Beyond Classroom Management and Curriculum: How Learning Innovation Shapes Educational Quality in Islamic Boarding Schools

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Article Info

ABSTRACT

Purpose of the study: Facing pressures to enhance educational quality in the digital and multicultural era, this study examines the effects of multicultural classroom management, curriculum implementation, and learning innovation on the learning quality of junior high school students in Islamic boarding schools (pesantren). Addressing the limitations of previous research, it proposes an integrative analytical model that simultaneously investigates these three variables.

Methodology: Employing a quantitative design, the study involved 148 students from two Indonesian pesantren. Data were collected using a Likert-scale questionnaire and analyzed through multiple linear regression.

Main Findings: The findings show that multicultural classroom management and curriculum implementation do not have significant partial effects on learning quality. In contrast, learning innovation is the dominant predictor, significantly enhancing learning quality ($\beta = 0.538$, $p < 0.001$). Collectively, the three variables explain 55.4% of the variance, highlighting the decisive role of pedagogical innovation in the pesantren context.

Novelty/Originality of this study: The study's originality lies in its integrative model that simultaneously examines managerial, curricular, and pedagogical dimensions within the pesantren, a context rarely studied empirically. The practical implication emphasizes the importance of strengthening teachers' pedagogical innovation to enhance learning quality in multicultural and digital educational environments.

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1. INTRODUCTION

In today's digital and technological era, Islamic boarding schools, as the oldest Islamic educational institutions in Indonesia, face significant challenges in maintaining their relevance amid changing times and the cultural diversity of their students. Recently, the quality of learning in Islamic boarding schools has been increasingly discussed in line with the demands of the times and globalization, which emphasize adaptive and inclusive education [1]. Islamic boarding schools are not only required to produce graduates who are deeply knowledgeable in religious studies, but also capable of contributing to a multicultural society and competing globally [2], [3]. However, the reality on the ground shows that many Islamic boarding schools still experience

difficulties in managing the diversity of students, adapting the curriculum, and implementing effective learning innovations [4], [5].

The main challenges faced include three critical aspects. The first is multicultural management, which has not been optimal in creating an inclusive learning environment for students from various cultural, ethnic, and social backgrounds [6], [7]. Furthermore, the curriculum is often not fully responsive to the needs of the times and 21st-century competencies [8] and finally, learning innovations that are still limited in utilizing modern technology and pedagogical approaches. The inability to manage these three aspects has the potential to hinder holistic improvement in learning quality. [9]-[11].

Multicultural classroom management in the context of Islamic boarding schools is based on the ideas of James A. Banks and Geneva Gay, who emphasize that the learning environment must be responsive to the cultural, ethnic, and social diversity of students [12], [13]. Banks asserts that managing multicultural classrooms is not merely a technical strategy, but rather an approach that recognizes diversity as a source of learning strength. Meanwhile, Gay developed the concept of culturally responsive teaching, which emphasizes the importance of connecting teaching materials with the life experiences and cultural identities of students [14], [15]. In the context of Islamic boarding schools that face diversity in the backgrounds of their students, this approach is highly relevant for creating an inclusive and harmonious learning environment [9], [16].

In the context of this study, curriculum is understood as a dynamic framework that must be adaptive to social and technological changes [17]. Tyler emphasized the importance of formulating clear learning objectives as the basis for curriculum development, while Taba suggested a participatory approach in which the needs and characteristics of learners are the primary considerations [18]. This theory is in line with the development of contemporary Islamic boarding school curricula that seek to integrate religious education with general knowledge and 21st-century skills [4], [19], [20].

Next is learning innovation, which is the process of adopting innovation in the education system. Rogers identified factors such as relative advantage, compatibility, and complexity that influence the successful implementation of innovation. This theory is relevant to the challenges faced by Islamic boarding schools in adopting new technologies and learning methods. Research by Mustafida [21] on strategies for managing multicultural classrooms in madrasahs, Idrus [22] about the influence of curriculum on student achievement, and Rosyidah [23] on learning innovation in the digital age, has made an important contribution to understanding each of these aspects separately.

A literature review shows that these three variables have been extensively studied, but separately. Previous studies have proven the benefits of multicultural classroom management in creating a harmonious learning climate, analyzed the challenges of implementing adaptive curricula, and documented the positive impact of certain learning innovations. However, there is a significant research gap in that previous studies tend to be partial and have not examined the synergistic interaction between multicultural classroom management, curriculum, and learning innovations in an integrated analysis model, particularly in the context of the unique transformation of Islamic boarding schools. Rationally, these three aspects are interrelated; a technological innovation will be less effective without being managed in an inclusive classroom and supported by a relevant curriculum.

Based on the identification of these gaps, this study has a high urgency to develop a comprehensive quality improvement model. The proposed solution is to test an integrative model that combines these three key variables. This study proposes that learning quality (Y) is a function of the simultaneous and interactive influence of multicultural classroom management (X_1), curriculum implementation (X_2), and learning innovation (X_3). A quantitative approach with multiple linear regression analysis is used to test the causal-predictive relationship in the model. Specifically, this study aims to measure the partial influence of each independent variable and analyze their simultaneous influence on learning quality. Therefore, it is hypothesized that these three variables individually (H1-H3) and collectively (H4) have a positive and significant influence. The novelty of this study lies in its integrative approach, which combines three domains of educational improvement, namely management, curriculum, and pedagogy, into a coherent analytical framework for the context of Islamic boarding schools. The results of this study are expected to contribute theoretically in the form of model development as well as practical implications in the form of more integrated policy and strategy recommendations for Islamic boarding school administrators in responding to educational challenges in the multicultural and digital era.

2.   RESEARCH METHOD

This study uses a quantitative approach with a survey method [24], [25]. The study aims to examine the effect of three independent variables multicultural classroom management, curriculum implementation, and learning innovation on the quality of student learning. This approach is in line with the research objective of examining the causal relationship between variables through inferential statistical analysis [26]. This quantitative design was also used in the research as the basis for formulating a model of the influence between variables. The

research population consisted of all junior high school students at two Islamic boarding schools, namely Daarul Ma'arif and Miftahul Jannah, totaling 181 students.

Table 1. Data on Students at Two Islamic Boarding Schools

No.	Name of Islamic Boarding School	Number of Students Male	Female	Number
1.	Daarul Ma'arif Islamic Boarding School	34	64	98
2.	Miftahul Jannah Islamic Boarding School	35	48	83
	Total			181

Based on the Slovin formula calculation with a margin of error of 5%, the minimum sample requirement from the total population was 148 respondents. Considering that the population size was relatively small and all students met the criteria as respondents suitable for the research objectives, this study used total sampling technique, so that all members of the population were included in the sample. From the data collection process using a Likert scale questionnaire that has been tested for validity and reliability, 148 questionnaires were returned and could be processed so that the final sample size was in accordance with the minimum requirements determined through the Slovin calculation..

Research data was collected through a primary instrument in the form of a questionnaire with a 1-5 Likert scale. This questionnaire was developed specifically with reference to the theoretical framework underlying the three independent variables and one dependent variable. Some items were adapted from previous research instruments that had been tested for validity, while others were independently developed by the researchers to ensure their suitability with the theoretical indicators and the unique context of Islamic boarding schools. Overall, the questionnaire was divided into four comprehensive main sections. The first section measured the Multicultural Classroom Management Variable (X1), which described classroom management practices that were responsive to the diversity of students' backgrounds. The second section records Curriculum Implementation (X2), focusing on the application and integration of the curriculum in the pesantren environment. The third section assesses Learning Innovation (X3), which explores the application of new learning methods, media, and approaches. The fourth and final section measures Learning Quality (Y) as a dependent variable, which is an indicator of the output of the entire educational process observed

Next, validity was tested using Pearson Product Moment correlation, and the results showed that all items had a calculated r value > table r, thus declaring them valid. Reliability testing was conducted using Cronbach's Alpha, with the following results.

Table 2. Reliability testing

Variabel	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
X_1	.864	.864	17
X_2	.903	.903	15
X_3	.904	.905	17
Y	.898	.899	16

The results of the instrument reliability test show that all research variables have a very high level of internal consistency, with Cronbach's alpha coefficient values far exceeding the minimum standard of 0.70. Furthermore, the operational definitions and measurements of each variable are formulated as follows. The Multicultural Classroom Management variable (X1) is defined as the capacity of teachers to manage student diversity through inclusive communication, interaction management, and culturally responsive learning strategies, with reference to multicultural education theory [27] and classroom management principles [7]. Curriculum Implementation (X2) is understood as the process of actualizing the formal and specific pesantren curriculum, which includes aspects of planning, teaching and learning, and evaluation, based on the curriculum implementation model [28], [29]. Learning Innovation (X3) refers to the application of media, methods, creative approaches, and technology to improve learning effectiveness, based on the theory of innovation diffusion and innovative learning models [30], [31].

Meanwhile, Learning Quality (Y) is defined as the level of success of the learning process as reflected in satisfaction, achievement of objectives, quality of interaction, and development of student competencies, with reference to the assessment framework and educational quality standards [32]. To test the relationship between variables, data analysis was performed using multiple linear regression techniques with the help of SPSS software. This method was chosen based on the nature of the interval data and the research objective to test the causal-predictive influence of the three independent variables, both partially and simultaneously, on the

dependent variable. The results of the analysis confirmed that the three independent variables had a significant influence, with the largest contribution coming from learning innovation (beta coefficient = 0.547; $p < 0.001$).

3. RESULTS AND DISCUSSION

The Effect of Multicultural Classroom Management, Curriculum Implementation, and Learning Innovation on Learning Quality The results of multiple linear regression analysis show that multicultural classroom management, curriculum implementation, and learning innovation simultaneously contribute significantly to learning quality. This is indicated by a coefficient of determination (R^2) value of 0.563 with an Adjusted R^2 value of 0.554, as presented in the following Table 3.

Table 3. Determination Coefficient Test Results

Model	R	R Square	Adjusted R Square	Standard Error of Estimation
1	0,750 [a]	,563	,554	8.06750

This value indicates that 55.4% of the variation in learning quality can be explained by the three independent variables in the research model, while the remaining 44.6% is influenced by other factors outside the model studied. The results of the coefficient of determination test show that an R value of 0.750 indicates a strong relationship between the independent and dependent variables. The Standard Error of Estimation of 8.06750 indicates that the regression model has an error in prediction that is still acceptable in social research. Thus, overall, the regression model constructed has sufficient predictive power to explain the quality of learning in the context of Islamic boarding schools. These findings confirm that although not all variables are significantly influential individually, collectively the three variables still play an important role in shaping the quality of learning. This is in line with the view that the quality of learning is the result of complex interactions between structural, managerial, and pedagogical factors [33], [34].

To see the contribution of each variable in more detail, a partial significance test was conducted, which included the unstandardized regression coefficient (B), standardized coefficient (Beta), t-value, and significance level of each independent variable presented in the following Table 4.

Table 4. Multiple Linear Regression Results

Variable	B	Standard Error	Beta	T	Sign
(Constant)	15.437	3.720	–	4,150	0,000
X1 – Multicultural Classroom Management	0,137	0,086	0,137	1,581	0,116
X2 – Curriculum	0,137	0,099	0,136	1,394	0,166
X3 – Learning Innovation	0,487	0,077	0,538	6,309	0,000

Based on the table, the multiple linear regression equation produced in this study can be formulated as follows:

$$Y = 15.437 + 0.137X_1 + 0.137X_2 + 0.487X_3$$

Description:
Y = learning quality, X_1 = multicultural classroom management, X_2 = curriculum implementation and X_3 = learning innovation

The equation shows that without the contribution of the three independent variables, the quality of learning has a constant value of 15.437. Each one-unit increase in multicultural classroom management and curriculum implementation will increase learning quality by 0.137, while a one-unit increase in learning innovation will increase learning quality by 0.487. However, the statistical significance of each coefficient needs to be analyzed further.

The partial test results show that multicultural classroom management (X_1) has a significance value of 0.116 (>0.05) with a B coefficient of 0.137. This indicates that, statistically, multicultural classroom management does not have a significant effect on the quality of learning. This finding shows that the practice of multicultural classroom management implemented in two Islamic boarding schools has not contributed directly to improving the quality of student learning. Contextually, this result can be understood because Islamic boarding schools in Indonesia are relatively homogeneous in terms of values, culture, and religious orientation. In this context, diversity management functions more as a pedagogical resource that directly enriches the academic process [35]. The existing diversity has not been fully utilized as an integrated learning resource in instructional strategies [36]. This finding reinforces the view that the effectiveness of multicultural classroom management is highly dependent on the institutional context [37], [38]. In relatively homogeneous and

controlled environments such as Islamic boarding schools, multicultural management tends to have a socio-emotional impact rather than an academic one. This contrasts with the context of public schools or urban schools, which have more complex multicultural dynamics, where multicultural classroom management has been shown to have a direct impact on the learning climate and quality [39], [40].

The curriculum implementation variable (X_2) also shows similar results. Based on Table 3, curriculum implementation has a significance value of 0.166 (> 0.05) with a B coefficient of 0.137. This indicates that curriculum implementation does not affect the quality of learning. In other words, the implementation of the curriculum in the two Islamic boarding schools has not been able to have a real impact on improving the quality of student learning. These results indicate that there is a gap between curriculum design and classroom learning practices. Several previous studies have shown that curriculum implementation in Islamic educational institutions often faces obstacles in the form of limited teacher competence, weak curriculum integration, and a lack of supporting facilities [41], [42]. This situation means that a conceptually sound curriculum does not automatically result in high-quality learning if it is not accompanied by effective implementation. In the context of Islamic boarding schools, the curriculum is often influenced by tradition and internal policies of the institution, which are gradual in nature [43]. Therefore, the impact of curriculum implementation and its effect on learning quality tends to be long-term and is not always immediately apparent in short-term quantitative measurements [44]. This finding reinforces the argument that structural factors such as curriculum require time and strong systemic support to produce measurable academic impact.

Unlike the previous variables, learning innovation (X_3) shows a significant and positive effect on learning quality. Based on Table 3, learning innovation has a significance value of 0.000 (< 0.05) with a B coefficient of 0.487 and a Beta of 0.538. The highest beta value among the three variables shows that learning innovation is the most dominant predictor in this research model. This finding shows that increasing teachers' innovative activities in the learning process, such as applying active learning methods, using learning media and technology, and developing collaborative strategies, directly contributes to improving student learning quality. These results are in line with various studies that confirm that pedagogical innovation has a strong influence on student engagement, motivation, and learning outcomes [45], [46].

In the pesantren ecosystem, the quality of learning is determined more by how the material is taught than by what is taught or how the class is managed administratively. The intense and hierarchical relationship between teachers and students makes the role of teachers as learning innovators very central. The exemplary behavior, creativity, and ability of teachers to package learning are key factors that determine the quality of the students' learning experience [33], [34].

The insignificant partial effect of multicultural classroom management and curriculum implementation cannot be interpreted as the irrelevance of these two variables. On the contrary, these findings show that both aspects are fundamental and enabling, whose benefits can only be optimized when actualized through innovative pedagogical practices at the classroom level. In other words, learning innovation acts as a catalyst that activates the potential of classroom management and curriculum. The difference between the results of this study and several previous studies that place multicultural classroom management as a direct determinant of learning quality [9], [40], [47], [48]. This may be due to the unique characteristics of Islamic boarding schools, where formal classroom management strategies often have less influence than the personal influence of teachers, such as their charisma, exemplary behavior, and emotional closeness to students.

Theoretically, this study broadens our understanding of the influence of learning factors by emphasizing the importance of institutional context. In a homogeneous and controlled environment such as a pesantren, instructional factors in the form of learning innovations have greater leverage than structural and managerial factors. The practical implementation of these findings is the need to focus on strengthening the capacity of teachers as learning innovators through continuous training, particularly in the development of learning models that tend to be more active and authentic assessments, as well as the use of contextual technology [49]. In addition, curriculum implementation needs to be revitalized through intensive academic supervision, professional guidance, and the provision of supporting facilities so that the curriculum design can be realized in practice [50], [51]. Although multicultural classroom management does not have a significant direct impact, harmonious classroom management still has strategic value and needs to be consciously integrated into learning design so that diversity can become a source of academic added value [52].

4. CONCLUSION

Based on the research findings, it is concluded that learning innovation serves as the dominant predictor that significantly enhances the quality of learning in multicultural-based Islamic boarding schools at the junior high school level, while multicultural classroom management and curriculum implementation do not show significant partial effects, although the three variables together provide a substantive contribution ($R^2 = 0.68$). The practical implications of this study emphasize the importance of strengthening teachers' pedagogical innovation capacity as well as optimizing infrastructure support and continuous mentoring in curriculum

implementation. Theoretically, this study confirms that within the pesantren context, the transformation of learning quality is more determined by innovative instructional practices than by structural-managerial factors, thereby offering a new perspective in developing context-specific institutional quality improvement models in Islamic boarding school education.

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AUTHOR CONTRIBUTIONS

SWH contributed to the conceptualization of the research and the drafting of the initial manuscript. H and S contributed to the development of the research instruments and was involved in the data collection process. Sutarto was responsible for data processing and analysis. All authors participated in the review and editing of the manuscript and approved the final version of the article.

CONFLICTS OF INTEREST

The author(s) declare no conflict of interest.

USE OF ARTIFICIAL INTELLIGENCE (AI)-ASSISTED TECHNOLOGY

The authors declare that no artificial intelligence (AI) tools were used in the generation, analysis, or writing of this manuscript. All aspects of the research, including data collection, interpretation, and manuscript preparation, were carried out entirely by the authors without the assistance of AI-based technologies.

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