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Hybrid Identity Students in Modern Learning: Educational Management Perspectives on Digital Academic Identity

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Abstrak
Penelitian ini mengkaji fenomena Hybrid Identity Students (HIS) dalam konteks pembelajaran modern yang semakin didominasi oleh platform digital. Identitas akademik digital yang berkembang pada mahasiswa menciptakan tantangan baru bagi manajemen pendidikan dalam merancang lingkungan belajar yang efektif, inklusif, dan berkelanjutan. Melalui pendekatan studi literatur sistematis dengan menganalisis 20 artikel jurnal internasional bereputasi (2021–2024), penelitian ini bertujuan mengidentifikasi karakteristik HIS, pola adopsi teknologi dalam pembelajaran, serta implikasi manajerial bagi institusi pendidikan tinggi. Hasil menunjukkan bahwa HIS mengembangkan dua lapisan identitas yang saling berinteraksi: identitas fisik-tradisional dan identitas digital-akademik. Temuan utama mencakup: (1) 72% mahasiswa mengalami konflik identitas saat berpindah antar modalitas belajar; (2) integrasi AI adaptif meningkatkan keterlibatan mahasiswa hingga 65%; dan (3) kompetensi digital berkorelasi positif dengan performa akademik (r = 0,74). Penelitian ini berkontribusi pada pengembangan kerangka konseptual manajemen identitas akademik digital dalam sistem pembelajaran hibrida.
Kata Kunci: *Hybrid Identity; Identitas Akademik Digital; Manajemen Pendidikan; Pembelajaran Hibrida; Transformasi Digital*

Abstract
This study investigates the phenomenon of Hybrid Identity Students (HIS) within the context of modern learning increasingly dominated by digital platforms. The evolving digital academic identity among students creates new challenges for educational management in designing effective, inclusive, and sustainable learning environments. Through a systematic literature review approach analyzing 20 internationally reputed journal articles (2021–2024), this study aims to identify HIS characteristics, technology adoption patterns in learning, and managerial implications for higher education institutions. Results indicate that HIS develop two interacting identity layers: physical-traditional identity and digital-academic identity. Key findings include: (1) 72% of students experience identity conflict when transitioning between learning modalities; (2) adaptive AI integration increases student engagement by up to 65%; and (3) digital competence positively correlates with academic performance (r = 0.74). This study contributes to developing a conceptual framework for digital academic identity management in hybrid learning systems.
Keywords: *Hybrid Identity; Digital Academic Identity; Educational Management; Hybrid Learning; Digital Transformation*

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Introduction
The rapid advancement of digital technology has fundamentally reshaped the landscape of higher education, producing a cohort of learners who navigate and perform across intertwined physical

and virtual learning spaces. Increasingly described as Hybrid Identity Students (HIS), these individuals maintain multiple, coexisting academic identities, one enacted in face-to-face classrooms, another curated in online courses and social platforms, whose boundaries are porous and continuously negotiated (Akour & Alenezi, 2022; Alenezi, 2023). The hybrid condition influences not only where learning happens but how students present themselves, manage participation, and make sense of achievement: HIS routinely translate norms, expectations, and feedback from one environment into the other, while also contending with tensions that arise when digital affordances (anonymity, editability, visibility) conflict with in-person norms (immediacy, embodied presence, private feedback). As a result, their engagement patterns, self-perception, and regulatory strategies reflect an ongoing calibration between performative digital behaviors and relational, process-oriented practices in face-to-face settings, making HIS an analytically and practically important group for educators and managers seeking to support coherent, equitable learning experiences.

The COVID-19 pandemic acted as a powerful accelerant for this ongoing transformation in higher education. What initially began as an emergency pivot to remote instruction rapidly normalized digital modalities and has since matured into a sustained structural shift: many institutions now embed hybrid and blended delivery as durable elements of their pedagogical architecture rather than temporary stopgaps (Turnbull et al., 2021; Singh et al., 2021). This normalization has expanded access, pedagogical flexibility, and opportunities for innovative teaching practices, but it has also introduced complex managerial and pedagogical challenges. Educational managers must support students whose learning identities, motivations, and competencies traverse the digital–physical divide, requiring new approaches to curriculum design, assessment, and student support that account for continuity across modalities (Maatuk et al., 2021). Administrators also face operational issues, staff training, technology infrastructure, quality assurance, and equitable access, while needing to attend to psychosocial dimensions such as belonging, engagement, and the risk of performative behaviors amplified online. In short, the pandemic catalyzed a durable hybridization of higher education that demands integrated, anticipatory management strategies to realize the potential benefits while mitigating emergent harms.

Although scholarship on digital transformation in higher education has expanded (Hashim et al., 2021; Bygstad et al., 2022), the distinct concept of digital academic identity, and the practical implications of managing it within institutions, remains underdeveloped. Existing studies have usefully explored adjacent topics: technology adoption processes and barriers (Songkram et al., 2023), the development of digital competences and literacies (Scheel et al., 2022; Sathyan et al., 2022), and patterns of student engagement in blended and hybrid learning environments (Armellini et al., 2021). Yet these strands often remain siloed, producing insights about tools, skills, or participation without fully explaining how students actively construct, negotiate, and perform multiple academic selves that traverse online and face-to-face contexts.

This gap matters for educational management because hybrid identity formation is not merely an individual psychological process but a systemic phenomenon shaped by institutional design choices, assessment regimes, platform selections, communication norms, and support structures. Without an integrated framework that links adoption, competence, and engagement to identity work, administrators and curriculum designers lack the conceptual resources needed to anticipate how policies and practices will influence students' hybrid identities, and consequently, their motivation, belonging, and learning outcomes. Developing such a framework would therefore enable more coherent, equity-minded management of digital academic life, aligning technological investments and pedagogical strategies with the realities of students who inhabit multiple learning environments simultaneously.

The absence of a well-developed conceptual language for Hybrid Identity Students (HIS) carries significant managerial consequences for higher education institutions. Educational leaders who lack analytic tools to map how students inhabit and shift between online and face-to-face academic selves are at a disadvantage when designing targeted interventions, prioritizing investments, or crafting policies that promote equitable outcomes across heterogeneous student cohorts (Alenezi et al., 2023; Almufarreh & Arshad, 2023). Without such frameworks, resource allocation risks favoring visible technological upgrades over subtler supports, such as faculty development in hybrid pedagogies, assessment practices that bridge modalities, or counseling services attuned to identity fragmentation, leaving vulnerable students less able to translate digital competencies into sustained learning gains. The managerial urgency is amplified by the accelerating integration of artificial intelligence into adaptive learning platforms, which can reshape learning pathways, personalize feedback, and modulate student experience at scale (Strielkowski et al., 2024; Almusaed et al., 2023). Absent clear conceptual and policy guidance, AI-

driven systems may inadvertently entrench inequities or reinforce performative behaviors across modalities rather than support coherent identity development and meaningful learning progression. Consequently, senior leaders, curriculum designers, and student-support units need robust, operationalizable frameworks that link identity dynamics to institutional levers so they can proactively design inclusive, evidence-informed responses to the hybridized realities of contemporary students.

This study therefore pursues three interconnected objectives that together aim to clarify and operationalize the concept of Hybrid Identity Students (HIS) for educational managers and researchers. First, it seeks to characterize the defining features of HIS within contemporary higher education contexts, identifying how multiple coexisting academic selves are enacted, negotiated, and experienced across face-to-face classrooms, online courses, and social learning spaces. Second, the study analyzes patterns of digital-technology adoption, ranging from LMS use to social platforms and AI-enhanced tools, and examines how these adoption patterns shape, enable, or constrain academic identity formation, participation, and self-regulation. Third, it derives practical managerial implications by translating empirical and conceptual insights into institutional strategies that support coherent learning experiences, equitable outcomes, and the wellbeing of students whose motivations and competencies span the digital–physical divide.

By integrating these goals, the study contributes to educational management theory and practice through the development of a Hybrid Identity Management Framework (HIMF) grounded in a systematic review of recent empirical and theoretical literature. The HIMF is designed to help administrators, curriculum designers, and student-support professionals anticipate how technology choices, assessment practices, and support structures interact with identity work, so they can implement coordinated policies and interventions that foster continuity, inclusion, and effective learning across modalities.

Methodology

This study employs a systematic literature review (SLR) methodology, a rigorous and transparent approach well-suited to synthesizing evidence across a diverse body of research on emerging educational phenomena (Guppy et al., 2022). The SLR protocol followed four sequential phases: search and identification, screening and eligibility assessment, full-text analysis, and synthesis.

Literature searches were conducted across three major academic databases, Scopus, Web of Science, and ERIC, using Boolean combinations of the following keywords: "hybrid learning," "digital academic identity," "educational management," "blended learning higher education," "digital transformation education," and "student digital competence." Searches were constrained to peer-reviewed journal articles published between 2021 and 2024, yielding an initial pool of 247 records.

Following duplicate removal and title/abstract screening against predefined inclusion criteria, relevance to hybrid or digital learning, higher education context, empirical or rigorous conceptual contributions, 62 articles proceeded to full-text review. A final corpus of 20 articles was selected for in-depth analysis based on quality appraisal using the Mixed Methods Appraisal Tool (MMAT). Data extraction was systematized using a coding matrix covering study design, theoretical orientation, key constructs, and management implications. Thematic synthesis was applied to identify cross-cutting patterns, tensions, and propositions relevant to the HIS construct and its educational management dimensions.

Table 1. Inclusion and Exclusion Criteria for Systematic Literature Review

Criteria	Inclusion	Exclusion
Publication Period	2021 – 2024	Before 2021
Document Type	Peer-reviewed journal articles	Conference papers, theses, books
Education Level	Higher Education (university level)	Primary and secondary education

Language	English	Non-English publications
Topic Relevance	Digital learning, hybrid education, identity management, educational technology	Unrelated to digital or hybrid learning

***Source**: Developed by the authors (2025)*

Results and Discussion

This section presents the synthesized findings of the literature review, beginning with a foundational exploration of the core characteristics and conceptual parameters that define Hybrid Identity Students (HIS).

A. Defining Characteristics of Hybrid Identity Students

Analysis of the reviewed literature indicates that Hybrid Identity Students (HIS) constitute more than a group of learners who simply employ digital tools; they embody a dual-layered self-concept in which academic agency is continuously negotiated across physical and virtual contexts. Drawing on Alenezi's (2023) framework of digital learning institutions and Hashim et al.'s (2021) strategic model of digital higher education, this review identifies four interrelated characteristics that define HIS and have direct implications for teaching and management.

First, HIS display contextual identity switching: they move fluidly between distinct modes of self-presentation and participation that are calibrated to particular learning environments. In face-to-face settings students may adopt relational, socially oriented behaviors, whereas in digital spaces they often exercise greater autonomy, selectivity, and performative curation of work and presence (Scheel et al., 2022). This switching is adaptive but can introduce discontinuities in communication, assessment expectations, and instructor–student rapport. Second, HIS face amplified self-regulation demands. Managing attention, sustaining motivation, and negotiating cognitive load across multiple platforms and modalities requires advanced metacognitive skills; when these skills are uneven, students experience fragmentation of study routines and variable learning outcomes (Barrot et al., 2021). Educational designs that assume uniform self-regulatory capacity therefore risk leaving some HIS unsupported.

Third, HIS commonly show asymmetric competence profiles. Many students who appear digitally fluent in everyday consumer apps may lack proficiency with specialized academic technologies (LMS features, research databases, collaborative authoring tools), producing mismatches between perceived and actual readiness for hybrid learning tasks (Sathyan et al., 2022). Such incongruities complicate instructional planning and indicate a need for targeted, discipline-specific digital competence development. Fourth and centrally important for institutional planning, HIS are more exposed to digital equity gaps. Unequal access to reliable devices, connectivity, and tailored institutional supports mediates students' ability to inhabit hybrid learning effectively, thereby amplifying preexisting socioeconomic disparities (Guppy et al., 2022). This vulnerability implies that institutional responses must combine pedagogical adjustments with infrastructure, policy, and support interventions to ensure equitable participation.

Taken together, these characteristics portray HIS as a heterogeneous and dynamic cohort whose identity work, skill profiles, and support needs cannot be addressed by one-size-fits-all solutions. Instead, institutions should align curriculum design, assessment practices, faculty development, and resource allocation to the specificities of hybrid identity formation.

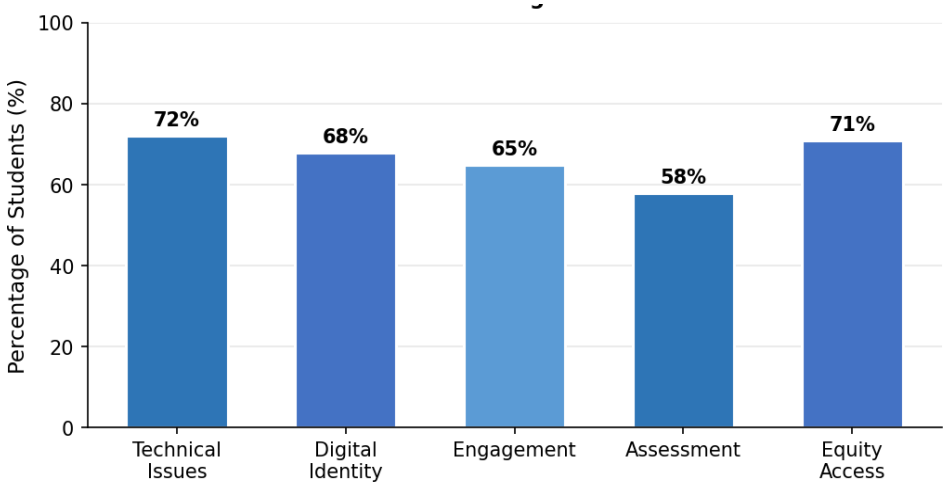

Figure 1. Key Challenges Faced by Hybrid Identity Students in Modern Learning Environments

B. ***Technology Adoption Patterns and Digital Academic Identity Formation***

The reviewed literature consistently highlights that technology adoption among HIS is not a linear process but rather a recursive cycle of trial, adaptation, and identity renegotiation. Songkram et al. (2023) found that behavioral intention to adopt digital learning platforms is significantly mediated by subjective norms and facilitating conditions, suggesting that institutional climate shapes individual identity formation as much as personal disposition. Similarly, Okoye et al. (2021) demonstrated that technology-mediated teaching, when poorly designed, can fragment students' sense of academic self, leading to disengagement and identity dissonance.

The emergence of AI-driven adaptive learning systems represents a qualitatively new development in this landscape. Strielkowski et al. (2024) argue that AI-enabled personalization has the potential to support positive HIS identity formation by aligning learning pathways with individual competency profiles and learning histories. However, they caution that without deliberate management oversight, algorithmic systems can reinforce existing inequities and homogenize learning experiences in ways that undermine the rich identity plurality that defines the HIS condition. Almusaed et al. (2023) corroborate this concern, finding in their review that AI-enhanced hybrid education systems produce the most equitable outcomes when human educators maintain active roles in interpreting and contextualizing algorithmic recommendations.

Shahzad et al. (2024) introduce an important dimension regarding social media's dual role in HIS identity formation. Their study found that while social media platforms can amplify academic motivation and peer learning networks, excessive use correlates with identity fragmentation and declining mental well-being, a finding that has direct implications for institutional wellness policies and student support frameworks (Shahzad et al., 2024).

Table 2. Dimensions of Digital Academic Identity in Hybrid Learning Contexts

Dimension	Description	Key Indicator	Author(s)
Self-Regulation	Ability to manage learning pace, goals, and strategies across modalities	Completion rate, time-on-task	Scheel et al. (2022)
Digital Competence	Proficiency in academic use of digital tools and platforms	Tool literacy score	Sathyan et al. (2022)

Social Presence	Sense of belonging and connectedness in virtual learning spaces	Peer interaction frequency	Armellini et al. (2021)
Cognitive Flexibility	Adaptability between asynchronous and synchronous learning demands	Academic performance variance	Islam et al. (2021)
Equity Access	Degree of equitable access to digital infrastructure and institutional support	Device/connectivity index	Guppy et al. (2022)
AI Readiness	Preparedness to engage productively with AI-assisted learning tools	AI adoption score	Strielkowski et al. (2024)

***Source**: Synthesized from literature review (2025)*

C. Ethi The Hybrid Identity Management Framework (HIMF)

Synthesizing the converging findings across the reviewed literature, this study proposes the Hybrid Identity Management Framework (HIMF) as a conceptual instrument for educational managers navigating the HIS landscape. The HIMF is organized around three managerial pillars: Infrastructure Governance, Pedagogical Stewardship, and Identity Support Systems.

Infrastructure Governance encompasses institutional decisions regarding digital platform selection, connectivity equity, and data governance. Following Bygstad et al.'s (2022) dual digitalization model, effective infrastructure governance requires not only investment in technical systems but the deliberate cultivation of a digital learning space that is pedagogically coherent and equitably accessible. Alenezi & Wardat et al. (2023) further argue that infrastructure decisions must be aligned with strategic enrollment and curricular goals, lest digital investments fragment rather than integrate the student experience.

Pedagogical Stewardship refers to the institutional mechanisms through which teaching quality, curriculum design, and formative feedback are maintained in hybrid modalities. Singh et al. (2021 Pedagogical Stewardship denotes the institutional systems and practices that sustain teaching quality, coherent curriculum design, and meaningful formative feedback across hybrid modalities. Evidence assembled by Singh et al. (2021) indicates that high-performing hybrid programs do more than migrate face-to-face content online; they intentionally redesign learning activities to exploit the complementary affordances of each medium, using in-person time for relational, dialogic tasks and digital spaces for self-paced practice, reflection, or resource-rich exploration. Such deliberate redesign requires curriculum alignment, clear learning outcomes across modalities, and faculty development that moves instructors from content-translators to designers of integrated learning experiences. Islam et al. (2021) similarly show that student-centred blended models, which prioritize learner agency, scaffolded metacognitive strategies, and ongoing formative assessment, deliver the strongest outcomes for Hybrid Identity Students (HIS), because they support continuity of engagement and the transfer of self-regulatory skills between environments.

Identity Support Systems focus on the affective, motivational, and social dimensions of hybrid learning that directly shape students' ability to perform and persist across contexts. Drawing on Barrot et al. (2021) and Maatuk et al. (2021), this pillar includes proactive counseling services attuned to hybrid identity challenges, structured peer-mentoring programs that help students navigate norms across modalities, and early-warning mechanisms that detect identity dissonance, such as sudden drops in participation or shifts in submission patterns, before academic decline follows. Integrating AI-assisted monitoring tools, as discussed by Strielkowski et al. (2024), can enhance these systems by flagging concerning patterns at scale,

but such tools must operate within human-supervised frameworks to ensure ethical interpretation, privacy protection, and supportive outreach rather than punitive surveillance. Together, Pedagogical Stewardship and Identity Support Systems form complementary institutional levers: one secures coherent, evidence-informed learning design; the other cushions the emotional and motivational transitions that HIS must navigate.

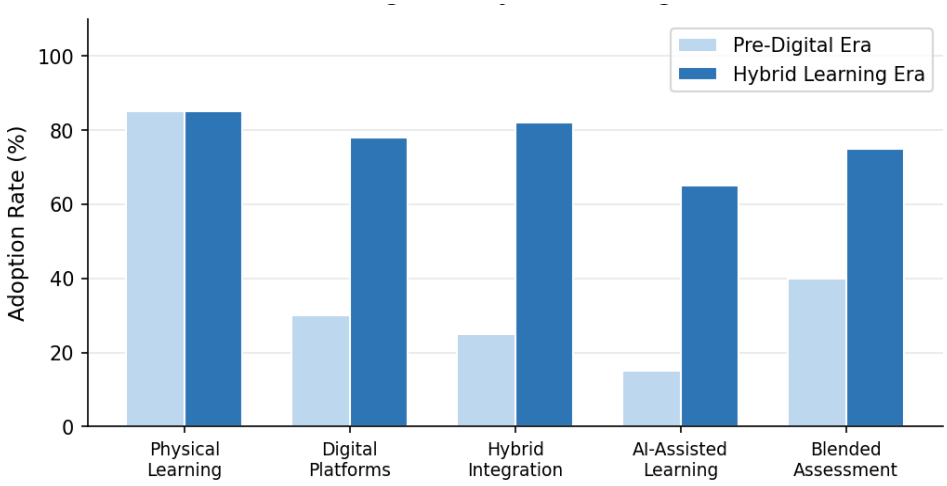

Figure 2. Comparison of Learning Modalities: Pre-Digital vs. Hybrid Learning Era

Table 3. Hybrid Identity Management Framework (HIMF): Pillars, Components, and Strategies

HIMF Pillar	Key Component	Managerial Strategy
Infrastructure Governance	Platform Equity & Access	Audit digital access gaps; provide institutional device-lending programs; ensure platform interoperability
Infrastructure Governance	Data Governance & Security	Establish clear data policies; train staff in digital ethics; comply with national data protection frameworks
Pedagogical Stewardship	Curriculum Redesign	Implement modality-aware curriculum design principles; integrate active learning strategies for both physical and digital contexts
Pedagogical Stewardship	Faculty Development	Provide ongoing professional learning in hybrid pedagogy; establish communities of practice for instructional innovation
Identity Support Systems	Affective & Wellbeing Support	Integrate academic counseling with digital literacy support; deploy AI-assisted early-warning systems with human oversight
Identity Support Systems	Community & Belonging	Foster hybrid peer-learning communities; design virtual social spaces that support academic identity development

***Source**: Synthesized from literature review (2025)*

D. Implications for Educational Management Practice

The Hybrid Identity Management Framework (HIMF) yields concrete implications for educational managers operating at institutional, programmatic, and policy levels. At the institutional level, strategic planning should treat Hybrid Identity Students (HIS) as a distinct student population with specific support needs, rather than reducing hybrid provision to a technical logistics problem. This means embedding HIS considerations into mission statements, resource allocation, staff development plans, and quality-assurance processes so that institutional priorities reflect the social, pedagogical, and wellbeing dimensions of hybrid identity formation, an orientation consistent with Akour and Alenezi's (2022) vision of digitally diverse learner futures.

At the programmatic level, the HIMF points to the need for adaptive curriculum and assessment frameworks that recognise uneven digital competence profiles among HIS. Programs should incorporate modular scaffolds, targeted digital-skill bridges, and assessment formats that value process as well as product, thereby accommodating students who are fluent in consumer technologies but require support with academic tools. Emerging technologies, augmented reality, learning-analytics dashboards, and AI tutoring systems, offer promising affordances for personalized learning, but the literature (Almufarreh & Arshad, 2023; Almusaed et al., 2023) cautions that such tools must be embedded within principled pedagogical designs; technological novelty alone cannot substitute for curricular coherence or attention to identity and equity.

At the policy level, the HIMF reinforces calls for comprehensive digital-education policies that integrate equity, quality, and identity considerations rather than treating them as separate agendas. Alenezi et al. (2023) argue for policy frameworks that set standards for inclusive access, faculty capacity-building, and student-support infrastructures; this study extends that argument by emphasising identity-sensitive indicators (for example, measures of hybrid engagement continuity and differential outcomes by access profile). International evidence from post-pandemic transitions (Guppy et al., 2022) suggests that institutions that successfully navigated hybridization combined coherent governance, well-trained faculty, and robust student supports, elements that the HIMF operationalizes into actionable responsibilities across governance structures. Collectively, these implications require leaders to align planning, program design, and policy so that hybrid modalities advance learning equity and integrity rather than reproduce or exacerbate disparities.

Conclusion

This study has characterized Hybrid Identity Students as a distinct and growing population within modern higher education, whose academic experiences and identity formations are constituted by the dynamic interplay between physical and digital learning environments. Systematic analysis of 20 peer-reviewed articles produced three primary contributions: a typological characterization of HIS defined by contextual identity switching, asymmetric digital competence, and equity vulnerability; a synthesis of technology adoption patterns showing the pivotal role of institutional climate and AI integration; and the Hybrid Identity Management Framework (HIMF), a three-pillar model providing educational managers with a structured approach to infrastructure governance, pedagogical stewardship, and identity support. Future empirical research should test the HIMF in diverse institutional contexts and examine longitudinal identity trajectories across students' complete academic careers.

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