Jurnal Pemberdayaan Masyarakat
Volume 5 Issue 2 Year 2026 | Pages 503–521
ykgm.org

E-ISSN 2962-8091
DOI: https://doi.org/10.46843/jpm.v5i2.814

Explaining Student Character Formation: The Mediating Mechanism of Classroom Climate in Muhammadiyah Schools

Nurul Latifatul Inayati[1]*, Istanto[1], Muhammad Zidan Nur Ihsan[1], Ma'ruf Alfattah[1], Siti Rosilawati Ramlan[2]
[1]Faculty of Islamic Studies, Universitas Muhammadiyah Surakarta, Surakarta, Indonesia
[2]Universiti Sains Islam Malaysia, Negeri Sembilan, Malaysia

ABSTRACT

The phenomenon of declining discipline and increasing juvenile delinquency in West Java poses serious challenges to the formation of student character. This study aims to analyze the influence of Muhammadiyah learning and teachers' attitudes on students' character by considering the role of mediation in the classroom climate. This study used an exploratory quantitative approach with 319 respondents selected through purposive sampling. The data were analyzed using Structural Equation Modeling (SEM) and Bootstrap tests based on the Correlated Bias (BCA). The results of the study show that Muhammadiyah learning has a significant effect on the classroom climate (p=0.021), but it does not affect students' character (p=0.196). Teachers' attitudes have a significant effect on classroom climate (p<0.001) and students' character (p<0.001). In the mediation test, the classroom climate did not mediate the relationship between Muhammadiyah learning and character, but did partially mediate the relationship between the teacher's attitude towards the student's character and the student's character. These findings confirm that character formation is more effectively influenced by the quality of teachers' pedagogical relationships and classroom climate, thereby strengthening theories about the effectiveness of character education in educational contexts and the role of contextual relationships in these contexts.

ARTICLE INFORMATION

Keywords:
classroom climate; muhammadiyah learning; student characteristics; teacher attitude

Correspondent Author:
Nurul Latifatul Inayati

Email:
nl122@ums.ac.id

© Yayasan Keluarga Guru Mandiri. This is an open-access article under the CC Attribution 4.0 International License.
Article info: Submitted: 2026-03-18 | Revised: 2026-04-19 | Accepted: 2026-05-25 | Published: 2026-06-13
Recommended citation: Inayati, N. L., Istanto., Ihsan, M. Z. N., Alfattah, M., & Ramlan, S. R. (2026). Explaining Student Character Formation: The Mediating Mechanism of Classroom Climate in Muhammadiyah Schools. *Jurnal Pemberdayaan Masyarakat, 5*(2), 503-521.

INTRODUCTION

The phenomenon of declining adolescent character in West Java Province reflects the structural failure of education in transforming students' values. Official data shows that West Java consistently ranks among the top three in juvenile delinquency cases (Nawawi et al., 2025). Data from 2020-2023 shows that the proportion of students involved in deviant acts, such as brawls, minor law violations, addictive substance abuse, and violence, is very high (Ajisuksmo, 2024). The decline in student character also occurs in the school environment. At least 45-75% of children have cheated, such as cheating, manipulating, or copying someone else's work (Jenkins et al., 2023). This fact shows that existing educational interventions have not been able to significantly shape adolescents' character in a sustainable way, even though various character education programs have been officially implemented in schools, especially in Muhammadiyah schools. According to the theory of value internalization, schools are the primary arena for character formation through the mechanisms of value transmission, behavioral reinforcement, and role modeling (Achadah et al., 2022). Therefore, the learning delivered to the community serves not only to transmit knowledge but also to shape

students' moral orientation and behavior (Hartono et al., 2025; Hartono & Rosyadi, 2024). Furthermore, teachers serve as central moral agents who implement values in daily learning practices (Akram et al., 2023; Purwati & Haryanto, 2025). Consistency of teacher behavior, fairness, ethical commitment, and the quality of interactions with students are determining factors in the process of character internalization (Feliza, 2025). However, the latest research on the influence of Muhammadiyah learning and teachers' attitudes on students' characteristics yields inconsistent results. Several studies reveal that value-based learning, including aspects of Muhammadiyah and teachers, has a significant impact on students' character (Hadi et al., 2025). However, several other studies have shown that the influence of education often only stops at normative and cognitive ability-oriented understandings (Marhayati et al., 2020). In addition, other studies have found that teacher variables are not always the dominant factor in shaping student character (Kraft, 2019). The problem is that this approach has a gap in the sparsity of explicit testing of contextual mechanisms, such as classroom climates that serve as mechanisms for value transformation pathways.

In Social Cognitive Theory, it is emphasized that the internalization of values is most effective when it occurs through direct observation and social interaction, rather than through the teaching of values (Bandura, 1991; Li et al., 2024). In line with that, the Moral Internalization Theory explains that values taught will be fully internalized only when the student experiences them in a supportive relational context (Wu et al., 2025). Therefore, the classroom is the primary microsystem in which teachers' attitudes and learning practices shape students' learning quality (Reksiana et al., 2023). In the educational literature, the classroom climate is understood as a micro-reflection of the learning environment, reflecting the quality of interactions, social relationships, and students' perceptions of support, justice, and psychological safety (Robinson, 2023). Based on these theoretical and empirical findings, this study aims to examine the extent to which Muhammadiyah learning and teacher attitudes influence student character, both directly and indirectly through classroom climate as a mediator. The novelty of this research lies in the empirical testing of the relational-contextual model, namely the role of classroom climate as a pedagogical mechanism that bridges the learning of teacher values and attitudes with the formation of student character in an integrated structural model.

METHOD

This study employed a survey-based, exploratory, quantitative design to examine the causal relationships among Muhammadiyah learning, teacher attitudes, classroom climate, and student characteristics, both directly and indirectly, within a single structural model. The exploratory approach was chosen for its ability to explain the mechanisms underlying relationships among variables within an established theoretical framework, rather than simply describing phenomena (Ghana 2023). In this study, the researcher employed Structural Equation Modeling (SEM) with the aid of SPSS 24 and AMOS 25 as the analysis techniques. SEM analysis was chosen due to its ability to examine both direct and indirect relationships (Maksum et al. 2025).

The population in this study is students in Muhammadiyah schools at the junior high school level (equivalent to junior high school/MTs) in West Java Province. The sampling technique in this study uses purposive sampling, which aims to select respondents in clusters based on certain criteria. The response criteria in this study include: 1) Students who have participated in Muhammadiyah learning for at least 1 semester; and 2) Students who have studied at Islamic boarding schools for 1 semester; 3) MTs Muhammadiyah is operationally active; 4) has a minimum number of students of 200 people to ensure the adequacy of the respondent population; 5) carries out Muhammadiyah learning periodically, and is willing to be a research location. This technique was chosen to ensure that respondents have direct experience of the variables being studied, so that the answers given are not biased or irrelevant (Ahmad & Wilkins, 2025). The sample size is determined by balancing the needs

of Structural Equation Modeling (SEM) analysis. The minimum sample size for Structural Equation Modeling (SEM) analysis is around 150-200 respondents (Priyanath et al., 2020). This study also pays attention to ethical aspects by ensuring that respondents' participation is voluntary, anonymous, and based on informed consent. The data collected is only used for academic purposes and is kept confidential.

The instrument in the study was a closed-ended questionnaire with a Likert scale of 1-5. Each variable is represented by each construct, as follows: Muhammadiyah learning (Quality, Relevance of the material, Learning Process and Technique, and Teacher Feedback) (Engida et al., 2024; Rosmiyanti et al., 2025; Seno & Paglinawan, 2024), Teacher Attitude (Emotional Support, Academic Support, Openness, Perspective or Trust) (Prananto et al., 2025; Suyatno et al., 2019), Classroom Climate (Student Engagement, Relationships between Students, Sense of Security, and Clarity of Class Structure) (Evans et al., 2009), and Characteristics of Santri (Internal Religiosity, Responsibility and Discipline, Politeness, and Moral Integrity) (Kurniawan & Fitriyani, 2023). Instruments are developed based on theories or scientific articles with national (Sinta) and international reputations (Scopus, Elsevier, Taylor & France, etc.). Before distribution, the developed instrument was tested for validity and reliability (pilot study) using 40 respondents with characteristics similar to the study population. The goal is to evaluate the item's clarity, identify potential biases, and assess its initial reliability using Cronbach's Alpha. Items that have value: Correlated Item Total Correlation below the value of the R-table will be revised or eliminated (Govindasamy et al., 2024).

The analysis process begins with evaluating the measurement model using the Confirmatory Factor Analysis (CFA) technique to ensure the validity and reliability of each construct. Convergent validity was evaluated through standard factor load values (≥ 0.50) and Average Variance Extracted (AVE) values (≥ 0.50), while construct reliability was assessed by paying attention to Composite Reliability (CR) values (≥ 0.70) (Goretzko, 2024). After the analysis of the measurement model was declared to meet the criteria, the analysis continued with the testing of the structural model by evaluating the model feasibility index, taking into account the Chi-square/df, CFI, GFI, TLI, and RMSEA values according to the minimum limits recommended by Hu and Bentler (1999) and Baharum et al. (2023). The last submission is a hypothesis test of both direct and indirect relationships. Direct hypothesis testing is conducted by analyzing the path coefficient and its significance (Afthanorhan et al. 2020). As for testing indirect relationships (through mediation), researchers use bootstrapping with 5,000 resamples at the 95% confidence level. This aims to obtain an estimate of the confidence interval on the influence of non-life. The mediation effect is stated to be significant when the confidence interval does not exceed zero (0), and the P-Value (two-tailed significance) value is less than 0.05 (Preacher & Hayes, 2008; Faizah et al., 2023).

RESULTS AND DISCUSSION

In the first analysis, each variable underwent a Pilot Test to determine the Validity and Reliability of each item. Items that do not meet the standards will be eliminated, resulting in valid and reliable variables. The results of the analysis are presented in Table 1.

Table 1. Pilot Test of Muhammadiyah Learning Variables

Variables	Corrected Item-Total Correlations	Cronbach's Alpha
KM1	0.663	
KM2	0.653	0.779
KM3	0.602	
KM4	0.614	
KM5	0.650	

RM1	0.402	
RM2	0.574	0.720
RM3	0.673	
RM4	0.602	
RM5	0.600	
LP1	0.664	
LP2	0.643	0.765
LP3	0.588	
LP4	0.646	
LP5	0.580	
TS1	0.584	
TS2	0.637	0.789
TS3	0.682	
TS4	0.589	
TS5	0.645	

Teacher Attitude Variables

Variables	Corrected Item-Total Correlations	Cronbach's Alpha
DE1	0.667	
QE2	0.583	0.805
QE3	0.409	
QE4	0.739	
QE5	0.665	
DA1	0.624	
DA2	0.594	0.811
DA3	0.533	
DA4	0.670	
DA5	0.591	
K1	0.576	
K2	0.527	0.793
K3	0.651	
K4	0.637	
K5	0.513	
R1	0.287	
R2	0.582	0.737
R3	0.676	
R4	0.635	
R5	0.651	

Class Climate Variables

Variables	Corrected Item-Total Correlations	Cronbach's Alpha
KS1	0.463	
KS2	0.520	0.757
KS3	0.624	
KS4	0.417	
KS5	0.452	
HS1	0.544	
HS2	0.566	0.780
HS3	0.665	
HS4	0.394	
HS5	0.652	

RA1	0.607	
RA2	0.531	0.747
RA3	0.587	
RA4	0.366	
RA5	0.451	
KK1	0.601	
KK2	0.699	0.824
KK3	0.640	
KK4	0.665	
KK5	0.653	
Characteristics of Students Variables		
Variables	**Corrected Item-Total Correlations**	**Cronbach's Alpha**
RI1	0.627	
RI2	0.710	0.842
RI3	0.745	
RI4	0.716	
RI5	0.778	
D1	0.730	
D2	0.640	0.811
D3	0.624	
D4	0.672	
D5	0.628	
AP1	0.614	
AP2	0.633	0.889
AP3	0.795	
AP4	0.786	
AP5	0.693	
IM1	0.712	
IM2	0.533	0.818
IM3	0.696	
IM4	0.593	
IM5	0.569	

The results of the trial of the variables of Muhammadiyah Learning, Teacher Attitude, Classroom Climate, and Student Characteristics showed the same thing, namely, the Correlation value of Corrected Items-Total and Alpha Cronbach in each variable as a whole was above the specified minimum limit (T-Table: > 0.279 and Alpha Cronbach ≥ 0.6). It indicates that the items in each construction have met the minimum recommended standards, allowing them to be declared valid and reliable. Thus, every concept of Muhammadiyah Learning, Teacher Attitude, Classroom Climate, and Student Characteristics is considered valid and reliable so that it can be distributed and applied in the main research.

After going through the instrument trial stage (pilot study). Furthermore, the analysis of respondent characteristics was conducted to provide an overview of the research subject's profile, including age, grade level, and school origin for each educational respondent. As a result, of the 319 valid respondents, based on their school origin, the majority came from Madrasah Islam Darul Arqam Garut (52.4%), followed by MTs Baitur Rohmah Muhammadiyah (43.3%), and MBS Al-Furqan Cibiuk (4.3%). By age, the majority of respondents were 13 years old (63.6%), followed by 14 years old

(25.4%), while other age groups had relatively small proportions. In terms of grade level, the majority of respondents were in grade VII (62.7%), followed by grade VIII (30.4%), and grade IX (6.9%).

Table 2. Respondent Characteristics

Characteristic		Frequency	Percentage
School Origin	MTs. Baitur Rohmah Muhammadiyah	138	43.3%
	Darul Arqam Garut	167	52.4%
	MBS Al-Furqan Cibiuk	14	4.3%
Age	12 years	18	5.6%
	13 years	203	63.6%
	14 years	81	25.4%
	15 years	15	4.7%
	16 years	2	0.6%
Classes	Seven (7)	200	62.7%
	Eight (8)	97	30.4%
	Nine (9)	22	6.9%
	TOTAL	319	100%

After conducting a demographic test, the researcher conducted validity and reliability tests on each combination using the Confirmatory Factor Analysis (CFA) technique in Amos.24 software. To evaluate convergent validity, discriminant validity, and construct reliability before structural model testing (Baharum et al., 2023). Parameter estimation is based on the Maximum Likelihood approach, by assessing standardized factor loadings, Average Variance Extracted (AVE) values, and Composite Reliability (CR) (Cheung et al., 2024).

Table 3. Confirmatory Factor Analysis (CFA) Muhammadiyah learning Variables

Indicator	Items	Factor Loading	AVE	CR
Quality of Material	KM1	0.66	0.518	0.763
	KM4	0.73		
	KM5	0.76		
Relevance of the Material	RM3	0.78	0.502	0.744
	RM4	0.65		
	RM5	0.67		
Learning Process	LP1	0.71	0.527	0.770
	LP2	0.73		
	LP4	0.74		
Teacher Feedback	TS1	0.65	0.525	0.847
	TS2	0.74		
	TS3	0.80		
	TS4	0.69		
	TS5	0.72		
Teacher Attitude Variables				
Indicator	**Items**	**Factor Loading**	**AVE**	**CR**
Emotional Support	DE1	0.74	0.621	0.891
	QE2	0.76		
	QE3	0.77		
	QE4	0.83		
	QE5	0.83		

Academic Support	DA1	0.80	0.589	0.878
	DA2	0.75		
	DA3	0.79		
	DA4	0.79		
	DA5	0.71		
Openness	K1	0.66	0.503	0.801
	K2	0.70		
	K3	0.69		
	K5	0.69		
Suspicion or belief	R1	0.76	0.579	0.873
	R2	0.78		
	R3	0.75		
	R4	0.76		
	R5	0.76		

Class Climate Variables

Indicator	**Items**	**Factor Loading**	**AVE**	**CR**
Student Activity	KS1	0.78	0.621	0.891
	KS2	0.72		
	KS3	0.75		
	KS4	0.72		
	KS5	0.73		
Social Relations	HS1	0.66	0.589	0.878
	HS2	0.70		
	HS3	0.78		
	HS4	0.73		
	HS5	0.73		
Sense of Fairness	RA1	0.74	0.503	0.801
	RA3	0.69		
	RA4	0.71		
	RA5	0.70		
Class Structure	KK1	0.72	0.579	0.873
	KK2	0.70		
	KK3	0.78		
	KK4	0.81		
	KK5	0.68		

Variable Characteristics of Students

Indicator	**Items**	**Factor Loading**	**AVE**	**CR**
Internal Religiosity	RI1	0.71	0.584	0.875
	RI2	0.78		
	RI3	0.77		
	RI4	0.80		
	RI5	0.78		
Responsibilities and Discipline	D1	0.77	0.627	0.894
	D2	0.77		
	D3	0.81		
	D4	0.80		
	D5	0.81		
Politeness	AP1	0.69	0.593	0.879
	AP2	0.78		

	AP3	0.86		
	AP4	0.77		
	AP5	0.75		
Moral Integrity	IM1	0.69	0.596	0.880
	IM2	0.75		
	IM3	0.82		
	IM4	0.80		
	IM5	0.79		

The results of the Confirmatory Factor Analysis (CFA) in Table 3 show that all measurement constructs in this study, such as Muhammadiyah Learning, Teacher Attitude, Classroom Climate, and Student Character, overall meet the recommended criteria for convergent validity and construct reliability by showing Average Variance Extracted (AVE) values exceeding the minimum threshold of 0.50 and Composite Reliability (CR) values exceeding 0.70, as suggested in previous studies (Baharum et al., 2023; Hu & Bentler, 1999). These findings confirm that each construct is measured consistently and adequately represents the underlying latent variable. Thus, the overall measurement model demonstrates strong internal consistency and validity, indicating that the instrument is robust in capturing the study's conceptual dimensions. Based on these results, the measurement model is deemed suitable for further structural analysis, including evaluation of the hypothesized relationships between variables. Goodness-of-fit evaluation was carried out to assess the extent to which the proposed conceptual model adequately represented the empirical data (Sathyanarayana & Mohanasundaram, 2024). The model fit assessment is conducted using several commonly used feasibility indices, including absolute fit indices, incremental fit indices, and parsimony fit indices, such as χ^2/df, GFI, AGFI, CFI, TLI, and RMSEA, with reference to recognized thresholds (Dash & Paul, 2021). The results of the matching test for the measurement and structural models are presented in Table 4.

Table 4. Measurement Model.

GOF Index	Acceptable Value	CFA Model	Result
x^2 (Chi-square)		261,453	Good Fit
Df (degree of freedom)		92	
x^2/df	< 3	2.84	Good Fit
GFI	> 0.8	0.912	Good Fit
CFI	> 0.9	0.957	Good Fit
TLI	> 0.9	0.945	Good Fit
RMSEA	< 0.08	0.076	Good Fit

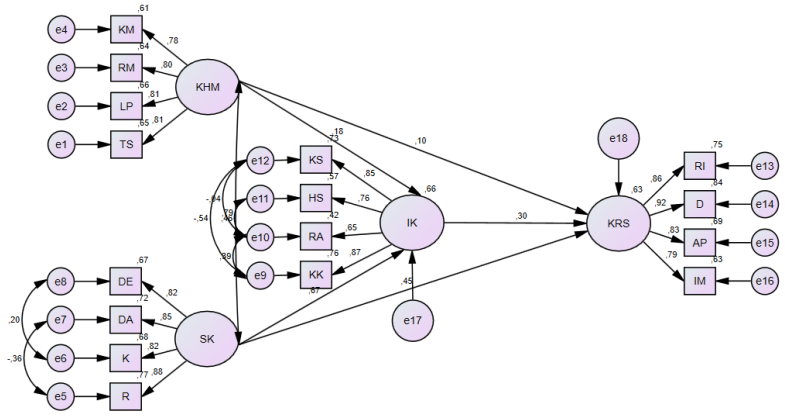

Figure 1. Structural Model.

Table 4 regarding the fit model evaluation shows that the model in this study has an adequate level of conformity with the following empirical data: Chi-square value of 261,453 with df=92, producing a ratio of X2/df=2.84. This value is below the < 3 recommendation limit, so it shows good model suitability. The absolute feasibility index also shows similar results, with a GFI value of 0.912 exceeding the minimum threshold of 0.80. Meanwhile, the comparative feasibility index showed strong results, indicated by CFI = 0.915 and TLI = 0.900, which met the criterion≥ 0.90. In addition, the RMSEA value of 0.076 is below the maximum limit of 0.08, which indicates an acceptable level of approximation error. Overall, the combination of absolute, incremental, and parsimonious fit indices indicates that the proposed CFA model meets the goodness-of-fit criteria (Dash & Paul, 2021).

Upon fulfillment of the goodness-of-fit criteria, the model is considered feasible for continued structural hypothesis testing. The evaluation of the relationship between variables was directly assessed by examining the estimated path coefficient and its significance, while the indirect relationship was tested using a bootstrapping technique with a 95% confidence interval and 5000 resamples. The results of the analysis are summarized in Table 5.

Table 5. SEM Results For Testing The Hypothesis

Hypothesis	Path	b	CR	P-Value	Result
H1	KMH → I	0.175	2.300	0.021	Supported
H2	KHM → KRS	0.101	1.293	0.196	No Supported
H3	I →KRS	0.297	3.571	****	Supported
H4	SK → I	0.670	8.215	****	Supported
H5	SK→KRS	0.450	4.483	****	Supported

Hypothesis	Path	Indirect Effect	P-value	Lower Bound BC (95%)	Upper Bound BC (95%)	Remarks
H6a	KHM → I → KRS	0.052	0.280	-0.038	0.250	Non Mediated
H7a	SK → I → KRS	0.199	0.047	0.003	0.381	Mediated

The results of the analysis of direct and mediated influences are shown in Table 5, and the majority of hypotheses are accepted. First, there is a significant influence of Muhammadiyah Learning on the Class Climate, with a standardized coefficient (β = 0.404, p = 0.021). However, the analysis showed that the Muhammadiyah learning did not have a significant impact on students' characteristics (β = 0.101, p = 0.196), so the first hypothesis was accepted, while the second was rejected. Furthermore, the analysis showed that the Class Climate had a significant impact on the formation of student character (β = 0.297, p < 0.001), indicating that the third hypothesis was accepted. In addition, the Teacher Attitude variable in this study showed a significant impact on both the Classroom Climate variable (β = 0.670, p < 0.001) and the Student Characteristics variable (β = 0.450, p < 0.001). This shows that a teacher's attitude is a key factor in shaping the classroom climate, along with students' characteristics. Thus, hypotheses 4 and 5 in this study are declared accepted. The mediator test analysis showed that the classroom climate was a mediator in the relationship between the teacher's attitude to the characteristics of the students (β = 0.199, p = 0.047; 95% BCa CI [0.003, 0.381]) (H7a), while in the relationship between Muhammadiyah Learning and the student's characteristics, the classroom climate did not play a mediator role (β = 0.052, p = 0.280; 95% BCa CI [-0.038, 0.259]) (H6a). Thus, hypothesis 6a was rejected, while hypothesis 7a was accepted.

The study in Muhammadiyah schools in Garut Regency showed that Muhammadiyah learning had a significant impact on the classroom climate, accounting for 40.4% of the variance (β = 0.404, p = 0.021). These findings indicate that the quality of Muhammadiyah learning, both in terms of the

depth of the material, the learning process, and the support and good feedback from teachers, contributes to the formation of students' perspectives on the classroom learning atmosphere. In other words, Muhammadiyah learning does not only serve as a means of conveying information or knowledge, but also as a pedagogical practice that shapes patterns of interaction, behavior, and the quality of students' social relations, especially in the classroom.

Theoretically, these findings can be explained through Social Learning Theory, as proposed by Albert Bandura. He explains that social behaviors and norms, including those in the classroom, develop through the processes of observation, modeling, and reinforcement in the context of social interaction (Bandura, 1991; Li et al., 2024). Well-structured learning provides communication models, behavioral standards, and learning patterns, which are then observed and imitated in daily classroom dynamics (Muhja & Wijaya, 2024). Through this mechanism, the quality of learning in Muhammadiyah strongly contributes to the formation of class norms, a sense of order, and social conditions among students.

In addition, according to Rudolf Moos's perspective in the theory of the classroom climate, the classroom climate is understood as the result of students' experiences of interpersonal relationship patterns, class organizational systems, and learning orientations that persist (Robinson, 2023). Clear, relevant, interactive, and responsive learning creates a psychological condition that allows students to feel safe, appreciated, and included in the learning process (Hardie et al., 2022). This condition ultimately shapes the perception of the classroom as a supportive and structured environment. The findings of this study are consistent with previous studies that show *KeMuhammadiyah learning* plays a supporting role in shaping the classroom climate (Jemain et al., 2025). The classroom climate is not just a structural condition but the result of students' psychosocial experiences of the learning process, teacher-student interaction, and social dynamics that develop during learning activities (Romanovska & Novak, 2024). Relevant teaching practices, supporting participation, clear communication, and active student engagement have been shown to foster a supportive and effective learning environment, which, in turn, improves attention, participation, and the quality of classroom interactions (Khodadad, 2023).

The implications of this finding show that improving the quality of learning in Muhammadiyah is relevant not only for strengthening the understanding of religious values but also for strategically building a conducive learning environment. This means that interventions in pedagogical aspects, such as preparing clearer, more contextually relevant materials, using participatory learning strategies, and providing responsive teacher feedback, can be an effective way to improve the quality of the classroom climate in Muhammadiyah schools. This finding emphasizes that efforts to improve the quality of learning in Muhammadiyah should not focus solely on enriching ideological content, but also on designing learning experiences that strengthen positive social interactions, psychological security, and student involvement in the classroom.

The results of this study show that Muhammadiyah learning does not have a direct effect on students' character ($\beta = 0.101$, $p = 0.196$). Not significant does not mean that Muhammadiyah learning has no impact on the formation of student character; rather, the impact is relatively small or weak. These findings indicate that the delivery of material related to religious and ideological values through formal learning has not automatically led to a change in students' character. According to Hasriani et al. (2025), character is a multidimensional construct that is formed through a long-term process involving cognitive, affective, and habituated aspects in a continuous social context; therefore, it cannot be influenced solely by classroom learning.

In the theory of internalization of values put forward by Herbert C. Kelman, formal learning will generally have an effect on the stage of compliance and identification before reaching the internalization stage (Kelman, 1958; Ramdani et al., 2017). This means that, in understanding the

values taught, students even show initial acceptance of these values, but the values do not necessarily become stable character traits reflected in real daily behavior. In addition, in the Value Action Gap Theory, it is emphasized that the understanding and acceptance of values is not automatically reflected in behavior, because value transformation requires social reinforcement, consistency of practice, and a context that allows these values to be implemented in daily life (Barr, 2006; Shen et al., 2025). Thus, it can be concluded that Muhammadiyah learning in practice tends to serve as a provider of knowledge of values and normative frameworks, while character formation requires support from other factors, such as social experience, daily habits, examples, and others. Its influence is still limited only to the cognitive aspect, but it is not strong enough to reach the affective and behavioral dimensions that are the core of character formation (Mulawarman et al., 2024).

These findings align with previous studies on character education, which suggest that pursuing cognitive values has a limited effect on character or behavioral change unless accompanied by concrete actions or practices in daily life (Marhayati et al., 2020). Thus, the insignificance of Muhammadiyah learning's influence on students' character does not mean that Muhammadiyah education is unimportant or useless. However, it emphasizes that the role of Muhammadiyah learning is more fundamental as a basis for knowledge of values, and that its effectiveness in shaping students' character depends on advanced processes beyond classroom delivery of material.

The results of this study show that class climate has a significant impact on students' characteristics, with a 29.7% effect ($\beta = 0.297$, $p = 0.021$). These findings confirm that the quality of the psychosocial environment students experience during the learning process plays an important role in shaping daily attitudes, values, and behaviors. A good classroom climate, characterized by a sense of security, positive social relationships, regular interactions, and psychological support from teachers and friends, allows students to practice the values learned in daily experiences (Siegel-Stechler, 2023). Thus, character develops not only through cognitive comprehension of values, but also through direct and repeated social experiences in the immediate environment, in this context, the classroom environment.

Theoretically, these findings can be explained by Albert Bandura's social learning theory, which posits that a person's behavior is shaped through observation, social interaction, and environmental reinforcement (Bandura, 1991; Li et al., 2024). In a supportive and structured class, students not only accept rules formally, but also observe real practices about how teachers treat students, how conflicts are resolved, and how cooperation between teachers and students takes place, so that the process of observation and social experience becomes an important mechanism in the formation of students' behavioral and moral habits (Aziz et al., 2025; Rusilowati et al., 2024). This is corroborated by Rudolf Moos and continued by Barry Fraser in the Classroom Climate Theory, which emphasizes that the classroom climate is seen as the result of students' collective experience of interpersonal relationships, classroom organizational systems, and learning orientations, which can directly affect students' social and emotional development (Fraser, 1989).

Recent studies show that a well-organized climate has a significant effect on students' disciplinary character (Rino & Setiawan, 2025). Therefore, the significance of classroom climate in shaping students' character in this study indicates that character formation is more effective through a consistent quality of learning environment experience. These findings also indicate that strengthening students' character requires special attention to creating a conducive classroom climate. A safe, dialogical, and conducive classroom environment allows educational values to be directly practiced in daily life, thereby increasing the opportunity to internalize them (Renita et al., 2026). The results of this study show that teachers' attitudes have a significant impact on the classroom climate, accounting for 67.0% of the variance ($\beta = 0.670$, $p < 0.001$). These findings indicate that the quality of pedagogical relationships built by teachers through emotional support, academic

assistance, open communication, and mutual trust directly contributes to the formation of students' perspectives on the classroom learning environment. According to Aldrup et al. (2022), The cause of the teacher's influence on the classroom climate is when the moment when the teacher shows a sense of empathy, responsiveness, and appreciation for the students, the interaction that occurs not only continues at the instructional level, but also spreads to the formation of a sense of priological security, interpersonal trust, and social order in the classroom. This condition ultimately affects students' perspective of the classroom as a supportive, fair, and conducive environment for learning.

In the theory of educational ecology, the learning environment is understood as a macrosystem formed through direct and repetitive interactions between individuals (Amali et al., 2023; Bronfenbrenner, 1976). In the classroom context, teachers are positioned as actors with high interaction intensity and formal authority, so that their attitudes and actions can greatly shape patterns, norms, and the learning atmosphere (Rahman, 2022). In addition, in the theory of class climate, the dimension of interpersonal relationships is an important component in shaping class climate (Fraser, 1989; Koul et al., 2023). A teacher's supportive and respectful attitude can strengthen the relationship, thereby creating a more stable learning environment, both emotionally and socially (Luo et al., 2022).

The results of the latest study indicate that the teacher-student relationship significantly predicts classroom perception, student engagement, and classroom structure. A study by Luo et al. (2022) also found that teacher support is the strongest factor in building a positive classroom climate, which in turn increases students' psychological security. In addition, the results of the study by Coyle et al. (2022) reveal that Teacher support and respectful classroom interaction are directly correlated with perceptions of classroom discipline, order, and social support. The findings suggest that the success of creating a conducive classroom climate is not only determined by the learning structure or curriculum, but is highly dependent on how teachers build relationships with students in daily practice. A teacher's responsive, open, and respectful attitude toward students serves as the main foundation for the development of a sense of security, learning engagement, and regular classroom interaction. In other words, teacher quality is a key factor in shaping and improving the quality of the school environment, especially by creating a conducive and supportive classroom climate for students (Luo et al., 2022).

The results of this study show that the teacher's attitude has a significant impact on students' characteristics, accounting for 45% of the variance ($\beta = 0.450$, $p < 0.001$). These findings confirm that the quality of pedagogical relationships built by teachers through emotional, academic, and respectful approaches to students, and through trust, not only affects the learning atmosphere but also contributes to the formation of students' values, moral attitudes, and social morals. According to Aldrup et al. (2022), Teachers who demonstrate empathy, consistency, and serve as role models create social experiences that allow students to learn about responsibility, discipline, and respect for others through hands-on interactions in the classroom. Thus, students' characters are not only shaped by the classroom climate but also by the interpersonal relationships they have with teachers.

In Bandura's social learning theory, behavior and moral values can develop through observation, modeling, and reinforcement by influential figures in their lives (Bandura, 1991; Li et al., 2024). In educational institutions, teachers are positioned as social models whose behaviors, attitudes, and practices serve as a reference for students in shaping their behavioral standards (Saepurrohman & Erihadiana, 2024). This perspective is in line with the theory of teacher-student relations as well as modern theories of social and emotional development that emphasize that teacher support (emotional, academic, and other support) can influence the formation of students' character through the mechanism of creating a sense of security or a sense of involvement (Lilia & Maia, 2025; Zheng, 2021).

Empirically, this study's findings are supported by several recent international studies, including Money's (2023). The results show that the quality of the teacher-student relationship contributes positively to the development of students' social character. Furthermore, the study by Sáez-Delgado et al. (2022) found that teachers who provide support to their students tend to strengthen students' sense of academic responsibility and self-regulation. The consistency of these findings indicates that the teacher's attitude is a pedagogical determinant that directly influences the formation of student character.

From the findings above, it can be concluded that improving the quality of teacher-student pedagogical interaction is an important point in forming student attitudes. Programs such as teacher training or professional development should emphasize relational competencies, including empathy, communication, behavioral consistency, and the ability to provide constructive feedback. The formation of students' character is not only understood as the result of teaching values, but also as a consequence of social experiences consciously managed through teachers' pedagogical practice in the classroom.

The results of the mediation analysis showed that the indirect effect of Muhammadiyah learning on students' character through classroom climate was insignificant ($\beta = 0.052$, $p = 0.280$; 95% BCa CI: [-0.038, 0.259]). The mediation relationship is not significant because the bootstrap confidence interval includes zero, indicating that the mediation mechanism is not statistically significant. This finding indicates that although Muhammadiyah learning affects the classroom climate, and the classroom climate affects students' character, these influences do not form a complete mediation path between Muhammadiyah learning and students' character.

Philil W. Jackson discusses the insignificance of the influence of Muhammadiyah learning on students' character through the mediation of the classroom climate in Hidden Curriculum Theory. According to Philil W. Jackson, character is more shaped by daily practices, school culture, power relations, and real examples than by the transmission of formal material (Abdurrahman et al., 2025; Giroux & Penna, 1979). In the context of mediation, the classroom climate is indeed at the micro level, shaped by the interaction between teachers and students. However, the construction of the classroom climate is not entirely autonomous, as it is still influenced by broader contexts, such as school culture, patterns of social relations, and prevailing institutional practices (Jiang & Liu, 2024). Thus, if the school's structure and culture are not aligned with the values formally taught in the classroom, the classroom climate may lose its effectiveness as a place for internalizing values and building character (Purwaningsih & Ridha, 2024). Therefore, it does not automatically bridge the gap between normative knowledge and actual character formation.

Recent empirical studies show that student character formation is often influenced by a combination of relational factors, social experiences, school culture, and long-term habituation practices, so that one contextual variable, such as the classroom climate, is not strong enough to be the main channeling mechanism for learning influences on character (Nieto et al. 2022; Wang et al. 2020). Therefore, the insignificance of the mediation path in this study confirms that the classroom climate functions more as a stand-alone psychosocial context in influencing character, rather than as a mechanism that directly bridges the influence of Muhammadiyah learning.

The results of the mediation test in this study showed that the teacher's attitude had a significant indirect effect on students' character through the classroom climate ($\beta = 0.199$, $p = 0.047$; 95% BCa CI [0.003, 0.381]). This is shown by the confidence interval on the path that does not include zero, indicating that the mediation mechanism is statistically significant. In addition, the direct effect of the teacher's attitude variable on students' character remains significant, even after the classroom climate variable is included as a mediator. This shows that the class climate partially mediates the relationship. Therefore, these findings show that the teacher's attitude variables not only affect

character directly but also indirectly through the learning atmosphere students experience during the learning process. Theoretically, these findings are in line with the theory of Social Learning by Albert Bandura, which emphasizes that individual behavior is formed through observation, one of which is the person or figure who is considered influential, as well as through the social context or environment in which the interaction occurs (Bandura, 1991; Li et al., 2024). In this case, teachers, as the primary social model, provide examples of values, norms, communication, and response patterns in the learning situation observed by students (Saepurrohman & Erihadiana, 2024). A supportive, fair, and responsive teacher attitude can shape patterns, collective norms, a sense of security, and the quality of social relationships in the classroom (Rahman, 2022). These social norms and experiences build a conducive learning environment where values are practiced and strengthen students' character development (Lilia & Maia, 2025; Zheng, 2021).

Rudolf Moos's Class Climate Theory also explains the same thing. According to him, the interpersonal relationship between teachers and students is the core dimension that shapes the classroom climate, which subsequently affects the development of students' attitudes, motivations, and behavior (Luo & Derakhshan, 2024; Robinson, 2023). Teachers are the main actors in shaping the quality of classroom relationships, while the classroom climate serves as a psychosocial mechanism that transmits these influences into students' daily learning experiences (Zheng, 2021). Therefore, the mediation pathway in this study shows that the influence of teachers' attitudes on characteristics does not operate linearly; the classroom climate plays a role in transmission, fostering a supportive, structured, and planned learning atmosphere. This finding confirms that the formation of student character is a relational and contextual process, in which teacher pedagogy contributes to a conducive classroom climate, which in turn supports the process of internalizing values. Thus, there is a need to strengthen teachers' competence, especially in classroom management as a systematic strategy to optimize students' character development.

CONCLUSION

This study demonstrates that Interprofessional Education (IPE) improves students' attitudes toward interprofessional collaboration. However, it does not significantly improve interprofessional competence within a short intervention period. These findings indicate that IPE can positively influence the affective domain, but competence development requires a longer duration, repeated exposure, and integration into clinical practice. Future IPE programs should therefore use longitudinal, practice-based, and competency-oriented approaches to support the sustainable development of interprofessional skills among healthcare students.

DECLARATION OF GENERATIVE AI

The authors declare that no generative AI or AI-assisted technologies were used in the writing process of this manuscript.

CONFLICTING INTEREST STATEMENT

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

FUNDING INFORMATION STATEMENT

The author would like to express his deepest gratitude to the Higher Education Research and Development Council (Diktilitbang) of the Muhammadiyah Central Leadership for the financial support provided through Research Grant Contract No. 0259.714/I.3/D/2025 in the implementation

of this research. Institutional assistance, both in the form of facilities and academic guidance, was invaluable in completing this research. Thanks are also extended to all participants and respondents who have voluntarily contributed their time and responses, which significantly enriched the quality of these research findings.

REFERENCES

Abdurrahman, A., Syahriani, F., & Yufriadi, F. (2025). The Influence of Hidden Curriculum on Student Character Development in Yemeni Madrasahs. *International Journal of Education and Teaching Studies, 1*(1), 1–12.

Achadah, A., Wahidmurni, W., & Yasin, A. F. (2022). Internalization of Character Education Values in Shaping Elementary School Students' Religious Behavior. *AL-ISHLAH: Jurnal Pendidikan, 14*(4), 4723–4734.

Afthanorhan, A., Awang, Z., & Aimran, N. (2020). An Extensive Comparison of CB-SEM and PLS-SEM for Reliability and Validity. *International Journal of Data and Network Science*, 357–364.

Ahmad, M., & Wilkins, S. (2025). Purposive Sampling in Qualitative Research: A Framework for the Entire Journey. *Quality & Quantity, 54*, 1461–1479.

Ajisuksmo, R. P. (2024). *Anak Berkonflik dengan Hukum dalam Perspektif Psikologi*. Pohon Cahaya.

Akram, H., Al-Adwan, A. S., Aslam, S., & Khan, M. I. (2023). Pedagogical Practices and Challenges in Cultivating Moral Values: A Qualitative Study of Primary School Teachers in Pakistan. *Education 3-13, 51*(4), 607–619.

Aldrup, K., Carstensen, B., & Klusmann, U. (2022). Is Empathy the Key to Effective Teaching? A Systematic Review of Its Association with Teacher-Student Interactions and Student Outcomes. *Educational Psychology Review, 34*, 1177–1216.

Amali, N. A. K., Ridzuan, M. U. M., Rahmat, N. H., Seng, H. Z., & Mustafa, N. C. (2023). Exploring Learning Environment Through Bronfenbrenner's Ecological Systems Theory. *International Journal of Academic Research in Progressive Education and Development, 12*(2), 144–162.

Aziz, M., Napitupulu, D. S., & Parapat, F. A. (2025). The Influence of Teacher Communication Patterns in Aqidah Akhlak Education on Students' Academic Achievement. *Attadrib: Jurnal Pendidikan Guru Madrasah Ibtidaiyah, 8*(1), 71–86.

Baharum, H., Ismail, A., Awang, Z., McKenna, L., Ibrahim, R., Mohamed, Z., & Hassan, N. H. (2023). The Study Adapted Instruments Based on Confirmatory Factor Analysis (CFA) to Validate Measurement Models of Latent Constructs. *International Journal of Environmental Research and Public Health, 20*, 1–16.

Bandura, A. (1991). Social Cognitive Theory of Self-Regulation. *Organizational Behavior and Human Decision Processes, 50*(2), 248–287.

Barr, S. (2006). Environmental Action in the Home: Investigating the 'Value-Action' Gap. *Geography, 91*(1), 43–54.

Badan Pusat Statistik Kabupaten Garut. (2024). Kabupaten Garut dalam Angka.

Bronfenbrenner, U. (1976). The Experimental Ecology of Education. *Teachers College Record: The Voice of Scholarship in Education, 78*(2), 1–37.

Cheung, G. W., Cooper-Thomas, H. D., Lau, R. S., & Wang, L. C. (2024). Reporting Reliability, Convergent and Discriminant Validity with Structural Equation Modeling: A Review and Best-Practice Recommendations. *Asia Pacific Journal of Management, 41*, 745–783.

Coyle, S., Weinreb, K. S., Davila, G., & Cuellar, M. (2022). Relationships Matter: The Protective Role of Teacher and Peer Support in Understanding School Climate for Victimized Youth. *Child Youth Care Forum, 51*, 181–203.

Dash, G., & Paul, J. (2021). CB-SEM vs PLS-SEM Methods for Research in Social Sciences and Technology Forecasting. *Technological Forecasting and Social Change, 173*, 121092.

Engida, M. A., Iyasu, A. S., & Fentie, Y. M. (2024). Impact of Teaching Quality on Student Achievement: Student Evidence. *Frontiers in Education, 9*(1), 1–10.

Evans, I. M., Harvey, S. T., Buckley, L., & Yan, E. (2009). Differentiating Classroom Climate Concepts: Academic, Management, and Emotional Environments. *Kōtuitui: New Zealand Journal of Social Sciences Online, 4*(2), 131–146.

Faizah, N., Wiyadi, & Sholahuddin, M. (2023). The Impact of Service Quality Using the Carter Model on Customer Satisfaction in Indonesian Islamic Banks. *Journal of Business and Management Studies, 5*(5), 211–232.

Feliza, M. A. (2025). Teachers as Ethical Role Models: Their Influence on Student Character Formation. *International Journal of Advanced Research in Science, Communication and Technology, 5*(6), 716–725.

Fraser, B. J. (1989). Twenty Years of Classroom Climate Work: Progress and Prospect. *Journal of Curriculum Studies, 21*(4), 307–327.

Ghanad, A. (2023). An Overview of Quantitative Research Methods. *International Journal of Multidisciplinary Research and Analysis, 6*(8), 3794–3803.

Giroux, H. A., & Penna, A. N. (1979). Social Education in the Classroom: The Dynamics of the Hidden Curriculum. *Theory & Research in Social Education, 7*(1), 21–42.

Goretzko, D., Siemund, K., & Sterner, P. (2024). Evaluating Model Fit of Measurement Models in Confirmatory Factor Analysis. *Educational and Psychological Measurement, 84*(1), 123–144.

Govindasamy, P., Cumming, T. M., & Abdullah, N. (2024). Validity and Reliability of a Needs Analysis Questionnaire for the Development of a Creativity Module. *Journal of Research in Special Educational Needs, 24*(3), 637–652.

Hadi, Y., Kholis, N., Remanita, Y., & Harta, L. I. (2025). A Systematic Literature Review on Character Education Strategies in Primary and Secondary Schools. *Journal of Educational Research and Practice, 3*(2), 321–340.

Hardie, P., O'Donovan, R., Jarvis, S., & Redmond, C. (2022). Key Tips to Providing a Psychologically Safe Learning Environment in the Clinical Setting. *BMC Medical Education, 22*(816), 1–11.

Hartono, Gusmian, I., & Giyoto. (2025). Integrative-Interconnective Approaches in Al-Islam and Muhammadiyah Education: Advancing the SDGs at UMS. *Profetika: Jurnal Studi Islam, 26*(2), 439–456.

Hartono, & Rosyadi, I. (2024). Ibn Miskawaih's Thoughts on Moral Education and Its Relevance at Universitas Muhammadiyah Surakarta. *Profetika: Jurnal Studi Islam, 25*(1), 83–94.

Hasriani, H., Hamim, U., & Mahmud, R. (2025). Strengthening Scouting Character Values Through a Moral Integrated Approach for Elementary School Students. *Indonesian Journal of Innovation Studies, 26*(3), 1–24.

Hu, L. T., & Bentler, P. M. (1999). Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives. *Structural Equation Modeling, 6*(1), 1–55.

Jemain, Z., Kholid, I., Djazuli, A., & Subandi, S. (2025). Integration of Learning Organization Principles in Muhammadiyah Education: A Case Study of Elementary and Middle Schools in Palembang, Indonesia. *AL-ISHLAH: Jurnal Pendidikan, 17*(2), 3102–3113.

Jenkins, B. D., Golding, J. M., Grand, A. M. Le, Levi, M. M., & Pals, A. M. (2023). When Opportunity Knocks: College Students' Cheating Amid the COVID-19 Pandemic. *Teaching of Psychology, 50*(4), 407–419.

Jiang, X., & Liu, R. (2024). Factors Influencing School Climate: An Empirical Study Based on the TALIS Principal Survey. *Humanities and Social Sciences Communications, 11*(722), 1–10.

Kelman, H. C. (1958). Compliance, Identification, and Internalization Three Processes of Attitude Change. *Journal of Conflict Resolution, 2*(1), 51–60.

Khodadad, D. (2023). Creating a Supportive and Effective Learning Environment for Engineering Students: Pedagogical Strategies, Engagement, and Enhanced Outcomes. *International Journal of Engineering Pedagogy, 13*(8), 33.

Koul, R. B., McLure, F. I., & Fraser, B. J. (2023). Gender Differences in Classroom Emotional Climate and Attitudes Among Students Undertaking Integrated STEM Projects: A Rasch Analysis. *Research in Science & Technological Education, 41*(3), 1051–1071.

Kraft, M. A. (2019). Teacher Effects on Complex Cognitive Skills and Social-Emotional Competencies. *Journal of Human Resources, 54*(1), 1–36.

Kurniawan, S., & Fitriyani, F. N. (2023). Thomas Lickona's Idea on Character Education Which Builds Multicultural Awareness: Its Relevance for School/Madrasah in Indonesia. *Al-Tadzkiyyah: Jurnal Pendidikan Islam, 14*(1), 33–53.

Li, K., Wijaya, T. T., Chen, X., & Harahap, M. S. (2024). Exploring the Factors Affecting Elementary Mathematics Teachers' Innovative Behavior: An Integration of Social Cognitive Theory. *Scientific Reports, 14*, 2108.

Lilia, Ţurcan-B., & Maia, B. (2025). The Teacher's Emotional Culture: A Self-Education Framework for Students' Emotional Development. *Didactica Danubiensis, 5*(1), 32–46.

Lopez-Garrido, G. (2023). Bandura's Self-Efficacy Theory of Motivation in Psychology. *Simply Psychology, 10*(1), 17–25.

Luo, N., Li, H., Zhao, L., Wu, Z., & Zhang, J. (2022). Promoting Student Engagement in Online Learning through Harmonious Classroom Environment. *The Asia-Pacific Education Researcher, 31*, 541–551.

Luo, T., & Derakhshan, A. (2024). Examining the Role of Classroom Climate and Teacher-Student Relationships in EFL Students' Perceived Learning Outcomes: A Self-Determination Theory Perspective. *Learning and Motivation, 88*, 102062.

Maksum, M. N. R., Ihsan, M. Z. N., Vambudi, V. N., Rifai, A., Nisa, A. T., Alauddin, M. B., & Irfani, S. Z. al. (2025). Evaluating Learning Motivation as a Mediator between Family Environment and Academic Achievement: Evidence from Indonesian Secondary Students. *Jurnal Pendidikan Progresif, 15*(3), 1905–1929.

Marhayati, N., Chandra, P., & Fransisca, M. (2020). Pendekatan Kognitif Sosial pada Pembelajaran Pendidikan Agama Islam. *DAYAH: Journal of Islamic Education, 3*(2), 250–270.

Megawati, M., Sulisworo, D., & Sayuti, M. (2025). Development of a Character Instrument Based on Al-Islam and Kemuhammadiyahan Values for Muhammadiyah Higher Education Students: A Systematic Literature Review. *Jurnal Konseling dan Pendidikan, 13*(3), 715–728.

Muhja, Z. A., & Wijaya, M. I. (2024). Application of Behaviorist Theory Based on the Learning Experience of Students in Boarding School Environments. *Al-Hayat: Journal of Islamic Education, 8*(3), 908–922.

Mulawarman, W. G., Kundori, K., Tubagus, M., Judijanto, L., & Susilawati, M. (2024). Character Education Management in Improving Students' Spiritual Intelligence. *Nidhomul Haq: Jurnal Manajemen Pendidikan Islam, 9*(1), 79–90.

Nawawi, M., Kurniawan, W., & Supriyadi, Y. H. (2025). Internalisasi Nilai Pendidikan Agama Islam dalam Menangani Kenakalan Remaja di Ponpes Yapika Cianjur Jawa Barat. *Raudhah Proud To Be Professionals: Jurnal Tarbiyah Islamiyah, 10*(3).

Ngumar, N., Tobroni, T., Romelah, R., & Ikhwan, A. (2025). Integrative Islamic Education for Organizational Cadre Formation: A Case Study of Muhammadiyah Boarding School in Trenggalek, Indonesia. *AL-ISHLAH: Jurnal Pendidikan, 17*(4), 6003–6015.

Nieto, J. L. L. G., Polanco, K., Hermosilla, I. T., & Véliz, J. B. (2022). Relationships between School Climate and Values: The Mediating Role of Attitudes towards Authority in Adolescents. *International Journal of Environmental Research and Public Health (IJERPH), 19*(5), 2726.

Prananto, K., Cahyadi, S., Lubis, F. Y., & Hinduan, Z. R. (2025). Perceived Teacher Support and Student Engagement among Higher Education Students – A Systematic Literature Review. *BMC Psychology, 13*(112), 1–22.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and Resampling Strategies for Assessing and Comparing Indirect Effects in Multiple Mediator Models. *Behavior Research Methods, 40*, 879–891.

Priyanath, H. M. S., RVSPK, R., & RGN, M. (2020). Methods and Rule-of-Thumbs in the Determination of Minimum Sample Size when Applying Structural Equation Modelling: A Review. *Journal of Social Science Research, 15*, 102–107.

Purwaningsih, E., & Ridha, R. (2024). The Role of Traditional Cultural Values in Character Education. *Pakistan Journal of Life and Social Sciences, 22*(2), 5305–5314.

Purwati, D., & Haryanto, S. (2025). The Role of Gontor Educational Values in Shaping the Morals of Santri as a Provision for Realizing a Civil Society. *Proceedings International Conference on Education Innovation and Social Science 2025*, 203–213.

Rahman, A. (2022). Investigating School Conditions for Teachers' Professional Learning and Development in Indonesia. *Teacher Development, 26*(2), 240–262.

Ramdani, F. M., Hufad, A., & Supriadi, U. (2017). Program Internalisasi Nilai Pendidikan Karakter pada Anak Usia Dini. *Sosietas: Jurnal Pendidikan Sosiologi, 7*(2), 386–398.

Reksiana, R., Rahmah, E. N., & Rahayu, L. A. (2023). Peers as an Educational Microsystem and Their Influence on the Formation of Student's Morality. *AL-ISHLAH: Jurnal Pendidikan, 15*(4), 6142–6151.

Renita, Gagaramusu, Y. B. M., Hariana, K., Rizal, Purnamasari, D., & Wilade, S. (2026). Building Student Discipline through Classroom Management Strategies. *Journal of Innovation and Research in Primary Education, 5*(1), 1761–1775.

Rino, P. P., & Setiawan, D. (2025). Disciplined Behaviour and Students' Responsibility through the Role of the Classroom Environment: A Qualitative Study. *JTP - Jurnal Teknologi Pendidikan, 27*(1), 253–264.

Robinson, K. A. (2023). Motivational Climate Theory: Disentangling Definitions and Roles of Classroom Motivational Support, Climate, and Microclimates. *Educational Psychologist, 58*(2), 92–110.

Romanovska, L., & Novak, M. (2024). The Role of Teacher-Student Relationships in Providing Social and Psychological Support to Participants of the Educational Process. *Social Work and Education, 11*(2), 308–319.

Rosmiyanti, R., Aida, N., Sulastri, S., Saputra, R., & Astini, B. I. (2025). Peran Umpan Balik Guru dalam Pengembangan Minat dan Bakat Siswa Sekolah Dasar. *Jurnal Pengajaran Sekolah Dasar, 4*(3), 696–707.

Rusilowati, A., Hidayah, I., Nugrahani, R., Abidin, Z., Hutagalung, F. D., Sofchah, T., & Ariyanti, S. W. (2024). Child-Friendly School and Its Relationship with the Merdeka Curriculum in Forming the Students' Character through Science Learning. *Jurnal Pendidikan IPA Indonesia, 13*(1), 137–146.

Saepurrohman, A., & Erihadiana, M. (2024). The Concept of Qudwah and Its Implications for Teacher Personality Competence in Islamic Education. *Jurnal Pendidikan Islam, 14*(2), 90–102.

Sáez-Delgado, F., López-Angulo, Y., Mella-Norambuena, J., Baeza-Sepúlveda, C., Contreras-Saavedra, C., & Lozano-Peña, G. (2022). Teacher Self-Regulation and Its Relationship with Student Self-Regulation in Secondary Education. *Sustainability, 14*(24), 16863.

Sathyanarayana, S., & Mohanasundaram, T. (2024). Fit Indices in Structural Equation Modeling and Confirmatory Factor Analysis: Reporting Guidelines. *Asian Journal of Economics, Business and Accounting, 24*(7), 561–577.

Seno, I. M., & Paglinawan, J. (2024). Institutional Support and Content Relevance on Instructional Quality of Basic Education Teachers. *International Journal of Novel Research and Development, 9*(11), 974–980.

Shen, H., Clark, N., & Mitra, T. (2025). Mind the Value-Action Gap: Do LLMs Act in Alignment with Their Values? *Proceedings of the 2025 Conference on Empirical Methods in Natural Language Processing*, 3097–3118.

Siegel-Stechler, K. (2023). "Conversation Is Everything": How Teachers and Students Create Environments where Open Discussion Can Thrive. *Theory & Research in Social Education, 51*(1), 626–660.

Suparmun, A. C. A. (2019). Paradigm of Muhammadiyah Cadre Education: Study of Cadre Education in M. Din Syamsuddin's Leadership (2005-2015). *Iseedu: Journal of Islamic Educational Thoughts and Practices, 3*(1), 1–26.

Suyatno, Mardati, A., Wantini, Pambudi, D. I., & Amurdawati, G. (2019). The Impact of Teacher Values, Classroom Atmosphere, and Student-Teacher Relationship towards Student Attitude during Learning Process. *International Journal of Learning, Teaching and Educational Research, 18*(8), 54–74.

Wang, M.-T., Degol, J. L., Amemiya, J., Parr, A., & Guo, J. (2020). Classroom Climate and Children's Academic and Psychological Wellbeing: A Systematic Review and Meta-Analysis. *Developmental Review, 57*, 100912.

Wang, X. (2023). Exploring Positive Teacher-Student Relationships: The Synergy of Teacher Mindfulness and Emotional Intelligence. *Frontiers in Psychology, 14*, 1301786.

Wu, L., Chen, Y., & Huang, X. (2025). The Process and Motivations of Individual Values Internalization: A Qualitative Study. *BMC Psychology, 13*(1036), 1–15.

Zheng, F. (2021). Fostering Students' Well-Being: The Mediating Role of Teacher Interpersonal Behavior and Student-Teacher Relationships. *Frontiers in Psychology, 12*, 796728.