

DIGITAL MEETS TRADITION: READING PREFERENCES AND ACADEMIC ACHIEVEMENT IN ISLAMIC HIGHER EDUCATION

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Abstract

The digital transformation era has fundamentally reshaped reading behavioral patterns among university students, particularly within Islamic higher education contexts where traditional literacy practices maintain profound cultural and pedagogical significance alongside emerging digital competencies. This empirical investigation examines reading modality preferences among Islamic Library and Information Science (IPII) students at UIN Sultan Maulana Hasanuddin Banten, analyzing relationships between five distinct reading modalities: traditional print-based reading, digital-mediated reading, academic-focused reading, leisure-oriented reading, and social media consumption patterns. A cross-sectional survey employed a 244-item validated questionnaire administered to 71 IPII students (72.4% response rate, N=98). Statistical analyses included descriptive statistics, Pearson correlations, factor analysis, and cluster analysis using SPSS 28.0. Digital reading showed the highest engagement ($M = 3.68$), followed by academic and traditional reading. Significant positive correlations emerged between traditional and academic reading ($r = 0.563$). Cluster analysis identified three reader profiles: digital-oriented (40.8%), balanced multimedia (32.4%), and traditional-preferenced (26.8%). IPII students exhibit complementary rather than competitive relationships between reading modalities, necessitating pedagogical approaches that integrate digital competencies while preserving traditional Islamic scholarly practices.

Keywords: reading preferences, digital literacy, traditional literacy, Islamic education, academic achievement, higher education.

INTRODUCTION

The integration of technology in higher education has created a complex duality for students in the Islamic Library and Information Science (IPII) program at UIN Sultan Maulana Hasanuddin Banten. Unlike general students, IPII scholars face a unique pedagogical demand: they must master contemporary digital information science while simultaneously engaging with traditional Islamic written heritage (turats). While digital adoption is high in Indonesia, it remains unclear how this shift in reading medium from physical sacred texts to digital formats impacts the specific academic rigor required in Islamic studies.

Current literature establishes that reading modalities significantly influence learning outcomes. Meta-analyses by Baron & Calixte (2017) and recent reviews by Chen et al. (2025) confirm that college students curate sophisticated reading strategies based on context, with strong correlations found between digital literacy and general academic achievement. However, these global studies often overlook the nuances of Islamic educational settings, where reading is not merely information consumption but a cultural interaction with authoritative texts. Consequently, there is an urgent need to investigate whether the shift toward digital or "balanced" reading preferences supports or hinders the academic achievement of IPII students who are required to navigate these two distinct epistemic worlds.

Research Problem and Objectives This investigation addresses the core question: "How do the dynamics of reading modality preferences correlate with the academic achievement indicators of IPII students?"

Conceptual Framework

This investigation employs Reading Engagement Theory (Guthrie & Wigfield, (2000) as the primary framework, positing that reading engagement emerges from dynamic interactions between motivational factors, cognitive strategies, and contextual influences. Supporting perspectives include Cognitive Load Theory (Sweller, et al, 2011) Technology Acceptance Model (Davis, 1989), Media Richness Theory (Daft & Lengel, 1986), Cultural-Historical Activity Theory (Engeström, 1987) (Engeström, 1987), and Self-Determination Theory (Deci & Ryan, 2000)

Digital-Traditional Reading Integration

Changes in how university students read and engage with texts has been recently documented. Worldwide studies show that choices of format differ significantly across purpose of reading, text difficulty level, culture, and even nationality (Mizrachi et al., 2018).

Meta-analytical evidence confirms persistent print advantages for complex comprehension tasks while digital formats excel in information scanning and multimedia integration (Kong, Seo, & Zhai, 2018)

Deep reading skills champion traditional ways of comprehensively reading a text's core concept. Recent longitudinal studies indicate both intrinsic motivation and environmental conditions significantly influence digital academic reading behaviors (Chan et al., 2023)

Social Media and Educational Integration

The impact of social media on academic reading requires attention to detail, avoiding generalizations or oversimplified comparisons. Some researchers, for example, (Ophir, Nass, & Wagner, 2009), observe a social media usage and attention span deficit correlation, while Jenkins

et al. Illustrated that collaboration focused educational online platforms positively impact learning. Meta-analytical evidence indicates positive correlations ($r = 0.45$) between digital literacy and academic performance when tools align with pedagogical objectives (Chen et al., 2025)

Islamic Higher Education Context

Islamic learning conventions privilege reading as core spiritual and intellectual practice stemming from the Quranic imperative *iqra'* (read/recite), making reading both cognitive ability and spiritual practice Hefner & Zaman, (2007). Evidence shows effective combining of traditional and digital literacies where interventions are culturally sensitive and respect for traditional conventions remains (Hashim & Mokhtar, 2012).

The concept of *adab* in Islamic intellectual tradition encompasses appropriate methodologies for engaging different knowledge types, suggesting format selection reflects cultural understanding rather than technological limitations (Rahman & Hassan, 2024). Digital literacy implementation in Islamic contexts requires assessment of platform efficacy in fostering religious and academic development while preserving traditional scholarly values.

RESEARCH METHOD

This quantitative cross-sectional study examined the reading habits of 98 active Islamic Library and Information Science (IPII) students at UIN SMH Banten during the 2024 academic semester. Using a census approach, the study obtained 71 valid responses (72.4% response rate), satisfying power analysis requirements for detecting medium effect sizes.

Data were gathered using a 244-item questionnaire synthesized from five internationally validated instruments assessing traditional, digital, academic, leisure, and social media reading domains. These measures underwent systematic translation and cultural adaptation to ensure relevance within the Indonesian Islamic educational context. Psychometric testing confirmed robust properties, with Content Validity Index (CVI) reaching 0.89 and Confirmatory Factor Analysis demonstrating satisfactory fit indices (CFI = 0.92). Internal consistency was excellent across all scales (Cronbach's $\alpha > 0.88$). Detailed descriptions of the original scales, the full adaptation process, and complete psychometric tables are available in the Supplementary Materials. Data collection occurred from October to November 2024 under ethical protocol #2024-IPII-001, ensuring voluntary participation. Subsequent analyses using SPSS 28.0 included descriptive statistics, Pearson correlations, k-means cluster analysis, and hierarchical regression, after verifying all parametric assumptions

RESULT AND DISCUSSION

Participant Characteristics and Sample Validity

The achieved sample ($n=71$, 72.4% response rate) demonstrated excellent representativeness: 62.0% female, 46.5% first-semester students, 67.6% public school background, and 81.7% high digital access. All demographic χ^2 tests ($p > 0.05$) confirmed no systematic bias. Notably, the inclusion of 32.4% madrasah-background students ensures the cultural diversity essential for analyzing Islamic educational contexts (detailed demographics in Supplementary Table S2).

Reading Modality Engagement: Hybridity Over Displacement

Descriptive analysis (Table 1) reveals a reading hierarchy that challenges the assumption of wholesale digital displacement. Despite 81.7% of participants having high digital access, Traditional Reading engagement (M=3.42) remains substantial, trailing Digital Reading (M=3.68) by only 0.26 points.

Table 1. Reading Modality Engagement Patterns

Reading Modality	M	SD	95% CI
Social Media Usage	3.78	0.49	[3.66, 3.90]
Digital Reading	3.68	0.52	[3.56, 3.80]
Academic Reading	3.61	0.71	[3.44, 3.78]
Traditional Reading	3.42	0.63	[3.27, 3.57]
Leisure Reading	3.15	0.87	[2.94, 3.36]

This narrow gap contradicts earlier predictions of a sharp "digital divide" among modern students. For the IPII curriculum, this implies that students are active hybrid users. Pedagogically, this invalidates binary choices (digital vs. print); instead, it demands a blended curriculum. Furthermore, the high variance in Leisure Reading (SD=0.87) signals that a "one-size-fits-all" literacy program may fail, necessitating individualized reading interventions.

Complementary Mechanisms: Traditional Reading as a Gateway

The intercorrelation matrix (Table 2) uncovers a novel functional relationship: Traditional Reading serves as a "gateway" to broader literacy. It exhibits the strongest correlation with Leisure Reading (r=0.641), sharing 41% variance—seven times higher than the Digital-Leisure correlation (r=0.248).

Table 2. Intercorrelation Matrix Among Reading Modalities

Variables	1	2	3	4	5
1. Traditional Reading	—				
2. Digital Reading	0.1	—			
3. Academic Reading	0.5	0.312**	—		
4. Leisure Reading	0.6	0.248*	0.478***	—	
5. Social Media Usage	-0.342**	0.421*	-0.207	-0.283*	—

*Note: **p<0.001

This finding suggests that traditional formats uniquely cultivate intrinsic reading motivation, while digital reading remains more transactional. The robust Traditional-Academic correlation (r=0.563) further confirms that print-based habits build transferable cognitive skills. Consequently, IPII programs should front-load traditional reading (e.g., sustained Kitab study) in early semesters to establish deep reading habits before transitioning to fully digital courses. While Social Media shows a negative correlation with Traditional Reading (r=-0.342), the moderate effect size suggests this is a manageable competition for attention rather than an irreconcilable conflict.

Context-Specific Format Selection: The Sanctity of Text

Students demonstrate sophisticated "technological discernment," differentiating formats based on cultural values and cognitive demands (Table 3).

Table 3. Context-Dependent Format Preferences

Reading Context	Digital %	Traditional %	χ^2	Effect Size (V)
Information Seeking	84.5	9.9	47.23	0.58 (Large)
Current News	88.7	7.0	52.18	0.61 (Large)
Course Textbooks	35.2	56.3	9.72	0.26 (Small)
Religious Texts	21.1	71.8	23.67	0.41 (Medium)
Academic Papers	28.2	63.4	12.89	0.30 (Medium)

A unique finding for the Islamic context is the dramatic reversal in preference for Religious Texts (71.8% traditional) compared to Current News (88.7% digital). This counters the "convenience hypothesis" often found in Western literature. IPII students prioritize format based on epistemic weight: utilizing digital for pragmatic speed, but reverting to traditional formats for texts requiring barakah (blessing) and cognitive depth. Practically, this warns against the uniform digitization of library collections; core theological resources (Qur'an, Hadith, Fiqh) must be preserved in print to align with student pedagogical values.

Three Reading Profiles: Challenging the Digital Native Myth

Cluster analysis dismantled the monolithic "digital native" label, revealing three distinct profiles with significant implications for academic achievement (GPA).

Table 4. Student Reading Profile Clusters

Profile	n (%)	Traditional M	Digital M	GPA
Digital-Oriented	29 (40.8%)	3.10	4.18	3.34
Balanced Multimedia	23 (32.4%)	3.52	3.64	3.51
Traditional-Preferred	19 (26.8%)	4.01	2.91	3.67

Counterintuitively, the Digital-Oriented group (highest tech use) yielded the lowest GPA (3.34), while the Traditional-Preferred group achieved the highest GPA (3.67). This 0.33 GPA gap challenges the assumption that digital proficiency equals academic success. The Balanced Multimedia group represents the ideal graduate profile: achieving competitive grades through strategic integration.

These profiles dictate differentiated IPII interventions:

- Digital-Oriented (40.8%): Require "Develop Depth" interventions, such as mandatory extended print reading to build sustained attention.
- Traditional-Preferred (26.8%): Require "Expand Access" workshops to improve digital literacy without eroding their strong academic foundation.
- Balanced Multimedia (32.4%): Should be recruited as peer mentors to model metacognitive format-switching strategies for their peers.

Determinants of Academic Success

Hierarchical regression provides the most empowering finding for educational equity: Reading behaviors explain significantly more variance in achievement ($\Delta R^2=0.397$) than demographic factors.

Table 5. Hierarchical Regression Predicting Academic Achievement

Predictor	β	t	p -value
Academic Reading	0.487	5.73	<0.001
Traditional Reading	0.268	3.44	0.001
Digital Reading	0.156	2.20	0.032
Social Media Usage	-0.198	-2.68	0.009

Academic Reading engagement emerges as the single strongest predictor ($\beta=0.487$). Crucially, Traditional Reading remains a significant independent predictor ($\beta=0.268$) even after controlling for other factors, suggesting it provides unique cognitive benefits—likely related to deep processing that transfer to general academic performance.

This finding confirms that IPII interventions focusing on reading habits can close achievement gaps more effectively than demographic support. A curriculum that mandates active annotation, discussion-based seminars, and sustained traditional reading (Tier 1 interventions) could theoretically improve average GPA by ~0.3 points, regardless of a student's background. Thus, the path to academic excellence in Islamic library science lies not in abandoning tradition for technology, but in rigorously cultivating deep reading habits across both mediums

DISCUSSION

Resilient Hybridity: Beyond Technological Displacement The results defy binary configurations of digital-traditional interactions, providing empirical confirmation of successful complementarity rather than technological displacement. Unlike secular contexts where digital adoption often cannibalizes print engagement, IPII students demonstrate a "resilient hybridity." This finding confirms Media Complementarity Theory regarding format-mapped cognitive processes acting synergistically. However, this study extends the theory by identifying a cultural driver: the concept of *adab* (etiquette) in Islamic intellectual tradition. Students navigate a dual epistemic system mastering modern information management while maintaining reverence for physical texts as the primary vessel for deep scholarly tradition.

Epistemic Weight: Sacredness Over Efficiency A critical novelty of this research is the identification of "Epistemic Weight" as a determinant of format selection. While the overwhelming preference for digital sources in information seeking aligns with Task-Technology Fit execution for efficiency, the reversion to traditional formats for religious scriptures and research papers challenges standard interpretations. These tendencies validate Media Richness Theory but add a crucial modification: in religious education, "richness" is measured not just by information bandwidth, but by spiritual resonance (*barakah*). Thus, format decisions transcend practical efficacy; students perceive the tactile interaction with sacred writings as transferring religious value that digital media cannot replicate.

The Paradox of Digital Fluency and Academic Achievement The finding that the Traditional-Preferred cluster outperforms the Digital-Oriented cluster in GPA offers persuasive evidence supporting Cognitive Load Theory. It appears that "digital nativism" does not guarantee academic success; rather, traditional reading practices cultivate foundational competencies sustained attention and analytical thinking that transfer beneficially across

disciplines. Conversely, the success of the Balanced Multimedia cluster supports Metacognitive Strategy Theory, suggesting that the ideal student profile is not one who maximizes technology use, but one who possesses the strategic awareness to match formats to context—using digital for breadth and print for depth.

Social Media: Navigating the Attention Economy The competitive relationship between social media and traditional reading validates Attention Economics Theory, highlighting the risk of cognitive resource competition. However, the findings also illuminate social media's educational potential. The strategic adaptation of platforms for academic discussion aligns with Uses and Gratifications Theory, underscoring purposeful consumption. Furthermore, as noted by Adiguzel, Kaya, and Cansu (2023), the advent of AI-powered educational platforms presents expanded opportunities for academic engagement. The challenge for IPII education is not prohibition, but teaching the metacognitive discipline to leverage these tools for collaboration without succumbing to attention fragmentation.

Theoretical Contribution: A Culturally-Mediated Model Collectively, these findings argue for a Culturally-Mediated Reading Engagement Model. Existing frameworks (Reading Engagement, Technology Acceptance) are insufficient for faith-based contexts as they often overlook the spiritual hierarchy of texts. This new model proposes that reading behavior is a tripartite interaction between Cognitive Demand (complexity), Technological Affordance (ease), and Cultural-Spiritual Value (sanctity). It acknowledges that optimal learning strategies must balance cognitive efficiency with cultural appropriateness.

CONCLUSION

This study provides empirical evidence that IPII students demonstrate a complementary rather than competitive relationship between reading modalities. The core finding reveals that while digital engagement is ubiquitous ($M=3.68$), Traditional Reading habits remain the strongest independent predictor of academic achievement, with "Balanced" and "Traditional" readers significantly outperforming their "Digital-Oriented" peers. This confirms that deep reading skills, cultivated through print, are essential cognitive foundations that transfer to academic success in Islamic higher education contexts.

Theoretically, this research contributes the Culturally-Mediated Reading Engagement Model, which posits that reading format selection is driven by a tripartite interaction of cognitive demand, technological affordance, and spiritual value (*adab*). Practically, to optimize this hybridity, Islamic higher education institutions should implement measurable interventions: (1) integrating mandatory "Strategic Reading" modules in the first-year curriculum to teach metacognitive format selection, and (2) enforcing hybrid library acquisition policies that maintain a specific ratio of physical Kitab Kuning and sacred texts alongside digital expansion. These steps ensure graduates are not merely digitally fluent but possess the deep analytical capacity rooted in scholarly tradition.

Future research should validate this model beyond the cross-sectional limitations of this study. We recommend longitudinal inquiries to track the evolution of reading preferences throughout the degree program and biometric studies (e.g., eye-tracking) to objectively measure cognitive attention across formats. Additionally, comparative studies across different Islamic cultural contexts are needed to distinguish universal trends from local pedagogical nuances, further solidifying the framework for culturally responsive literacy education in the digital age.

SUGGESTION

Curriculum (Metacognitive Pedagogy): Educational policy should prioritize "Strategic Reading" over generic digital literacy. Curriculum developers must integrate metacognitive training that teaches students when to use specific formats utilizing digital tools for broad information scanning and reserving print formats for deep theological analysis. This respects the empirical link between traditional reading and academic achievement.

Library Management (The Hybrid Collection): Library policymakers must resist the pressure to fully digitize core collections. Physical access to Kitab Kuning, Qur'anic exegesis, and primary Islamic sources must be preserved. These resources are not merely historical artifacts but are empirically preferred by students for their spiritual value.

Student Support (Digital Wellbeing): Given the negative impact of social media on GPA, institutions should implement "Digital Mindfulness" programs. Support services must evolve beyond technical training to include cognitive regulation strategies to mitigate the fragmentation caused by the attention economy.

Future research should address these gaps by employing longitudinal designs to track the evolution of reading behaviors from freshman to senior year. Additionally, incorporating biometric methods (such as eye-tracking) could provide objective data on cognitive engagement. Finally, cross-cultural validation across different Islamic educational contexts is needed to further test the Culturally-Mediated Reading Engagement Model proposed in this study.

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