ATTA'DIB
Jurnal Pendidikan Agama Islam
p-ISSN: 2745-665X, e-ISSN: 2746-1572
Publisher By Islamic Education Study Program Faculty of Tarbiyah IAIN Bone.
Address: HOS Cokroaminoto Street, Watampone, South Sulawesi, Indonesia.
Email: attadib.iainbone@gmail.com / attadib@iain-bone.ac.id

DEEP LEARNING, LOVE-BASED CURRICULUM, AND STUDENT CHARACTER DEVELOPMENT: THE ADDITIONAL PREDICTIVE CONTRIBUTION OF JUMBO MOVIE PERCEPTION

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Keywords:
Character development, Deep learning, Movie perception, Love-based curriculum, Moderated Multiple Regression.

Article History:
Received:
August 22, 2026

Accepted:
October 25, 2026

Published:
November 22, 2026

ABSTRACT
This study examines the predictive associations of Deep Learning and Love-Based Curriculum with students' character development and assesses the additional predictive contribution of Jumbo Movie Perception. A quantitative cross-sectional explanatory-predictive design was employed involving 92 seventh-grade students at MTs Ma'arif Darutaqwa. Data were collected through five-point Likert-scale questionnaires and analyzed using hierarchical moderated multiple regression. The findings revealed that pedagogical Deep Learning was a significant positive predictor of character development (B = 0.286, p = .006), whereas Love-Based Curriculum showed a positive but nonsignificant association (B = 0.309, p = .057). Adding Jumbo Movie Perception as an additional predictor significantly increased the explained variance by 5.7% (ΔR^2 = .057, p = .011). However, its interaction effects with Deep Learning and Love-Based Curriculum were not statistically significant (ΔR^2 = .023, p = .264), providing no evidence of moderation. These findings highlight the predictive contribution of reflective learning and students' perceptions of morally meaningful narratives to character development. In Islamic Religious Education, films may serve as supplementary learning resources when integrated with guided moral reflection and discussion. The findings are interpreted as predictive associations rather than causal effects.

How to cite:
Farida, L., Maesaroh, I., & Kholis, N. (2026). Deep learning, love-based curriculum, and student character development: The additional predictive contribution of Jumbo movie perception. *Atta'dib: Jurnal Pendidikan Agama Islam, 7*(2).
DOI: https://doi.org/10.30863/attadib.v7i2.12502

INTRODUCTION

Character education is a fundamental goal of education because learning success depends not only on knowledge mastery but also on developing students'

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moral, social, and emotional dispositions. A meta-analysis by Brown et al. (2023) shows that character education programs positively affect student development, although the magnitude of this effect varies depending on the intervention's design and form. Cipriano et al. (2023) reported similar findings, affirming the contribution of social and emotional learning to social-emotional competence, attitudes, behaviors, and educational outcomes. More recent evidence from positive youth development research also indicates that self-awareness, self-management, relationship skills, and responsible decision-making are positively associated with prosocial development, further supporting a multidimensional view of character-related outcomes (Meulenbeek et al., 2026). Thus, character development is better understood as a multidimensional process involving cognitive, affective, social, and contextual experiences.

In the context of madrasas, this orientation is particularly relevant because Islamic character formation aims to integrate intellectual, spiritual, moral, and social development. Recent conceptual work on Islamic character education similarly emphasizes that *akhlaq* should be understood not merely as outward behavioral conformity but as an internalized moral disposition integrating spiritual consciousness, moral judgment, intellectual discipline, and social responsibility (Kholis et al., 2026). Islamic education therefore emphasizes exemplarity and reflection in moral formation, as reflected in the principle of *uswah hasanah* in QS. Al-Ahzab [33]: 21 and *tadabbur* in QS. An-Nisa' [4]: 82.

The challenge of character education is therefore not just how values are taught, but how learning experiences are designed so that values are understood, reflected, and translated into action. Contemporary educational discourse has also focused on the meaning and integrity of student development (Shirley, 2020). Evidence from Indonesian schools similarly indicates that character education is enacted through multiple mechanisms, including teacher exemplarity, habituation, school climate, curricular integration, and extracurricular activities. At the same time, implementation strategies vary across educational levels and institutional contexts (Aningsih et al., 2022; Carsiwan, 2024).

One relevant approach is Deep Learning. In this study, the term refers to a pedagogical approach that encourages active engagement, conceptual understanding, problem-solving, collaboration, linking knowledge to real life,

and reflection on learning experiences (Fullan et al., 2018). In Indonesia's education policy, Deep Learning is formulated on the principles of mindfulness, meaningfulness, and Joy, with a learning experience that includes understanding, applying, and reflecting (Kemendikdasmen RI, 2025). Theoretically, this approach aligns with Vygotsky's social constructivism (1980), which emphasizes social interaction, meaningful activities, and reflection in constructing knowledge. Sølvik and Glenna (2022) also show that deeper learning thrives through active engagement, dialogue, deep understanding, and metacognitive reflection. Empirical research also indicates that pedagogical designs emphasizing authentic problem solving, active participation, knowledge integration, critical thinking, and reflection can promote deeper learning and higher-order capabilities (Weng et al., 2023). Thus, Deep Learning provides a cognitive-reflective mechanism that can support Character Development.

However, character formation does not occur solely through cognitive processes. Relational and affective experiences also determine how students feel valued, accepted, and treated in an educational setting. In this context, the Love-Based Curriculum (KBC) places compassion, care, tolerance, respect for human dignity, humanist communication, and character strengthening as integral parts of madrasah learning and culture (Kemenag RI, 2025). The orientation aligns closely with Noddings's Ethics of Care (2013), which places the relationship of concern at the heart of moral development. A systematic review by Díaz-Megolla and Falcon (2025) shows that love in education is associated with well-being, interpersonal relationships, social-emotional development, and various educational outcomes, although the consequences depend on context and implementation. Contemporary applications of care ethics similarly emphasize that caring education involves more than interpersonal kindness; it requires pedagogical relationships in which emotional responsiveness, recognition, and moral responsibility are enacted through everyday teaching practices (Hansen & Quek, 2023; Kitayama et al., 2022). Therefore, KBC can be understood as a relational-affective mechanism that complements the cognitive-reflective mechanism of Deep Learning.

Beyond school, children also build moral meaning through narrative media. The Character Engagement and Moral Adjustment Model (CEMAM) explains that engagement with fictional characters occurs through attention,

appraisal, affiliation, and assessment, *so* the media's moral potential depends on how the audience perceives and engages with characters and narratives (Grizzard & Eden, 2022). De Leeuw et al. (2024) show that media stories can be meaningful experiences that encourage reflection and response to moral beauty, while Stolk et al. (2025) find that movie stories can help children recognize and reflect on character strengths. This broader pattern aligns with meta-analytic evidence showing that exposure to prosocial media is associated with greater prosocial behavior and empathic concern and lower aggression. However, the magnitude of these associations varies across media types, participant characteristics, and study designs (Coyne et al., 2018). However, the literature does not show that movies automatically produce certain characters, but it does support narrative media as a source of moral meaning.

In this study, the film *Jumbo* is relevant because it features themes of friendship, courage, caring, self-acceptance, and empathy. However, students may not interpret the same message in the same way. Recent experimental evidence also suggests that the prosocial consequences of media exposure can differ by audience characteristics; for example, the effects of prosocial short-video content on adolescents' prosocial behavior varied by social value orientation (Li & Li, 2024). Therefore, *Jumbo* Movie Perception is included as a moderator variable. In the relationship between Deep Learning and Character Development, positive *Jumbo* Movie Perception can, in theory, enrich the reflective and meaning-making process. Meanwhile, in KBC's relationship with Character Development, representations of empathy, care, and friendship can serve as symbolic representations of the value students experience in a love-based educational environment. The literature on eudaimonic entertainment also shows that meaningful media often portrays virtues such as love, kindness, care, generosity, and helping (De Graaf & Das, 2023). However, whether media perceptions alter the associations between the two pedagogical approaches and Character Development remains empirically untested.

Based on this description, two research gaps remain. First, research still has not simultaneously tested cognitive-reflective mechanisms through Deep Learning and relational-affective mechanisms through KBC in the context of tsanawiyah madrasas. Second, narrative media studies tend to treat movies more as a source of experience and moral meaning, while evidence on whether

perceptions of media are a boundary condition in the pedagogy-character relationship remains limited. These gaps provide the rationale for the proposed research model.

Therefore, this study aims to examine the associations between Deep Learning and the Love-Based Curriculum and Character Development, and to test whether *Jumbo* Movie Perception moderates these relationships. Conceptually, the research integrates three dimensions of educational experience: cognitive-reflective, relational-affective, and narrative-symbolic. The novelty of the research lies primarily in examining whether narrative-symbolic experiences serve as conditions that alter the strength of the relationship between the two pedagogical approaches and Character Development.

The study's conceptual framework, shown in Figure 1, illustrates the relationships among the variables.

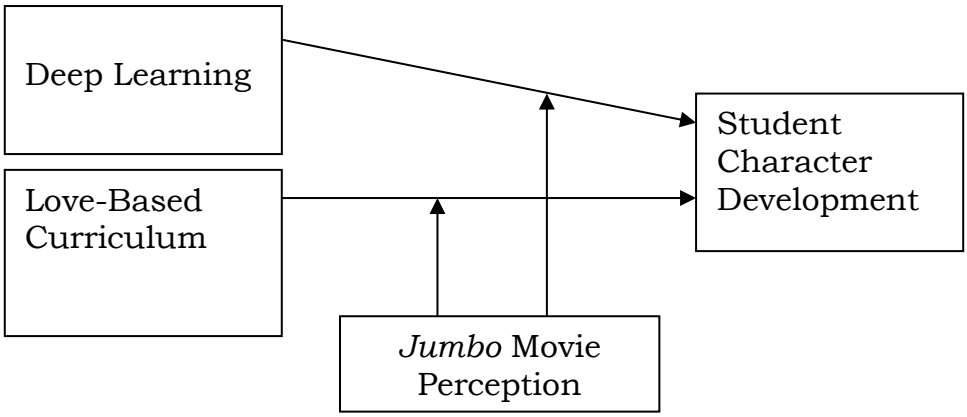

Figure 1. Research Conceptual Framework

Based on the theoretical framework and conceptual model, the research hypotheses are formulated as follows:

H1: Deep Learning (X1) positively predicts students' Character Development (Y).

H2: Love-Based Curriculum (X2) positively predicts students' Character Development (Y).

H3: *Jumbo* Movie Perception (Z) moderates the association between Deep Learning (X1) and students' Character Development (Y).

H4: *Jumbo* Movie Perception (Z) moderates the association between Love-Based Curriculum (X2) and students' Character Development (Y).

METHODS

This study employed a quantitative cross-sectional explanatory-predictive design to examine the predictive associations of Deep Learning and Love-Based Curriculum with students' Character Development and to test whether Jumbo Movie Perception moderated these relationships. This design was considered appropriate because the study focused on estimating the predictive contribution of naturally occurring educational experiences and examining whether the association between the predictors and Character Development varied according to students' perceptions of the film *Jumbo*. The study did not involve experimental manipulation; therefore, the findings reflect predictive associations rather than causal effects.

The research was conducted at MTs Ma'arif Darutaqwa Suci, Manyar District, Gresik Regency, during the even semester of the 2025/2026 academic year. The study population consisted of 120 seventh-grade students. From this population, 92 students were selected through simple random sampling based on student identification numbers. This sampling procedure gave each student in the target population an equal opportunity to participate and reduced systematic selection bias within the school population.

Data were collected using closed-ended questionnaires with a five-point Likert response format. Deep Learning was measured using 12 items covering active engagement, critical thinking, reflection, collaboration, and contextual learning. These indicators represented the cognitive-reflective dimension of students' learning experiences. Love-Based Curriculum was measured using 12 items addressing compassion, appreciation, social empathy, humanistic communication, and the cultivation of moral values, representing the relational-affective dimension of the educational environment.

Character Development was measured using 15 items covering religiosity, discipline, responsibility, cooperation, and honesty. *Jumbo* Movie Perception was measured using 15 items addressing students' understanding of moral messages, perceptions of character exemplars, positive motivation, the film's appeal, and the perceived relevance of its messages to their behavior. We assessed each scale's internal consistency using Cronbach's alpha. We treated a coefficient of .70 or above as a conventional indicator of acceptable internal

consistency (DeVellis & Thorpe, 2022), while values approaching this threshold were interpreted with appropriate caution.

All participating students viewed the same film, *Jumbo*, as part of their classroom learning activities. The film was screened before questionnaire administration so that all participants had been exposed to the same narrative content before reporting their perceptions. The viewing session was conducted under standardized classroom conditions to maintain comparable exposure across participants. After screening, students completed the questionnaire measuring Jumbo Movie Perception and other study variables. This procedure ensured that movie perception was measured based on a common media experience rather than different versions or viewing contexts.

Data were analyzed using IBM SPSS Statistics. Before hypothesis testing, we examined the assumptions required for multiple regression, including linearity, normality of residuals, multicollinearity, and heteroscedasticity. We then used Hierarchical Moderated Multiple Regression (MMR) because the study aimed not only to estimate the predictive contribution of Deep Learning and Love-Based Curriculum but also to determine whether Jumbo Movie Perception added explanatory value and moderated either association.

Before constructing the interaction terms, Deep Learning (X1), Love-Based Curriculum (X2), and Jumbo Movie Perception (Z) were mean-centered to facilitate interpretation and reduce nonessential multicollinearity between the predictors and their interaction terms. The analysis followed three stages. Model 1 included X1 and X2 to estimate their predictive contributions to Character Development. Model 2 added Z to evaluate the incremental predictive contribution of Jumbo Movie Perception beyond the two pedagogical predictors. Model 3 introduced X1 × Z and X2 × Z to test the two moderation hypotheses. We evaluated moderation through the statistical significance of the interaction coefficients and the change in explained variance (ΔR^2) between successive models. A simple-slope analysis was planned only if an interaction term reached statistical significance. All statistical tests used a significance level of 5% (α = .05).

RESULTS AND DISCUSSION

RESULTS

1. Reliability and Regression Assumption Test

Reliability tests used Cronbach's alpha to assess each instrument's internal consistency. The *Jumbo* Movie Perception scale had an α of .709, the Deep Learning scale had an α of .722, the Character Development scale had an α of .718, and the Love-Based Curriculum scale had an α of .692. The Deep Learning, *Jumbo* Movie Perception, and Character Development scales met the conventional .70 reliability criterion. In contrast, the Love-Based Curriculum scale showed marginal internal consistency and should therefore be interpreted with caution.

Before conducting the hierarchical regression analysis, we examined the assumptions of normality of residuals, linearity, multicollinearity, and heteroscedasticity. The normal P–P plot shows that the residual points follow and approach the diagonal line, so we found no significant deviation from residual normality. The linearity test showed a Deviation from Linearity value of 0.804 for the relationship between *Jumbo* Movie Perception and Character Development, 0.114 for Deep Learning and Character Development, and 0.281 for the Love-Based Curriculum and Character Development; all were greater than 0.05.

Multicollinearity diagnostics showed tolerance values of 0.748–0.941 and VIFs of 1.063–1.336, indicating no problematic multicollinearity. The residual scatterplot shows random points around the zero line, with no clear pattern, indicating no heteroscedasticity. Thus, the main regression assumptions are met, and the data can proceed to hierarchical moderated multiple regression analysis.

2. Descriptive Statistics

Table 1 presents the descriptive statistics for the study variables. The mean scores were 39.65 for Deep Learning (SD = 3.88), 41.93 for Love-Based Curriculum (SD = 3.43), 64.15 for *Jumbo* Movie Perception (SD = 5.10), and 63.75 for Character Development (SD = 5.11). The respective score ranges were 31–48, 35–51, 48–74, and 50–75. The relatively modest standard deviations

indicate that respondents' scores were moderately clustered around their respective means.

Table 1. Descriptive Statistics of Study Variables (N = 92)

Variable	M	SD	Min	Max
Deep Learning (X1)	39.65	3.876	31	48
Love-Based Curriculum (X2)	41.93	3.432	35	51
Jumbo Movie Perception (Z)	64.15	5.101	48	74
Character Development (Y)	63.75	5.111	50	75

3. Hierarchical Regression Analysis

Hierarchical regression analysis, as shown in Table 2, was conducted in three stages to evaluate the contribution of predictors and test for moderation of *Jumbo* Movie Perception. In Model 1, Deep Learning and Love-Based Curriculum simultaneously explained 19.3% of the variation in Character Development (R^2 = .193; adjusted R^2 = .175), and the model was statistically significant, $F(2, 89) = 10.623$, $p < .001$.

In Model 2, adding *Jumbo* Movie Perception increases R^2 to .250, or provides an additional explained variance of 5.7% (ΔR^2 = .057). The increase was significant, $\Delta F(1, 88) = 6.724$, $p = .011$, indicating an additional predictive contribution of Z after accounting for Deep Learning and Love-Based Curriculum.

In Model 3, the interactions of X1 × Z and X2 × Z increased R^2 to .273 (ΔR^2 = .023), but the increase was not significant, $\Delta F(2, 86) = 1.351$; $p = .264$. Thus, adding interaction terms does not significantly improve the model's explanatory power. Overall, *Jumbo* Movie Perception added predictive power in Model 2, but there was no evidence that it moderated either the Deep Learning–Character Development or Love-Based Curriculum–Character Development association.

Table 2. Hierarchical Regression Models That Predict Character Development

Model	Predictors Added	R^2	Adj. R^2	ΔR^2	ΔF	Δdf	p
1	X1, X2	.193	.175	.193	10.623	2, 89	<.001

Model	Predictors Added	R^2	Adj. R^2	ΔR^2	ΔF	Δdf	*p*
2	Z	.250	.224	.057	6.724	1, 88	.011
3	X1 × Z, X2 × Z	.273	.231	.023	1.351	2, 86	.264

Note. X1 = Deep Learning; X2 = Love-Based Curriculum; Z = *Jumbo* Movie Perception. All predictors were mean-centered before the interaction terms were created.

4. Regression Coefficient

The regression coefficients in Table 3 show each predictor's contribution to Character Development across three models. In Model 1, Deep Learning was positively and significantly related to Character Development (B = 0.286; SE = 0.102; β = .302; t = 2.809; p = .006), while the Love-Based Curriculum showed a positive but not significant coefficient at the 5% level (B = 0.309; SE = 0.160; β = .208; t = 1.931; p = .057).

In Model 2, after *adding Jumbo Movie Perception*, Deep Learning remained a positive and significant predictor (B = 0.284; β = .300; p = .005), while Love-Based Curriculum was insignificant (B = 0.221; β = .149; p = .167). *Jumbo* Movie Perception showed a positive and significant predictive contribution (B = 0.247; SE = 0.095; β = .247; t = 2.593; p = .011).

In Model 3, Deep Learning remained significant (B = 0.266; β = .281; p = .020), while Love-Based Curriculum (p = .090) and *Jumbo* Movie Perception (p = .114) were not significant. The two interaction terms were also insignificant, namely X1 × Z (B = 0.016; β = .074; p = .518) and X2 × Z (B = −0.060; β = −.184; p = .109).

Overall, *Jumbo* Movie Perception contributed additional explained variance in Model 2. However, there was no evidence that it moderated either the Deep Learning–Character Development or Love-Based Curriculum–Character Development association.

Table 3. Regression Coefficients to Predict Character Development

Predictors	*B*	*SE*	β	*t*	*p*
Model 1					
Deep Learning (X1)	0.286	0.102	.302	2.809	.006
Love-Based Curriculum (X2)	0.309	0.160	.208	1.931	.057

Predictors	*B*	*SE*	β	*t*	*p*
Model 2					
Deep Learning (X1)	0.284	0.099	.300	2.881	.005
Love-Based Curriculum (X2)	0.221	0.159	.149	1.392	.167
Jumbo Movie Perception (Z)	0.247	0.095	.247	2.593	.011
Model 3					
Deep Learning(X1)	0.266	0.112	.281	2.365	.020
Love-Based Curriculum (X2)	0.279	0.162	.187	1.715	.090
Jumbo Movie Perception (Z)	0.176	0.111	.176	1.595	.114
X1 × Z	0.016	0.024	.074	0.648	.518
X2 × Z	−0.060	0.037	−.184	−1.621	.109

Note. X1 = Deep Learning; X2 = Love-Based Curriculum; Z = *Jumbo* Movie Perception. X1, X2, and Z were centered on their means before creating the interaction terms.

DISCUSSION

1. The Predictive Association between Deep Learning and Character Development

The results indicate that Deep Learning was positively and significantly associated with Character Development. In Model 1, Deep Learning showed a positive and significant coefficient (B = 0.286; SE = 0.102; β = .302; t = 2.809; p = .006). The pattern remained consistent after *including Jumbo Movie Perception in Model 2 and after adding interaction terms* in Model 3. Thus, Deep Learning shows a relatively stable predictive contribution to Character Development across all model specifications.

These findings show that learning positions students as active participants through engagement, critical thinking, dialogue, collaboration, reflection, and linking material to real situations, and that this supports character development. Sølvik and Glenna (2022) show that deeper learning develops when teachers create a supportive learning environment that encourages active participation, dialogue, deep understanding, and metacognitive reflection. They also place deeper learning in the interconnectedness of cognitive and interpersonal domains. These findings align with the Deep Learning indicators in this study,

which include active engagement, critical thinking, reflection, collaboration, and contextual learning.

Cognitive-reflective mechanisms can explain this relationship. When students are not just receiving information but are asked to understand, apply, discuss, and reflect on knowledge, they can construct meaning, consider the consequences of their actions, and relate learning to social experiences. This process allows value to evolve from mere normative knowledge to a more personal and contextual understanding. This perspective aligns with Darling-Hammond et al. (2020). This perspective views learning and development as a process that integrates cognitive, social, emotional, relational, and contextual dimensions. Thus, character is not formed solely through the transmission of values, but through learning experiences that enable students to actively interpret and internalize them.

The broader character education literature also supports this study's findings. A meta-analysis by Brown et al. (2023) of 214 studies with 307,512 participants showed the positive effect of character education programs on student development. Meanwhile, Cipriano et al. (2023), in a meta-analysis of 424 studies from 53 countries, found that school-based social and emotional learning interventions are associated with the development of social-emotional competencies and various educational outcomes. Although neither study specifically examined Deep Learning as defined in this study, they support the proposition that learning experiences that integrate cognitive, social, emotional, and behavioral dimensions can support character development.

Pedagogically, these findings indicate that character education should not be positioned as additional material separate from the learning process. Character values develop more effectively when integrated into activities that demand active engagement, critical thinking, dialogue, collaboration, contextual application, and reflection. In this way, students not only learn about character values but also have opportunities to interpret their relevance, evaluate personal choices, and connect those values to real-life situations.

However, these findings still require cautious interpretation. Because the study used a cross-sectional explanatory-predictive design, interpret the observed association as predictive rather than causal. Nevertheless, the consistency of the Deep Learning coefficient across the three models indicates

that its association with Character Development was relatively robust within the present sample.

2. The Predictive Association between Love-Based Curriculum and Character Development

The results show that Love-Based Curriculum had consistently positive coefficients, but none reached the conventional .05 significance level across the three models. In Model 1, KBC has a positive coefficient but does not reach the 5% significance level (B = 0.309; SE = 0.160; β = .208; t = 1.931; p = .057). After *Jumbo* Movie Perception was included in Model 2, the KBC coefficient remained positive but not significant (B = 0.221; β = .149; p = .167). The same pattern was seen in Model 3 (B = 0.279; β = .187; p = .090). Thus, KBC's relationship with Character Development is consistently positive, but the statistical evidence is not sufficient to support an independent association between KBC and Character Development in the present sample.

The nonsignificant association of the Love-Based Curriculum with Character Development does not imply that compassion, empathy, care, and educational relationships are irrelevant to students' character formation. A systematic review by Díaz-Megolla and Falcon (2025) indicates that love in education is associated with well-being, interpersonal relationships, social-emotional development, and various educational outcomes. However, its effects depend on how educators translate love into practice. This relational perspective is further supported by Endedijk et al. (2022), whose meta-analysis shows that teacher–student relationship quality is associated with students' social development, and by Wu and Zhang (2022) who found that teacher–student closeness is related to adolescents' prosocial behavior through the satisfaction of relatedness needs. Taken together, these findings suggest that the contribution of a Love-Based Curriculum may operate through relational and psychological processes, such as perceived care, acceptance, support, and connectedness, rather than through a direct association with Character Development that is readily detectable in a single cross-sectional regression model.

Whitehead et al. (2023) further show that students perceive teachers' care through concrete behaviors such as kindness, empathy, clear communication,

attentiveness, and responsiveness to their needs, suggesting that love-based education gains meaning when care is consistently enacted in everyday interactions. This relational interpretation is also consistent with systematic evidence showing that teacher–student relationships are associated with emotional regulation, behavioral adjustment, school engagement, and other developmental outcomes, while relationship-focused interventions typically operate by strengthening closeness, reducing conflict, supporting social-emotional learning, and improving relational classroom management (García-Rodríguez et al., 2023; Poling et al., 2022).

The nonsignificant coefficient may also reflect the developmental and institutional nature of KBC implementation. The curriculum obtained formal operational status through the Decree of the Director General of Islamic Education No. 6077 of 2025, while data were collected during the 2025/2026 school year. Its implementation may therefore still have varied in intensity and consistency across classroom practices, although the present data cannot establish this explanation empirically. Moreover, relational-affective processes such as perceived care, psychological safety, connectedness, and classroom climate are likely to develop cumulatively. They may not be fully captured in a single cross-sectional measurement. Accordingly, the present findings indicate insufficient evidence for an independent KBC–Character Development association rather than evidence that care-based education is educationally irrelevant.

3. The Moderating Role of *Jumbo* Movie Perception in the Deep Learning–Character Development Association

The study found that *Jumbo* Movie Perception did not moderate the association between Deep Learning and Character Development. The X1 × Z interaction terms had a small, nonsignificant positive coefficient (B = 0.016; SE = 0.024; β = .074; t = 0.648; p = .518). Adding the interaction terms in Model 3 increased explained variance by only 2.3%, and this increment was not significant (ΔR^2 = .023; $\Delta F(2, 86)$ = 1.351; p = .264). Thus, there is no statistical evidence that the influence of Deep Learning on Character Development differs across high- and low-students' *Jumbo* Movie Perception.

The absence of moderation distinguishes the moral potential of narrative media from its capacity to alter an existing pedagogical association. Research on meaningful media suggests that stories can stimulate moral reflection and recognition of character strengths (De Leeuw et al., 2024; Stolk et al., 2025). However, such effects depend on how audiences attend to, evaluate, and identify with narrative characters. Consistent with CEMAM (Grizzard & Eden, 2022), a generally positive perception of *Jumbo* may therefore be insufficient to modify the association between Deep Learning and Character Development.

The regression pattern supports this distinction. *Jumbo* Movie Perception significantly increased explained variance when entered as an additive predictor in Model 2, whereas X1 × Z was nonsignificant in Model 3. Thus, the findings support an additional predictive contribution of movie perception but provide no evidence that it changes the strength of the Deep Learning–Character Development association. This interpretation is also consistent with evidence that media responses can vary substantially across individuals (Valkenburg et al., 2021). Although the media context and outcomes examined by Valkenburg et al. (2021) differ from those examined in the present study, their broader argument regarding heterogeneity in media responses remains relevant.

Pedagogically, narrative media and Deep Learning may therefore operate through conceptually distinct forms of experience: narrative-symbolic engagement and cognitive-reflective learning. A stronger linkage between the two may require explicit instructional integration through guided reflection, moral dialogue, or character analysis. However, this possibility was not tested in the present study and should be examined in future research.

4. The Moderating Role of *Jumbo* Movie Perception in the Love-Based Curriculum–Character Development Association

The study found that *Jumbo* Movie Perception did not moderate the association between Love-Based Curriculum and Character Development. The interaction term X2 × Z has a negative coefficient but is not statistically significant (B = −0.060; SE = 0.037; β = −,184; t = −1.621; p = .109). Therefore, the negative sign of the coefficient cannot be interpreted as evidence that *Jumbo* Movie Perception weakens KBC's influence. The addition of the interaction block in Model 3 also increased R^2 by only 2.3%, which was insignificant ($\Delta F(2, 86) =$

1.351; p = .264). Thus, there is no statistical evidence that the strength or weakness of KBC's influence on Character Development varies with students' *Jumbo* Movie Perception.

The moderation hypothesis was based on the conceptual overlap between the relational values emphasized in KBC and the virtues represented in meaningful narrative media. Eudaimonic entertainment frequently portrays love, kindness, care, helping, and generosity (De Graaf & Das, 2023). However, similarity in moral content does not necessarily produce a statistical interaction. Consistent with CEMAM (Grizzard & Eden, 2022), the moral implications of media depend on how viewers attend to, appraise, affiliate with, and evaluate narrative characters.

A plausible explanation lies in the different experiential bases of KBC and movie perception. KBC is primarily relational-affective, deriving meaning from repeated experiences of support, respect, empathy, psychological safety, and connectedness in teacher–student relationships. In contrast, movie perception operates primarily through narrative-symbolic engagement with characters, conflicts, actions, and consequences. These domains may therefore contribute to character-related outcomes without necessarily reinforcing one another multiplicatively. The nonsignificant X2 × Z coefficient in the present study supports this interpretation.

Accordingly, *Jumbo* Movie Perception should not be interpreted as a boundary condition for the KBC–Character Development association in this sample. If narrative media are intended to reinforce KBC, future research should examine more explicit pedagogical integration, such as guided moral discussion, character analysis, reflection on students' relational experiences, and follow-up social practices. The present study did not directly test these mechanisms.

CONCLUSION

This study examined the predictive associations of Deep Learning and Love-Based Curriculum with students' Character Development and tested whether Jumbo Movie Perception moderated these relationships. Deep Learning emerged as the most consistent predictor of Character Development across the regression models, whereas Love-Based Curriculum showed positive but statistically nonsignificant associations. Jumbo Movie Perception added

predictive power but did not significantly moderate either the Deep Learning–Character Development or Love-Based Curriculum–Character Development association. Thus, the findings support the predictive relevance of Deep Learning and the additive contribution of Jumbo Movie Perception, but do not support the proposed moderation hypotheses.

Theoretically, the findings point to three conceptually distinct domains of educational experience: cognitive-reflective experiences associated with Deep Learning, relational-affective experiences associated with Love-Based Curriculum, and narrative-symbolic experiences associated with engagement with the film *Jumbo*. These domains may be complementary in character education, but the present findings show that conceptual complementarity does not necessarily imply empirical interaction. Deep Learning was consistently associated with Character Development; Jumbo Movie Perception contributed additional explanatory value, whereas the relational-affective contribution of Love-Based Curriculum was not statistically distinguishable in the present sample. This pattern suggests that different educational experiences may relate to character development through distinct processes without necessarily statistically strengthening or weakening one another.

From a practical perspective, character education in madrasas should be embedded in everyday pedagogical and relational practices rather than treated solely as a separate curricular component. The findings highlight the value of learning activities that promote reflection, dialogue, collaboration, critical thinking, and contextual application. At the same time, the nonsignificant association of Love-Based Curriculum should not be interpreted as evidence that care-based education is unimportant; its contribution may depend on how consistently teachers enact compassion, empathy, respect, psychological safety, and responsiveness in teacher–student interactions and institutional culture. Similarly, *Jumbo* should not be regarded as an automatic character-building intervention. Narrative media may be more educationally meaningful when integrated with guided reflection, moral dialogue, and character analysis that connect narrative situations with students' lived experiences.

Several limitations qualify these conclusions. The cross-sectional explanatory-predictive design does not establish temporal precedence or causal relationships. The sample was limited to 92 seventh-grade students from a single

madrasah, restricting generalizability to other institutional and sociocultural contexts. In addition, all major constructs were measured through student self-reports, creating the possibility of common-method variance and response-related bias, which can affect estimated relationships when predictors and outcomes are obtained from the same source and measurement context. The marginal internal consistency of the Love-Based Curriculum scale (α = .692) also indicates a need for further measurement refinement. Moreover, Jumbo Movie Perception was measured broadly and did not directly assess more specific processes such as character identification, emotional engagement, narrative transportation, or depth of moral reflection.

Future research should therefore employ longitudinal, experimental, or quasi-experimental designs, involve larger multi-site samples, and combine student reports with teacher assessments, classroom observations, or behavioral indicators. Further studies should also refine how Love-Based Curriculum is measured and distinguish specific dimensions of narrative engagement. In particular, examining whether structured integration of morally meaningful films through guided discussion, character analysis, and reflective learning strengthens character-related outcomes would better test the relationship between pedagogical, relational, and narrative experiences in madrasah character education.

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