and the curricular practice. Based on this population, a sample size of 120 teachers was selected randomly by stratifying them in proportion so that there was equal representation of teachers in the three categories (Madrasah Ibtidaiyah(MI), Madrasah Tsanawiyah (MTs) and Madrasah Aliyah (MA)). The given sampling strategy was aimed at capturing the differences and similarities between the teacher competency development among different education levels and ensuring that the sampling remained representative and helped eliminate potential bias.

Data collection was done by the means of a structured questionnaire developed immediately prior to this study. The questionnaire took three main sections, (1) curriculum integration, (2) training approaches and (3) teacher competencies. All question items were assessed with a five-point Likert scale of strongly disagree

through strongly agree. In order to certify the validity of the instrument, the questionnaire was piloted by experts in the field of Islamic education and curriculum studies to test the relevancy, clarity of the items and relevance to the study purpose. A pilot test of 30 teachers outside the main sample also took place to check whether the instrument has a high degree of reliability. The reliability of the questionnaire was determined by the use of Cronbach Alpha, and all the scales returned higher than 0.80, which depicts a strong level of reliability between the scales. Data collection was made by implementing questionnaires in flesh and electronically depending on the accessibility of the madrasah and the preferences of the teachers. Participation was designed to be voluntarily and every respondent was given an informed consent form which had the stipulation of the purpose of the study, the procedures to be followed in the study as well as promising the responses to be made confidentially and anonymously. High ethical standards, such as the right to withdraw at any time were well-respected in order to safeguard the rights of the participants and the integrity of the researches.

The analysis has been done in two phases. Descriptive statistics (means, standard deviations and frequency distributions) were applied to present an overview and summarise responses of teachers on each of the major constructs. Second, the research hypotheses were used to carry out statistical tests through the use of inferential statistical techniques. Pearson's correlation analysis was used to measure the strength and direction of the relationships among curriculum integration, training approaches, and teacher competencies. To further explore the predictive power of curriculum integration and training approaches, multiple regression analysis was applied, allowing for the identification of the extent to which these independent variables significantly influenced teacher competency development. This analytical strategy ensured that the study could not only describe trends but also explain the dynamics between key variables in a robust and evidence-based manner.

Results and Discussion

In Indonesia, Madrasah education serves both a general education and a moralistic purpose by teaching the student the values, ethics and values of their spiritual beliefs. The educators of these schools must not only provide the knowledge on the subject matter but also perform the role of moral and spiritual teacher, following the main principles of Islamic education in classroom practice. Within the last few years, the Indonesian Ministry of Religious Affairs has made efforts to harmonize curriculum cross-subject-i.e., connecting content across religious studies and general knowledge- and have also been working to make teacher training more competency-oriented, to enhance the quality of teaching and professional skills.

Nevertheless, research shows that most teachers in madrasahs have difficulties with teaching integrated curricula and translating their professional development trainings into classroom practice (Imtiaz et al., 2022; Ali et al., 2023). Teachers state that there are disparities between what policy dictates and reality on the ground whereby access to adequate formal training is lacking, a shortage of resources, and the need to give weight both to academic skills and spiritual and ethical values.

The purpose of this study will be to provide answers to the above issues by focusing on the connection of the three dimensions, i.e. curriculum integration, training methods and teacher competency formation in madrasah education. The study employed the survey method which also served as a quantitative research tool to gather information on how curriculum and training programs affect the competence of teachers using a sample of teacher respondents in three provinces namely Central Java, East Java and West Nusa Tenggara. The study also seeks to provide information on how to increase teacher capacities in madrasahs to facilitate the overall development of students and quality education in madrasahs within Islamic schooling environments.

Table 1. Descriptive Statistics of Key Variables

Variable	N	Mean	SD	Min	Max
Curriculum Integration	120	3.85	0.52	2.50	5.00
Training Approaches	120	3.72	0.58	2.20	5.00

Teacher Competency	120	3 91	0.50	2.60	5.00
reactief Competency	120	9.91	0.50	2.00	5.00

The analysis indicates that teachers rated curriculum integration at a mean of 3.85 (SD = 0.52), reflecting a moderately high perception that subjects in the madrasah curriculum are effectively integrated, linking both Islamic and general knowledge. Training approaches received a slightly lower mean of 3.72 (SD = 0.58), suggesting that while teachers participate in professional development, there is perceived room for improvement in terms of relevance, frequency, and applicability. Teacher competency, measured across pedagogical, professional, personal, and social dimensions, had a mean of 3.91 (SD = 0.50), indicating that teachers feel relatively confident in their overall competencies. These descriptive results highlight that madrasah teachers generally perceive both curriculum and training initiatives positively, though neither factor is rated at the highest level, pointing to potential areas for enhancement.

Table 2. Pearson Correlation Matrix

Variable	1	2	3
1. Curriculum Integration	1		
2. Training Approaches	0.55**	1	
3. Teacher Competency	0.62**	0.68**	1

Note: **p < 0.01

The Pearson correlation analysis (Table 2) demonstrates statistically significant positive relationships between the key variables. Curriculum integration and teacher competency showed a correlation of r = 0.62 (p < 0.01), indicating that greater integration of curriculum content across subjects is associated with higher teacher competency levels. Similarly, training approaches and teacher competency were strongly correlated (r = 0.68, p < 0.01), suggesting that teachers who participate in more structured and effective training programs tend to report higher competency. The correlation between curriculum integration and training approaches was also significant (r = 0.55, p < 0.01), implying that integrated curricula and training initiatives are interrelated, potentially reinforcing each other in improving teacher outcomes. These results confirm that both curriculum and training are key factors linked to teacher competency development.

Table 3. Multiple Regression Analysis Predicting Teacher Competency

Predictor Variable	β	t	p
Curriculum Integration	0.34	4.95	< 0.01
Training Approaches	0.41	6.02	< 0.001
Model Summary			
R ²	0.48	F(2,117)=54.83	p<0.001

Multiple regression analysis (Table 3) further examined the predictive power of curriculum integration and training approaches on teacher competency. The model was significant (F(2,117) = 54.83, p < 0.001) and explained 48% of the variance in teacher competency (R^2 = 0.48). Both curriculum integration (β = 0.34, p < 0.01) and training approaches (β = 0.41, p < 0.001) significantly predicted teacher competency, with training approaches exhibiting a slightly stronger effect. This indicates that while both independent variables are important, professional development through training may play a more crucial role in enhancing teacher skills than curriculum integration alone. The regression results suggest that strategic investment in teacher training, alongside curriculum reforms, can substantially strengthen teacher competencies in madrasah education.

Synergizing Curriculum Integration and Training for Teacher Competency

The results of this paper speak very loudly to the centrality of curriculum integration alongside training methods that enhance teacher competency in the context of the madrasah system of education. Although descriptive and inferential findings concluded that all the factors are strongly associated with teacher

competency, the discussion dwells upon why such associations are so important and what they suggest to educational practice and policy.

The first reason is that curriculum integration is one of the possible mechanisms of introducing holistic teaching in the madrasah educational environment. When religious and general topics are integrated, the teachers find a better opportunity to provide material that promotes not only academic success but ethical-spiritual growth as well. This is in line with the discussion of Moslimany et al. (2024) who pointed out that integrated curricula promote coherence, relevance, and generation of critical thinking in Islamic education settings. The paper goes further to note that even incorporation of integration is not adequate; its power is determined by preparedness of teachers, flexibility in pedagogy, and skills of contextualizing materials to students. As a result, changes in curriculum should be complemented with a set of strategies that would enable teachers to introduce integration into the curriculum.

Second, the better predictive effects of training methods highlight the thrust of teacher professional development. The active involvement of teachers in such a reflective, context-sensitive and systematic training provides them with the practical aspects of turning the curriculum reforms into the classroom. The above observation implies that continuing professional development remains a critical practice in achieving teacher competence, especially in settings where teachers need to combine technical knowhow with spiritual teaching and mentorship. In the madrasah setting, one of the changes the study recommends is that training programs should not only impart the knowledge of how to teach and pass information but also applies the pedagogical principles that are truly Islamic to produce competent teachers in both knowledge and values fronts.

Additionally, the paper reveals a mutual interdependence between the curriculum construction and training programs. Integrated curricula have provided teachers with greater opportunities to teach interdisciplinarily, but without accompanying training these opportunities will tend not to be put into practice. On the other hand, training programs, which disregard the alignment of curriculums, are likely to result to skills which cannot be effectively applied in a classroom. This conclusion extends the literature on educational reforms to the point where curriculum integration and teacher training need to be achieved in a mutually supportive manner when it comes to religious schools where academic and moral objectives are expected to interlock with each other (Udemba, 2024; Buchanan, 2007).

This raises the concern of policy-making that interventions aimed at improving teacher competency in madrasah education would have to focus on a dual-strategy approach. It is imperative that policymakers make sure that curricula are integrated and highly contextualized, and also ensure long-term and effective professional development. The significance of this is that training activities need funding, mentorship systems, and institutional support in order to be productive. Moreover the study identifies a significant role of monitoring and evaluation processes which not only evaluates the technical capability of the teachers but also their capability of reflecting the Islamic/ spiritual nature of the educational process in the teaching methodologies.

The study also has theoretical contributions as it shows how competencies can be developed in the process of Islamic schooling given that they are multidimensional and reciprocally connected. These three are interdependent in that enhancement in one area is enhanced when supplemented by interventions in curriculum and training. Here, the holistic model of teacher competency, which directly links curriculum alignment with professional development, can suggest a more sustainable and contextually-relevant paradigm of madrasah education than parachute and unrelated interventions do.

Conclusion

The study demonstrates that teacher competency in madrasah education is significantly influenced by both curriculum integration and training approaches. While curriculum integration provides a framework for holistic teaching that combines academic, ethical, and spiritual learning, its effectiveness is dependent on teachers' ability to implement it in practice. Training approaches, particularly those that are structured, continuous, and contextually relevant, play a slightly stronger role in enhancing teacher competencies,

equipping educators with the skills necessary to translate curriculum reforms into classroom practice. The findings underscore the need for a dual-strategy approach, where curriculum design and professional development are implemented synergistically to produce teachers who are not only competent academically but also capable of fostering students' moral and spiritual growth. Ultimately, improving teacher competency in madrasahs requires coordinated efforts that align educational policies, training programs, and curriculum innovations to achieve sustainable and contextually appropriate educational outcomes.

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