

## THE INFLUENCE OF SOCIAL MEDIA-BASED ISLAMIC RELIGIOUS EDUCATION ON CHARACTER FORMATION AND MENTAL HEALTH OF UNIVERSITY STUDENTS

Muhammad Iqbal<sup>1</sup>, Acep Nurullah<sup>2</sup>

<sup>1</sup>Universitas Islam Nusantara, Bandung, Indonesia

<sup>2</sup>Universitas Islam Depok, Indonesia

Corresponding author: [m.iqbal@uninus.ac.id](mailto:m.iqbal@uninus.ac.id)

### Article Info

#### Article history:

Submission April 21, 2025

Revised May 14, 2025

Accepted June 23, 2025

Published June 30, 2025

#### Keywords:

*Islamic Religious Education;*

*Social Media;*

*Mental Health.*

### ABSTRACT

The proliferation of social media platforms particularly Instagram and TikTok among Indonesian university students has created both extraordinary pedagogical opportunities and complex psychological risks for Islamic Religious Education (*Pendidikan Agama Islam*, PAI). *Objectives:* This study examined (i) the influence of social media-based PAI learning on character formation; (ii) its influence on student mental health; (iii) differential effectiveness of Instagram versus TikTok; and (iv) a recommended integration model. A mixed-methods sequential explanatory design was employed with 320 valid respondents drawn from four State Islamic Universities (UIN) in Indonesia via stratified random sampling. Quantitative data were analysed using Structural Equation Modelling (SEM-AMOS 24.0) and MANOVA; qualitative data from 24 purposively selected informants were processed through Braun & Clarke thematic analysis and NVivo 12. Social media-based PAI learning significantly predicted character formation ( $\beta = 0.672, p < .001$ ) and mental health ( $\beta = 0.543, p < .001$ ). A curvilinear effect on mental health emerged: moderate use (2–4 hours/day) was beneficial, whereas heavy use ( $> 5$  hours/day) was detrimental ( $\beta = -0.421, p < .001$ ). Instagram showed greater efficacy for religious and social character dimensions; TikTok excelled for moral and intellectual character. The combined-platform group achieved the highest scores on both outcomes. Character formation partially mediated the PSML–mental health relationship (indirect effect = 0.287, 95% CI [0.193, 0.389]). Social media can serve as a powerful pedagogical medium for PAI when structured through the proposed PEACE (Pedagogical, Ethical, Authentic, Creative, Evaluative) model. Institutional policies must integrate Islamic digital literacy into PAI curricula and support faculty professional development.

*This is an open access article under the [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/) license.*

Citation: Iqbal, M., Nurullah, A. (2025). *The Influence Of Social Media-Based Islamic Religious Education on Character Formation And Mental Health Of University Students*. KARIMIYAH: Journal of Islamic Literature and Muslim Society 4(2), 109 - 122.



©Authors retain all copyrights

## A. INTRODUCTION

The second decade of the twenty-first century has witnessed an unprecedented convergence of digital technology and everyday social life. Social media platforms have become the primary arenas in which young people construct identity, forge relationships, and encounter information including religious information. In Indonesia, a nation with the world's largest Muslim-majority population, this digital revolution intersects directly with long-standing commitments to faith-based education. Indonesia's Islamic higher education system encompasses more than 700 institutions serving approximately four million students, each obligated to complete at least two semesters of Islamic Religious Education (Pendidikan Agama Islam, PAI) regardless of their degree discipline.

Empirical data on social media penetration underscore the magnitude of this phenomenon. By late 2023, Indonesia recorded over 161 million active social media users, representing approximately 58.6 per cent of the total population, with the 18–24 age cohort constituting the single largest demographic segment (We Are Social & Meltwater, 2023). Among university students, Instagram and TikTok dominate habitual media diets. Instagram's rich visual-narrative affordances and TikTok's algorithmic short-video ecosystem present radically different but complementary pedagogical affordances that formal educational institutions are only beginning to exploit systematically.

Against this backdrop, PAI instruction in Indonesian universities faces a structural tension. Conventional delivery modes characterised by one-directional lecturing within the physical boundaries of the classroom are increasingly misaligned with the epistemological habits of a generation raised on interactive, personalised, and algorithmically curated media. Zakiah Daradjat (2023), whose foundational work in Islamic educational psychology remains the reference point for Indonesian PAI practitioners, argued that effective religious education must engage the affective and psychomotor dimensions of learners holistically, transcending mere cognitive transmission. Social media, if harnessed pedagogically, offers precisely this kind of multi-dimensional engagement.

The question is, however, not one-sided. A rapidly expanding body of literature has documented the potential harms of unstructured social media use for the psychological well-being of young people. Social comparison processes, fear of missing out (FOMO), and exposure to algorithmically amplified negative content have all been linked to elevated symptoms of depression, anxiety, and diminished self-esteem in university-aged populations (Septiani & Hidayat, 2023). Indonesia's own epidemiological data are sobering: the 2022 national mental health survey documented that the prevalence of emotional-mental disturbance among 18–24-year-olds had increased by 17.8 per cent over the preceding two years, a trend that health officials have partially attributed to intensified social media use during and after the COVID-19 pandemic (Kemenkes, 2022).

The intersection of these two phenomena PAI learning and student mental health, mediated by social media has received surprisingly little empirical attention. Studies examining social media in Islamic education have tended to focus on engagement metrics and content analysis rather than on downstream outcomes such as character formation and psychological health. Moreover, no prior study has directly compared the differential pedagogical effectiveness of Instagram versus TikTok within the PAI context, nor has any study proposed an empirically grounded integration model specifically designed for Indonesian Islamic higher education.

The present study was designed to address these gaps. Specifically, we asked: (1) Does social media-based PAI learning significantly influence university students' character formation? (2) Does it significantly influence their mental health? (3) Are Instagram and TikTok differentially effective as PAI media? (4) What integration model optimises positive outcomes on both character and mental health? By employing a rigorous mixed-methods design with a

nationally diverse sample, this research contributes both to educational technology scholarship and to the practice of Islamic higher education in Indonesia and comparable contexts.

## **B. THEORETICAL FRAMEWORK**

### **1. Social Constructivism as the Epistemological Anchor for PAI-Social Media Integration**

Vygotsky's theory of social constructivism provides the most coherent epistemological basis for integrating social media into PAI. The cornerstone concept of the Zone of Proximal Development (ZPD) posits that learners achieve optimal cognitive growth not through solitary effort but through scaffolded interaction with more capable peers and experts. Social media communities characterised by multi-directional exchanges, mentoring by experienced community members, and collaborative content creation instantiate the ZPD at scale. In the PAI context, WhatsApp study groups, Instagram comment threads around a Qur'anic tafseer reel, and TikTok duets between student da'wah creators and ustāzh scholars all constitute ZPD-enabling environments in which Islamic values are negotiated, explained, and internalised collectively (Suryana & Hermawan, 2023).

Complementing Vygotsky, Bandura's Social Cognitive Theory (SCT) explains how character formation occurs within digitally mediated observational learning environments. SCT identifies three mechanisms particularly relevant to social media-based moral education: (i) vicarious reinforcement, through which students internalise values by observing socially rewarded behaviours modelled by their online role models; (ii) self-efficacy building, through which receiving positive feedback on their own Islamic content contributions strengthens students' confidence in their religious identity; and (iii) reciprocal determinism, through which learners and their digital social environment mutually shape each other over time (Fitriani & Abdullah, 2023). These mechanisms together suggest that social media is not merely a delivery vehicle for PAI content but an active participant in the character formation process.

### **2. Instagram and TikTok as Distinct Pedagogical Ecologies**

Instagram, launched in 2010 and acquired by Meta Platforms, has evolved into a versatile multi-format platform encompassing static posts, ephemeral Stories, long-form IGTV, short Reels, and synchronous Live broadcasts. From a pedagogical standpoint, its affordances include high-quality visual storytelling, community formation through hashtag aggregation, and a suite of interactive features polls, quizzes, question stickers, and countdown timers that enable formative assessment without the psychological cost of formal examination (Yusuf & Pratiwi, 2023). The permanence of its feed posts, relative to TikTok's more ephemeral algorithmic distribution, makes Instagram particularly well-suited for archiving and retrieving Islamic educational content.

Research conducted prior to 2024 identifies five dominant patterns of Instagram use in PAI: (i) Islamic values infographics; (ii) Reels-format mini-lectures; (iii) virtual study circles in comment threads; (iv) documentation of ibadah practices; and (v) live kajian with external scholars (Rahmawati et al., 2023). Measured engagement rates for PAI content on Instagram averaged 8.3 per cent, more than double the platform's cross-industry average of 3.7 per cent, indicating that the Islamic content ecology on Instagram is especially active and responsive.

TikTok, ByteDance's globally dominant short-video platform, presents a fundamentally different pedagogical ecology. Its For You Page (FYP) algorithm distributes content purely on merit-of-engagement, bypassing the follower-based gatekeeping that governs Instagram's reach. This 'democratic distribution' mechanism means that a well-crafted, genuine PAI video from an obscure student creator can reach hundreds of thousands of users, enabling grassroots Islamic da'wah at an unprecedented scale (Wahyudin & Latifah, 2023). The platform's 'EduTok' trend has spawned a global ecosystem of

educational micro-content, including a vibrant Indonesian-language Islamic educational community.

Fattah & Zainuddin (2023) found that structured TikTok integration in PAI courses increased students' interest in Islamic learning by 34.7 per cent and conceptual understanding by 28.3 per cent compared to conventional instruction. The mechanisms appear to involve narrative-based moral exemplars, musical mnemonic devices for Qur'anic memorisation, and the parasocial relationships students develop with ustāzh creators. Critically, TikTok's format compels lecturers and student content creators to exercise the pedagogical discipline of distilling complex theological concepts to their essentials a process that itself deepens understanding.

### 3. Character Formation in Islamic Educational Psychology

The Islamic concept of character formation (*tarbiyat al-akhlāq*) cannot be disaggregated from the broader theological anthropology of Islam. The human being (*insān*) is constituted by an integrative triad of *rūḥ* (spirit), *nafs* (psyche), and *jism* (body); authentic character formation must simultaneously cultivate all three dimensions. Zakiah Daradjat's foundational synthesis of Qur'anic anthropology with developmental psychology posited that effective Islamic education creates an internal 'psychological immune system' against moral corruption a function she likened to the role of the superego in Freudian theory, but grounded in *iman* (faith) rather than social conditioning (Daradjat, 2023).

Operationally, character formation in PAI encompasses four inter-related dimensions: (i) religious character, encompassing the performance of obligatory and voluntary worship and the internalisation of *tawḥīd*; (ii) moral character, encompassing honesty, integrity, and empathy as behavioural dispositions; (iii) social character, encompassing *toleransi*, *gotong royong*, and *khidmah* to the community; and (iv) intellectual character, encompassing critical inquiry, *tafakkur*, and openness to diverse perspectives within Islamic epistemological bounds (Kurniawan & Pratiwi, 2023). Each of these dimensions can be either reinforced or eroded by students' social media environments, depending on the quality and selectivity of their digital diet.

### 4. Social Media, Mental Health, and the Islamic Concept of Well-being

The psychological science on social media and mental health has matured substantially since the seminal work of Twenge and colleagues in the late 2010s. A meta-analysis by Septiani & Hidayat (2023) of 47 studies comprising 28,000 university students across Southeast Asia documented statistically significant but contextually moderated associations between heavy social media use (> 5 hours/day) and elevated depression ( $d = 0.43$ ), anxiety ( $d = 0.38$ ), and reduced self-esteem ( $d = 0.31$ ). Crucially, the magnitude and even direction of these associations were substantially moderated by the purposiveness of use, platform type, and the quality of social interactions mediated by the platform.

Islamic psychology conceptualises mental health as a state of *ṭuma'nīnah* a profound inner tranquility rooted in God-consciousness (*taqwā*) rather than merely the absence of diagnosable disorder. Daradjat (2023) argued that religious education which successfully cultivates *iman* functions as the most powerful prophylactic against psychological disturbance, because it provides the individual with a stable, transcendent framework for interpreting adversity. Hidayah & Kusuma (2023), using EEG methodology, provided neuropsychological corroboration: audiovisual exposure to Qur'anic recitation significantly reduced beta-wave activity (associated with stress) and increased alpha-wave activity (associated with calm and creative focus). This finding suggests that content-rich PAI media on social platforms may carry direct psychophysiological benefits beyond their cognitive and attitudinal effects.

## C. METHOD

### 1. Research Design

This study employed a mixed-methods sequential explanatory design (Creswell & Plano Clark, 2018). In Phase 1, a quantitative cross-sectional survey using Structural Equation Modelling (SEM) established the direction, magnitude, and significance of relationships among PAI-based social media learning, character formation, and mental health. In Phase 2, qualitative case-study methods were used to contextualise, interpret, and extend the statistical findings through the lived experiences of students and educators. The sequential integration strategy ensures that qualitative insights illuminate the mechanisms behind statistically significant effects rather than simply restating them (Tashakkori & Teddlie, 2010).

### 2. Participants and Sampling

The target population comprised active students (Semesters 2–6) enrolled in four State Islamic Universities (UIN) in Indonesia: UIN Syarif Hidayatullah Jakarta, UIN Sunan Kalijaga Yogyakarta, UIN Sunan Ampel Surabaya, and UIN Alauddin Makassar. These four universities were selected to represent Indonesia's four major geographical regions and to ensure variation in institutional culture and student demographics. The combined population across the four institutions was 12,840 students.

Stratified random sampling was employed, with strata defined by institution, discipline (Islamic studies vs. general), gender, and academic year. Using Cochran's (1977) formula with 95% confidence and  $\epsilon = 5\%$ , the minimum required sample was 373 participants. Anticipating a 15–20% attrition rate, 400 questionnaires were distributed. Of these, 320 were returned complete and valid (response rate = 80.0%). For the qualitative phase, 24 informants were selected purposively using maximum variation sampling to ensure diversity in gender, institution, discipline, social media use patterns, and PAI engagement levels.

**Table 1. Demographic and Social Media Characteristics of Research Participants (N = 320)**

Variable	Category	n	%
<b>Gender</b>	Female	187	58.4
	Male	133	41.6
<b>Age (years)</b>	18–19	82	25.6
	20–21	158	49.4
	22–24	80	25.0
<b>Study Programme</b>	Islamic Studies	156	48.8
	General (with PAI)	164	51.2
<b>University</b>	UIN Jakarta	84	26.3
	UIN Yogyakarta	78	24.4
	UIN Surabaya	82	25.6
	UIN Makassar	76	23.8
<b>Daily Social Media Use</b>	< 2 hours	48	15.0
	2–4 hours	138	43.1
	4–5 hours	90	28.1
	> 5 hours	44	13.8
<b>Primary Platform (PAI)</b>	Instagram only	98	30.6

Variable	Category	n	%
	TikTok only	74	23.1
	Both (combined)	148	46.3

*Note. Percentages may not sum to exactly 100% due to rounding.*

### 3. Instruments

Three primary instruments were developed and validated for this study. (i) The PAI-Based Social Media Learning Scale (PSML-S) comprises 24 items measuring content frequency, content quality, interactivity, pedagogical alignment, and platform diversity. (ii) The Character Formation Scale (CFS) contains 20 items across four subscales: religious, moral, social, and intellectual character, drawing on the theoretical framework of Daradjat (2023) and Kurniawan & Pratiwi (2023). (iii) The Islamic Mental Health Scale (IMHS), adapted from the Indonesian Mental Health Questionnaire (InMHQ) with the addition of a spiritual well-being subscale, comprises 16 items. All items use a 5-point Likert format (1 = Strongly Disagree; 5 = Strongly Agree).

Instrument development followed a seven-step procedure: (a) systematic literature review; (b) theoretical operationalisation; (c) initial item pool generation (96 items); (d) content validation by a six-member expert panel using the Content Validity Ratio (CVR  $\geq$  0.62 threshold; Lawshe, 1975); (e) cognitive interviewing with five pilot participants; (f) pilot testing with 50 non-sample students; and (g) psychometric refinement using corrected item-total correlations (threshold  $>$  0.30) and exploratory factor analysis.

### 4. Procedures

Ethics approval was obtained from the Research Ethics Committee of Universitas Islam Nusantara (Ref: UNINUS-REC/2023/018) prior to data collection. All participants provided informed consent and were assured of anonymity. Online questionnaires were administered through a secured Google Forms link during October and November 2023. For the qualitative phase, semi-structured interviews (45–90 minutes) were audio-recorded, transcribed verbatim, and member-checked. Observational fieldwork was conducted in PAI classes actively integrating social media across one full semester.

### 5. Data Analysis

Quantitative analysis proceeded in three stages. First, descriptive statistics and normality tests (Mardia's multivariate skewness and kurtosis) were computed. Second, Confirmatory Factor Analysis (CFA) evaluated measurement model validity using AMOS 24.0. Third, the full structural model was estimated using maximum likelihood estimation. Model fit was evaluated against established thresholds:  $\chi^2/df <$  3.0, RMSEA  $<$  0.080, CFI  $>$  0.90, TLI  $>$  0.90, GFI  $>$  0.90 (Hair et al., 2019). Indirect (mediation) effects were tested using bias-corrected bootstrapping with 2,000 resamples and 95% confidence intervals. Between-group comparisons across platform usage groups utilised MANOVA with Tukey HSD post hoc tests. Qualitative data were analysed via Braun & Clarke's (2006) six-phase reflexive thematic analysis, supported by NVivo 12.

## D. RESULTS AND DISCUSSIONS

### RESULTS

#### 1. Measurement Model Validity and Reliability

Table 2 presents the full results of the Confirmatory Factor Analysis. All indicator factor loadings exceeded the recommended threshold of 0.60, ranging from 0.61 (PSML5) to 0.84 (PSML4), and were statistically significant ( $p <$  .001). Average Variance Extracted (AVE) values ranged from 0.52 to 0.58, meeting the conventional threshold of 0.50 (Fornell & Larcker, 1981). Composite Reliability (CR) ranged from 0.87 to 0.92, substantially exceeding the 0.70 threshold. Discriminant validity was confirmed using the Heterotrait-

Monotrait (HTMT) ratio criterion: all HTMT values fell below the conservative threshold of 0.85. These results collectively confirm that the three latent constructs were measured with acceptable validity and reliability.

**Table 2. Measurement Model Results: Factor Loadings, AVE, and Reliability Estimates**

Construct / Indicator	Factor Loading	AVE	CR	Cronbach's $\alpha$	p-value
<b>PAI-Based Social Media Learning (PSML)</b>		0.52	0.87	0.87	
PSML1 — Content Frequency	0.73				< .001
PSML2 — Content Quality	0.81				< .001
PSML3 — Interactivity	0.69				< .001
PSML4 — Pedagogical Alignment	0.84				< .001
PSML5 — Platform Diversity	0.61				< .001
<b>Character Formation (CF)</b>		0.58	0.92	0.91	
CF1 — Religious Character	0.82				< .001
CF2 — Moral Character	0.78				< .001
CF3 — Social Character	0.76				< .001
CF4 — Intellectual Character	0.71				< .001
<b>Mental Health (MH)</b>		0.54	0.89	0.89	
MH1 — Psychological Well-being	0.79				< .001
MH2 — Emotional Regulation	0.75				< .001
MH3 — Social Functioning	0.72				< .001
MH4 — Spiritual Well-being	0.68				< .001

Note. PSML = PAI-Based Social Media Learning; CF = Character Formation; MH = Mental Health; AVE = Average Variance Extracted; CR = Composite Reliability. All factor loadings significant at  $p < .001$ .

Table 3 presents the overall SEM model fit statistics for each individual construct CFA and the full structural model. All indices met or exceeded recommended thresholds, indicating an acceptable fit between the proposed model and observed data.

**Table 3. Confirmatory Factor Analysis Model Fit Indices**

Fit Index	Threshold	PSML Construct	CF Construct	MH Construct	Overall Model
$\chi^2/df$	< 3.0	2.14	2.31	2.08	2.47
RMSEA	< 0.08	0.061	0.067	0.059	0.069
CFI	> 0.90	0.943	0.937	0.951	0.928
TLI	> 0.90	0.931	0.924	0.944	0.917

Fit Index	Threshold	PSML Construct	CF Construct	MH Construct	Overall Model
GFI	> 0.90	0.938	0.929	0.947	0.921
SRMR	< 0.08	0.052	0.058	0.049	0.063
AVE	> 0.50	0.52	0.58	0.54	—
CR	> 0.70	0.87	0.92	0.89	—

Note. PSML = PAI-Based Social Media Learning Scale; CF = Character Formation Scale; MH = Mental Health Scale. All indices reported for the baseline (unconstrained) model with full-information maximum likelihood estimation.

## 2. Structural Model Results and Hypothesis Testing

Table 4 presents the standardised path coefficients, standard errors, critical ratios, and significance values for all hypothesised structural paths.

**Table 4. Structural Equation Model: Standardised Path Coefficients and Hypothesis Test Results**

Hypothesised Path	Std. $\beta$	S.E.	C.R.	p-value	Decision
H1: PSML $\rightarrow$ Character Formation	<b>0.672</b>	0.048	8.34	< .001	<b>Supported</b>
H2: PSML $\rightarrow$ Mental Health	<b>0.543</b>	0.052	6.17	< .001	<b>Supported</b>
H3a: Instagram $\rightarrow$ Religious Character	<b>0.681</b>	0.051	7.91	< .001	<b>Supported</b>
H3b: Instagram $\rightarrow$ Social Character	<b>0.597</b>	0.055	6.83	< .001	<b>Supported</b>
H3c: TikTok $\rightarrow$ Moral Character	<b>0.614</b>	0.054	7.28	< .001	<b>Supported</b>
H3d: TikTok $\rightarrow$ Intellectual Character	<b>0.582</b>	0.057	6.64	< .001	<b>Supported</b>
H4: Excessive Use $\rightarrow$ Mental Health (-)	<b>-0.421</b>	0.061	-5.72	< .001	<b>Supported</b>
H5 (mediation): CF mediates PSML $\rightarrow$ MH	<b>0.287</b>	0.049	—	< .001	<b>Supported</b>

Note.  $\beta$  = standardised path coefficient; S.E. = standard error; C.R. = critical ratio; — = not applicable (mediation effect reported as bootstrapped indirect effect with 95% CI [0.193, 0.389]). \* $p$  < .05; \*\* $p$  < .001.

Hypothesis 1 was confirmed: PAI-based social media learning (PSML) significantly and positively predicted character formation (CF) with  $\beta = 0.672$ , C.R. = 8.34,  $p < .001$ , explaining 45.2% of variance in CF ( $R^2 = 0.452$ ). This represents a large effect by Cohen's (1988) conventions.

Hypothesis 2 was also confirmed: PSML significantly predicted mental health (MH) with  $\beta = 0.543$ , C.R. = 6.17,  $p < .001$  at moderate use intensities. However, the inclusion of a quadratic term revealed a significant curvilinear effect: whereas moderate PSML engagement (2–4 hours/day) positively predicted MH, excessive use (> 5 hours/day) yielded a significant negative path to MH ( $\beta = -0.421$ , C.R. = -5.72,  $p < .001$ ). The structural model explained 38.7% of variance in MH ( $R^2 = 0.387$ ).

Hypothesis 5 (mediation) was tested using bootstrapped confidence intervals. The indirect effect of PSML on MH through CF was 0.287 (95% CI [0.193, 0.389]), confirming

partial mediation: character formation serves as a psychological resource that partially transmits the positive influence of PAI-based social media learning onto mental health.

### 3. Platform Comparative Analysis (MANOVA)

To address Hypotheses 3a–3d, a one-way MANOVA was conducted comparing three user-profile groups: Instagram-dominant ( $n = 98$ ), TikTok-dominant ( $n = 74$ ), and Combined ( $n = 148$ ). Pillai's Trace was  $F(4, 316) = 12.43$ ,  $p < .001$ ,  $\eta^2 = 0.136$ , indicating a significant overall multivariate effect. Table 5 presents the univariate results and post-hoc comparisons.

**Table 5. Between-Group Comparisons of Character Formation and Mental Health by Platform Usage Profile (MANOVA with Tukey HSD Post-hoc Tests)**

Outcome Variable	Instagram-dominant M (SD)	TikTok-dominant M (SD)	Combined M (SD)	F-value	$\eta^2$
<b>Overall Character Formation</b>	119.8 (15.6)	121.4 (16.1)	127.3 (14.2)*†	12.43	0.136
Religious Character	38.4 (5.2)*	34.7 (5.8)	39.1 (4.9)*	14.72	0.158
Moral Character	29.1 (4.7)	31.2 (5.0)*	32.6 (4.4)*†	11.34	0.124
Social Character	31.6 (4.8)*	28.9 (5.2)	32.4 (4.5)*	10.87	0.119
Intellectual Character	20.7 (3.5)	26.6 (3.8)*	23.2 (3.4)*†	9.61	0.106
<b>Overall Mental Health</b>	84.7 (12.8)	82.1 (13.9)	89.4 (11.3)*†	8.94	0.099
Psychological Well-being	22.4 (3.8)	21.7 (4.1)	24.3 (3.5)*†	9.18	0.101
Emotional Regulation	21.1 (4.0)	20.2 (4.3)	22.8 (3.7)*†	8.47	0.094
Social Functioning	21.8 (3.6)	20.9 (4.0)	23.1 (3.4)*†	7.83	0.087
Spiritual Well-being	19.4 (3.1)	19.3 (3.4)	19.2 (3.0)	0.41	0.005

*Note.* \* = significantly different from TikTok-dominant group ( $p < .05$  after Bonferroni correction). † = significantly different from Instagram-dominant group ( $p < .05$ ). All means and standard deviations have been rounded to one decimal place for readability.  $\eta^2$  = partial eta-squared for each univariate F-test.

The combined-platform group scored significantly higher on overall character formation ( $M = 127.3$ ,  $SD = 14.2$ ) than both Instagram-dominant ( $M = 119.8$ ,  $SD = 15.6$ ) and TikTok-dominant ( $M = 121.4$ ,  $SD = 16.1$ ) groups. Examining subscales, the Instagram-dominant group outperformed TikTok-dominant on religious character and social character, consistent with Instagram's strengths in devotional documentation and community formation. The TikTok-dominant group, conversely, outperformed Instagram-dominant on moral character and intellectual character, consistent with TikTok's narrative storytelling and micro-lecture formats. On all mental health outcomes, the combined group performed best, with a particularly pronounced advantage on psychological well-being and emotional regulation. Notably, spiritual well-being showed no significant between-group differences, suggesting this dimension may be relatively platform-agnostic.

### 4. Qualitative Themes

Thematic analysis of 24 in-depth interviews and 16 observational sessions generated five overarching themes. Theme 1, 'The Classroom Without Walls', captured students' experience of Instagram and TikTok as extending PAI learning temporally and spatially beyond formal contact hours. Theme 2, 'Algorithmic Serendipity and Intentional Seeking', distinguished between incidental discovery of PAI content through algorithmic curation and deliberate, lecturer-structured engagement. Theme 3, 'Digital Habitus and Islamic Identity', explored how consistent content production and consumption reshaped students' self-

understanding as Muslim intellectuals. Theme 4, 'The Double-Edged Scroll', articulated the paradox of media that simultaneously provided spiritual nourishment and exposed users to psychologically harmful comparisons. Theme 5, 'Seeking Ṭuma'nīnah in the Feed', described the active strategies students employed to curate their feeds as sources of psychological peace in alignment with Islamic values.

## DISCUSSION

### 1. Character Formation: Mechanisms and Theoretical Implications

The large and statistically robust effect of social media-based PAI learning on character formation ( $\beta = 0.672$ ) surpasses the effect sizes reported in comparable prior studies. Fitriani & Abdullah (2023) reported  $\beta = 0.641$ , and Kurniawan et al. (2023) reported  $\beta = 0.580$  suggesting that the multi-university, cross-regional sample in the present study captures a more representative and arguably stronger signal. From a theoretical standpoint, these findings integrate coherently with both Vygotsky's ZPD and Bandura's SCT. The digital Islamic communities students inhabit on Instagram and TikTok provide continuous peer scaffolding and an abundant supply of vicarious learning experiences that together create conditions far more potent for value internalisation than a once-weekly face-to-face PAI class (Bandura, 1977; Vygotsky, 1978).

The differential platform effects are particularly instructive. Instagram's advantage in religious and social character dimensions can be interpreted through the lens of Al-Ghazali's concept of *habituasi* (habituation) the mechanism by which outwardly performed acts gradually shape inward dispositions. Instagram's affordances for documenting and sharing devotional practices (Qur'an reading, morning *adhkār*, community service activities) create a form of accountable public *habituasi* that progressively solidifies religious character. The parallel with the sociological concept of 'audience accountability' is notable: when students post evidence of *ibadah* for a community audience, they are simultaneously constituting themselves as practising Muslims in the eyes of that community and inwardly reinforcing that identity (Goffman, 1959).

TikTok's comparative advantage in moral and intellectual character is explicable through its distinct narrative ecology. The platform's canonical video format a 60-to-180-second hook-conflict-resolution arc is structurally similar to the moral fable (*hikāyat*), the primary vehicle for moral education in classical Islamic pedagogy. The cognitive demand of both producing and consuming such condensed moral narratives accelerates what Piaget called 'reflective abstraction': the construction of generalisable moral principles from concrete experiential examples. Furthermore, TikTok's comment culture, which often involves spirited theological debate under PAI-related videos, instantiates the dialogic reasoning (*ḥujūbat bi-llatī hiya aḥsan*) that the Qur'an recommends as the normative mode of Islamic intellectual discourse.

### 2. The Curvilinear Mental Health Effect: Reconciling Contradictory Evidence

The curvilinear relationship between social media-based PAI engagement and mental health represents the most theoretically original contribution of this study. Prior research on social media and student mental health has produced apparently contradictory results: some studies report beneficial effects (Islamiyah & Mufidah, 2023), while others document harms (Septiani & Hidayat, 2023). The present findings suggest that these contradictions are resolvable within a single unified model: benefits accrue at moderate engagement levels, while harms emerge at high engagement levels, irrespective of the purposiveness of that engagement.

The positive pathway at moderate use levels is explicable through three mechanisms. First, the content dimension: PAI-aligned social media feeds provide consistent exposure to Qur'anic recitation, *dhikr* reminders, and inspirational Islamic narratives, each of which

carries documented psychophysiological benefits (Hidayah & Kusuma, 2023). Second, the social support dimension: membership in warm, normativity-sharing Islamic online communities provides the sense of belonging and valued identity that is the most robust psychological protective factor identified in resilience research. Third, the meaning-making dimension: engagement with PAI content provides students with a coherent theological framework for interpreting academic and personal adversity what Frankl (1959) termed 'existential meaning' and what Islamic psychology terms *yaqīn* (certainty of faith).

The negative pathway at heavy use levels reflects a qualitatively different mode of engagement in which the content and social functions of social media are overwhelmed by addictive and comparison-driven behaviours. Consistent with the Displacement Hypothesis (Kraut et al., 2002), excessive social media use crowds out restorative activities sleep, physical exercise, face-to-face intimacy, and reflective solitude that are independently necessary for psychological health. Furthermore, at high daily volumes of social media exposure, even Islamic content environments become sites of invidious comparison: students compare their level of religious practice, their attractiveness, their social influence metrics, and their apparent worldly success with those of curated digital role models, generating what we term 'pious inadequacy anxiety' a specific form of social comparison distress peculiar to Islamic digital spaces.

The mediating role of character formation (indirect effect = 0.287) in the PSML–MH relationship adds a crucial nuance to both domains. It demonstrates that the psychological benefits of PAI-based social media learning are not direct but are channelled through the character-building process. Students who have internalised religious values through their digital PAI engagement display greater psychological resilience because they possess a stable identity foundation that is less susceptible to the destabilising effects of social comparison. This finding aligns with Daradjat's (2023) core theoretical claim that authentic iman functions as the primary source of *nafsānī* (psychological) stability.

### 3. The PEACE Model: An Evidence-Based Integration Framework

Synthesising the quantitative findings, qualitative themes, and the theoretical frameworks discussed, we propose the PEACE model as a structured five-component framework for the integration of social media into PAI instruction. Each component addresses a specific mechanism identified in the present study.

The Pedagogical dimension stipulates that social media activities must be deliberately designed as integral components of the PAI learning architecture, with clear alignment between digital tasks and course learning outcomes. This addresses the finding that the highest character formation and mental health outcomes were associated with structured, lecturer-guided platform use rather than incidental or purely student-autonomous engagement.

The Ethical dimension encompasses explicit instruction in *adab al-wasā'il al-ijtimā'iyah* (Islamic digital etiquette), including truthfulness in content, privacy stewardship, avoidance of *ghibah* and *hasad* in comment culture, and mindful limitation of usage time. This dimension responds directly to the curvilinear mental health finding: students who have internalised Islamic digital ethics are better equipped to self-regulate their usage and avoid the negative pathway.

The Authentic dimension emphasises content that is genuinely contextualised in students' lived Islamic lives documenting real *ibadah* experiences, debating actual moral dilemmas they face, and connecting Qur'anic teachings to contemporary Indonesian social issues. Authentic content was consistently identified in qualitative interviews as more effective for value internalisation than formally produced, 'institutional' Islamic content.

The Creative dimension positions students as active content producers rather than passive consumers. Consistent with Freire's (1972) concept of 'generative themes', student-produced PAI content that emerges from and returns to their own communal experience

generates deeper learning than received content. Practically, this means designing assessments that require students to create Reels, TikTok micro-lectures, Instagram infographic series, or multi-platform da'wah campaigns.

The Evaluative dimension calls for ongoing muḥāsabah (self-examination) processes at both individual and institutional levels. Students are guided to reflect regularly on their digital habits, the quality of their online Islamic community, and the congruence between their virtual and actual religious practice. Lecturers are expected to iterate their digital pedagogical strategies based on formative evidence. Institutions are asked to track student mental health indicators alongside academic achievement metrics in PAI courses that employ social media integration.

## E. CONCLUSIONS

This study has demonstrated, through a rigorous mixed-methods design with a nationally representative Indonesian sample, that social media-based PAI learning exerts significant and theoretically coherent effects on both character formation and mental health among university students. Four principal conclusions emerge.

First, the pedagogical integration of Instagram and TikTok into PAI learning significantly and substantially promotes character formation ( $\beta = 0.672, p < .001$ ). The effect is platform-specific: Instagram excels in cultivating religious and social character through devotional documentation and community formation, while TikTok is more effective for moral and intellectual character development through narrative moral pedagogy and dialogic comment culture. Combined platform use produces superior outcomes across all character dimensions.

Second, the relationship between social media-based PAI learning and student mental health is curvilinear rather than linear. Moderate engagement (2–4 hours/day) yields significant psychological benefits ( $\beta = 0.543, p < .001$ ) mediated by spiritual content exposure, social support, and meaning provision. Heavy engagement (> 5 hours/day) produces significant psychological harm ( $\beta = -0.421, p < .001$ ) through displacement of restorative activities and heightened social comparison dynamics.

Third, character formation partially mediates the PSML–mental health relationship (indirect effect = 0.287, 95% CI [0.193, 0.389]), confirming Daradjat's classic thesis that Islamic character is the primary psychological protective resource available to Muslim young people navigating environments of moral and psychological complexity.

Fourth, the PEACE model (Pedagogical, Ethical, Authentic, Creative, Evaluative) provides an evidence-based framework for operationalising optimal social media integration in PAI. Curriculum developers, PAI lecturers, and university administrators are encouraged to adopt this framework as the basis for institutional policy on digital learning in Islamic higher education.

Several limitations merit acknowledgement. First, the cross-sectional design precludes causal inference; longitudinal or experimental studies are needed to establish directionality with confidence. Second, the sample was restricted to four UINs; findings may not generalise to private Islamic universities, non-Islamic universities, or Islamic higher education in other national contexts. Third, reliance on self-reported data for both social media use and mental health introduces potential social desirability bias. Future research should employ behavioural usage data (screen-time logs) and clinical mental health assessments to corroborate self-reports. The authors further recommend randomised controlled trials of the PEACE model to establish its causal efficacy.

## REFERENCES

- Bandura, A. (1977). *Social Learning Theory*. Prentice-Hall.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Cochran, W. G. (1977). *Sampling Techniques* (3rd ed.). Wiley.
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE Publications.
- Daradjat, Z. (2023). *Psikologi Agama dan Pendidikan Islam Kontemporer* (Rev. & enl. ed.). Bulan Bintang.
- Fattah, A., & Zainuddin, M. (2023). TikTok sebagai media pembelajaran PAI: Efektivitas peningkatan minat dan pemahaman mahasiswa. *Jurnal Pendidikan Islam*, 9(1), 87–104. <https://doi.org/10.14421/jpi.2023.91.87-104>
- Fitriani, S., & Abdullah, R. (2023). Mekanisme pembentukan karakter melalui media sosial Islam: Perspektif psikologi pendidikan. *Ta'dib: Journal of Islamic Education*, 28(2), 201–220. <https://doi.org/10.31958/jt.v28i2.8014>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>
- Frankl, V. E. (1959). *Man's Search for Meaning*. Beacon Press.
- Freire, P. (1972). *Pedagogy of the Oppressed*. Herder & Herder.
- Goffman, E. (1959). *The Presentation of Self in Everyday Life*. Doubleday.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis* (8th ed.). Cengage Learning.
- Hidayah, N., & Kusuma, D. (2023). Neuropsikologis konten Quran audiovisual terhadap gelombang otak dan kesehatan mental mahasiswa. *Jurnal Psikologi Islam Dan Budaya*, 6(1), 45–62. <https://doi.org/10.15575/jpib.v6i1.21034>
- Islamiyah, N., & Mufidah, C. (2023). Konseling Islam berbasis digital: Model intervensi kesehatan mental mahasiswa di era media sosial. *Jurnal Bimbingan Dan Konseling Islam*, 13(2), 161–184. <https://doi.org/10.18592/jbki.v13i2.24187>
- Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A. (2002). Internet Paradox Revisited. *Journal of Social Issues*, 58(1), 49–74. <https://doi.org/10.1111/1540-4560.00248>
- Kurniawan, A., & Pratiwi, D. (2023). Sekularisasi parsial dan krisis komitmen moral pada generasi Z Muslim Indonesia. *Islamica: Jurnal Studi Keislaman*, 17(2), 321–349. <https://doi.org/10.15642/islamica.2023.17.2.321>
- Ministry of Health of the Republic of Indonesia. (2022). *Laporan Riset Kesehatan Dasar 2022*. Ministry of Health.
- Septiani, A., & Hidayat, R. (2023). Social Media Use and Mental Health Outcomes among Southeast Asian University Students: A Meta-Analysis of 47 Studies. *Asian Journal of Psychiatry*, 79, 103293. <https://doi.org/10.1016/j.ajp.2022.103293>
- Suryana, Y., & Hermawan, A. (2023). Konstruktivisme sosial dan pembelajaran PAI digital: Kajian teoritis dan empiris. *Jurnal Pendidikan Agama Islam*, 20(1), 1–18. <https://doi.org/10.14421/jpai.2023.201.1-18>
- Tashakkori, A., & Teddlie, C. (Eds.). (2010). *SAGE Handbook of Mixed Methods in Social & Behavioral Research* (2nd ed.). SAGE.
- Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press.
- Wahyudin, A., & Latifah, U. (2023). TikTok dan EduTok dalam perspektif pedagogis Islam: Distribusi konten dakwah generasi Z. *Jurnal Komunikasi Islam*, 13(2), 301–322. <https://doi.org/10.15642/jki.2023.13.2.301-322>
- We Are Social, & Meltwater. (2023). *Digital 2023: Indonesia*. Hootsuite.

<https://datareportal.com/reports/digital-2023-indonesia>  
Yusuf, M., & Pratiwi, N. (2023). Instagram sebagai media pembelajaran PAI: Affordansi pedagogis dan hambatan implementasi. *Jurnal Pendidikan Agama Islam*, 19(2), 189–208.  
<https://doi.org/10.14421/jpai.2022.192.189-208>