Rethinking Digital Readiness in Higher Education: A Behavioural–Institutional Framework for Transformation

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ABSTRACT

Purpose – This paper addresses the persistent gap between digital capacity and transformation in higher education by reconceptualising digital readiness as a multilevel socio-technical capability rather than a static measure of technological assets. *Design/methodology/approach* – Using a critical conceptual synthesis of digital readiness literature, the study identifies key theoretical and methodological limitations and develops the Behavioural–Institutional Framework for Transformation (BIFT), which integrates behavioural, leadership, and institutional dimensions of readiness. *Findings* – Digital transformation outcomes depend on the alignment of behavioural readiness (e.g., self-efficacy, unlearning, resilience), leadership readiness (e.g., strategic vision, orchestration), and institutional readiness (e.g., digital culture, psychological safety, technical debt). This alignment generates *digital transformation preparedness*, a distinct construct that better explains sustained transformation than conventional readiness measures. *Originality/value* – The paper advances theory by distinguishing readiness from preparedness and positioning cross-level alignment as the central mechanism of digital transformation. It also proposes the *Behavioural–Digital Readiness Index (BDRI)* as a multi-method agenda for assessing preparedness through context-sensitive and performance-oriented indicators.

Keywords: Digital Readiness; Higher Education; Digital Transformation; Multilevel Framework; Behavioural–Institutional Lens.

INTRODUCTION

Digital transformation in higher education has shifted from a peripheral innovation to a structural imperative. The rapid diffusion of Learning Management Systems (LMS), the rise of generative artificial intelligence, and the expansion of digital governance have compelled institutions to reconfigure both academic delivery and administrative processes (Adiwijaya et al., 2025). The COVID-19 pandemic further accelerated this transition, exposing not only the possibilities of digital technologies but also the fragility of institutional systems responsible for implementing them (Nair and Sandip, 2023).

Despite substantial investment in digital infrastructure and competency development, many institutions still struggle to convert digital capacity into sustained transformation outcomes (Niemiec and Zerbst, 2025; Rocha et al., 2025). Some universities turn digital investment into pedagogical innovation and organisational agility, while others experience stalled initiatives, superficial adoption, or outright resistance. This pattern suggests that access to technology, though necessary, is not sufficient to explain transformation success.

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At the centre of this problem is the concept of digital readiness. In policy and research, digital readiness is usually defined as a multidimensional construct encompassing infrastructure, technical skills, and access to digital tools (Soomro et al., 2020; Valdivia-Salazar et al., 2025). Measurement frameworks mirror this view, relying heavily on maturity indices and self-reported assessments that privilege technological capacity and perceived competence (Chounta et al., 2024; Tsimpanis et al., 2023). In this dominant paradigm, institutions are treated as "ready" when they possess the relevant technologies and digitally literate users. However, this conceptualisation has limited explanatory power. Studies increasingly show that institutions scoring highly on readiness indices often fail to achieve meaningful or sustained change (Koczerga, 2024; Michelotto & Joia, 2024). The problem is not merely that readiness measures are incomplete; it is that they often capture capacity without explaining how that capacity becomes effective. Digital readiness has therefore been mis-specified as a static inventory rather than a dynamic, multilevel condition.

This paper argues that the persistence of uneven transformation in higher education reflects a theoretical problem as much as a practical one. Existing infrastructure-centric and adoption-centric models are reductive because they explain readiness in terms of isolated variables rather than the interaction among them. They privilege infrastructure over human agency, reduce behavioural dynamics to simplified adoption constructs, treat leadership and institutional context as background conditions, and fragment analysis across levels without specifying their interdependence. As a result, institutions may appear prepared while remaining unable to translate digital capacity into sustained transformation.

To address this problem, the paper develops a Behavioural–Institutional perspective that reconceptualises readiness as a multilevel, interactional phenomenon. On this basis, it introduces the Behavioural–Institutional Framework for Transformation (BIFT), which distinguishes readiness from digital transformation preparedness. Readiness refers to the presence of behavioural, leadership, and institutional attributes; preparedness refers to the functional alignment and activation of those attributes in support of sustained transformation outcomes.

The paper makes two main contributions. The first is theoretical: it reframes digital readiness as a multilevel construct grounded in cross-level interaction rather than isolated capacity. The second is methodological: it proposes the Behavioural-Digital Readiness Index (BDRI) as a measurement agenda that shifts assessment from self-reported capacity to performance-oriented, context-sensitive indicators.

LIMITATIONS OF EXISTING DIGITAL READINESS MODELS

The rapid expansion of digital infrastructures in higher education has intensified the need to assess institutional "readiness." Yet, despite increasingly sophisticated measurement frameworks, a persistent disconnect remains between digital capacity and transformation outcomes (Adiwijaya et al., 2025; Rocha et al., 2025). Institutions that score highly on readiness indices frequently fail to achieve sustained pedagogical innovation or organisational change. This discrepancy suggests a deeper problem in how digital readiness is conceptualised and measured.

The central limitation of prevailing models is not the absence of relevant variables, but the theoretical logic that organises them. Most frameworks privilege infrastructure over agency, reduce behavioural complexity to simplified adoption constructs, treat leadership and institutional context as background conditions, and fail to specify how factors at different levels interact. The result is a form of illusory readiness: institutions appear prepared in measurement terms, yet remain unable to translate capacity into transformation.

A first limitation is infrastructural determinism. Many digital readiness frameworks assume that technological capacity leads predictably to adoption and, in turn, to transformation. Maturity indices and related tools therefore foreground connectivity, hardware availability, platform access, and software provision as primary indicators of readiness (Chounta et al., 2024; Nazyrova et al., 2025). This emphasis is analytically convenient, but it is empirically fragile. Across higher education contexts, infrastructure alone does not ensure meaningful use, and it certainly does not guarantee sustained change. In resource-constrained settings, investments in digital tools are often weakened by unstable power supply, weak support systems, and insufficient

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contextualised training (Ogbonna et al., 2025; Omojemite, 2025). Even in better resourced institutions, digital technologies may produce only surface-level adoption, reinforcing existing routines rather than transforming them (Zhong et al., 2025). The problem is that infrastructure is often treated as an agent of change rather than as a resource whose effects depend on organisational and human conditions.

A second limitation is behavioural reductionism. In response to infrastructural bias, many models incorporate constructs drawn from adoption theories such as TAM and UTAUT, but these are usually narrowed to perceived usefulness, ease of use, and behavioural intention (Tbaishat et al., 2026). Such variables help explain initial acceptance, but they do not capture the deeper behavioural work required for transformation. Digital change in higher education involves cognitive restructuring, emotional adjustment, and the abandonment of entrenched habits. Constructs such as unlearning, resilience, technostress, and psychological resistance remain marginal in most readiness models. The measurement problem is compounded by heavy reliance on self-reported data, which tends to inflate perceived competence and conceal anxiety or resistance (Zhao et al., 2021). Cultural variation further limits generalisability, because the drivers of digital engagement differ across contexts (Rüller, 2025). As a result, behavioural readiness is often represented as static competence rather than as a dynamic disposition shaped by context and change demands.

A third limitation is the under-specification of leadership and institutional dynamics. Although leadership and institutional context are frequently acknowledged in the literature, they are rarely theorised as active mechanisms within readiness models. Leadership is often treated as a supportive backdrop, despite evidence that its capacity to align stakeholders and orchestrate resources is a stronger predictor of transformation than infrastructure alone (Truong and Tran, 2026). What is usually missing is an account of how leadership translates dispersed individual capability into coordinated institutional action. The same problem affects institutional analysis. Organisational culture, governance structures, and legacy systems are often simplified or ignored, even though they shape whether digital initiatives are enabled, delayed, or blocked. The concept of technical debt is especially important here, because accumulated infrastructural and procedural rigidity can actively inhibit transformation rather than merely slow it (Park, 2025). Without treating leadership and institutions as causal forces, readiness models cannot explain why institutions with similar resources produce very different outcomes.

A fourth limitation is fragmentation across levels of analysis. Some models focus on individual competencies, others on organisational capacity, but few offer a coherent account of how micro-, meso-, and macro-level conditions interact. This fragmentation produces partial explanations. A model may show that faculty possess high digital literacy while ignoring the organisational barriers that prevent those skills from being used. Conversely, institutional policies may appear robust yet fail because they lack the behavioural commitment required for implementation (Ukeje et al., 2026). Although some studies have introduced multilevel measurement, they often stop at correlation and do not specify the mechanisms through which cross-level interaction produces transformation (Kalbarczyk et al., 2021). The result is a set of readiness assessments that provide static snapshots rather than dynamic explanations.

The cumulative effect of these limitations is systematic misdiagnosis. Institutions are classified as “ready” on the basis of infrastructural provision and self-reported competence, encouraging policy responses that prioritise hardware acquisition and skills training while leaving deeper behavioural and organisational conditions untouched (Truong and Tran, 2026). In this sense, dominant readiness models are not merely incomplete; they are analytically reductive. By conflating resource availability with transformation capability, they obscure the conditions under which digital capacity is activated, coordinated, and sustained.

This is therefore not simply a measurement problem but a theoretical one. If readiness is treated as a set of independent attributes, it becomes impossible to explain why some institutions convert digital investment into transformation while others do not. What matters is not whether the relevant components exist in isolation, but how they interact. A more adequate account must therefore move beyond variable-centric models toward a framework that captures the interdependence of behavioural, leadership, and institutional dynamics. This reconceptualisation provides the basis for the Behavioural–Institutional Lens developed in the next section, where readiness is reframed as an emergent property of cross-level interaction and alignment.

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THE BEHAVIOURAL–INSTITUTIONAL LENS

The preceding analysis shows that the "transformation gap" in higher education cannot be explained by infrastructure or digital skills alone. The deeper problem is that existing models do not explain how individual, organisational, and systemic factors work together to produce transformation. Most frameworks assume a linear movement from capacity to outcome, yet digital change is usually uneven, conditional, and often disrupted (Niemiec and Zerbst, 2025).

To address this limitation, this section develops a Behavioural–Institutional Lens that reframes digital readiness as a multilevel and interactional construct. Rather than treating behavioural, leadership, and institutional elements as separate dimensions, the lens views them as interdependent domains whose alignment determines whether transformation occurs. The central issue is therefore not simply what institutions possess, but how these elements cohere in practice.

Behavioural Readiness: Latent Capacity and Its Limits

At the micro level, digital readiness rests on the dispositions of individual actors. Digital self-efficacy, adaptability, and intrinsic motivation are important because they shape whether people are willing to engage with new technologies (Sabani et al., 2023). Even so, these qualities do not automatically generate institutional change.

Behavioural readiness is best understood as latent capacity rather than operative transformation. Self-efficacy may encourage engagement, but it does not ensure coordination; motivation may support experimentation, but it does not guarantee uptake across the institution. In higher education, change often requires unlearning established pedagogical habits, a process that is demanding and context-dependent (Zhao et al., 2026). Without supportive structures, even competent individuals may revert to familiar routines, producing symbolic or superficial adoption.

Evidence also shows that digital literacy can reduce technostress and increase willingness to engage (Le et al., 2022; Rehman et al., 2024), but these effects are sustained only when the organisational environment supports them. Behavioural readiness is therefore necessary, but not sufficient. Its contribution depends on alignment with higher-level conditions.

Leadership Readiness: Translating Capacity into Collective Action

At the meso level, leadership is often cited as a key enabler of digital transformation. Yet many readiness models treat leadership as a supportive backdrop rather than as a mechanism that converts individual capability into institutional action. This leaves a major explanatory gap.

Within the Behavioural–Institutional Lens, leadership readiness performs a translational function. It provides direction, coordinates resources, and aligns behavioural efforts across units. Leadership is the channel through which strategic intent is communicated and implemented. Transformational and participative leadership styles can promote innovation and engagement (Antonopoulou et al., 2020), but their impact depends on whether they bridge the gap between policy and practice.

Middle managers are especially important in this process because they interpret, adapt, and operationalise strategy in local contexts (Li et al., 2024). When this translational role is weak, readiness remains fragmented: individuals may be capable, but their efforts do not combine into collective capability. Leadership readiness, then, is not just about vision or support. It is about conversion—turning dispersed capacity into coordinated action.

Institutional Readiness: Enabling Conditions and Structural Constraints

At the macro level, institutional readiness refers to the cultural, structural, and systemic conditions that shape whether transformation can be sustained. Institutions are often treated as passive settings, but they actively

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influence the success or failure of digital change. One important condition is psychological safety, which encourages experimentation, risk-taking, and knowledge sharing (Du and Xie, 2025; Papadonikolaki and Morgan, 2026). Where psychological safety is weak, digital initiatives may provoke caution, resistance, or compliance without real adoption. Institutional culture matters in a similar way: openness to innovation and tolerance for failure increase the likelihood that change will take root (Mashinini and Sethibe, 2025).

Institutional readiness is also constraining, not only enabling. Technical debt shows how legacy systems, rigid procedures, and accumulated structural inefficiencies can slow or block transformation (Park, 2025). In such cases, the institution itself becomes a source of friction. This means institutional readiness is a conditional force that shapes how far behavioural and leadership efforts can go.

From Fragmentation to Alignment

Taken together, the three domains show that digital transformation does not fail because one component is missing, but because the components are not aligned. Existing models are limited not because they exclude relevant variables, but because they treat them as independent rather than interdependent. This is why institutions may display high digital competence but weak coordination, strong leadership vision but an unsupportive culture, or robust infrastructure but persistent resistance. In each case, the problem is not the absence of readiness in general; it is misalignment across levels (Qin et al., 2022; Singun, 2025).

What remains underdeveloped in the literature is the mechanism through which alignment itself becomes transformative. Although multilevel interaction is often acknowledged (Heuermann et al., 2024), it is rarely specified in a way that explains how readiness conditions are activated and sustained. There is still no clear construct for the integrated capacity that emerges when alignment is achieved.

Toward a Theory of Alignment

The implication is that digital readiness cannot be reduced to a descriptive inventory of resources or competencies. What matters is whether those conditions are coordinated into a coherent system capable of supporting change. Without such a construct, readiness remains a static label that cannot explain variation in transformation outcomes.

This gap motivates the next section, which introduces the BIFT. BIFT formalises alignment as a causal mechanism and advances digital transformation preparedness as the integrative construct linking readiness to outcomes.

PROPOSED BEHAVIOURAL–INSTITUTIONAL FRAMEWORK

The limitations identified in existing digital readiness models point to a deeper theoretical gap: current frameworks describe resources and competencies, but they do not explain how these elements combine to produce institutional transformation. The Behavioural–Institutional Framework for Transformation (BIFT) addresses this gap by treating digital transformation as an outcome of cross-level alignment rather than the additive effect of separate readiness inputs.

BIFT also introduces a sharper distinction between readiness and digital transformation preparedness. Readiness refers to the presence of behavioural, leadership, and institutional attributes; preparedness refers to the extent to which those attributes are aligned and activated for sustained transformation. This distinction helps explain why institutions with similar resources may produce very different outcomes (Adiwijaya et al., 2025; Niemiec and Zerbst, 2025).

From Readiness to Preparedness: A Multilevel Causal Architecture

BIFT conceptualises digital transformation as a mediated and conditional process. Behavioural, leadership, and institutional readiness are necessary inputs, but their effects matter only when they converge into preparedness.

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Preparedness is therefore a higher-order construct emerging from cross-level coherence and functioning as the immediate precursor to transformation outcomes.

This formulation departs from linear models in two ways. First, it rejects the assumption that capacity automatically becomes transformation, a premise embedded in infrastructure-centric frameworks (Chounta et al., 2024). Second, it treats alignment as causal rather than incidental: transformation occurs when micro-, meso-, and macro-level conditions reinforce one another. In practical terms, an institution may possess advanced LMS infrastructure, but without leadership coordination and a supportive culture, that capacity remains underused.

Cross-Level Mechanisms: How Alignment Produces Transformation

BIFT explains transformation through three interacting mechanisms. First, behavioural readiness provides the cognitive and motivational basis for change. It includes self-efficacy, adaptability, and willingness to unlearn. Yet these qualities remain local unless organisational structures enable them to be translated into practice (Le et al., 2022; Zhao et al., 2026). Second, leadership readiness performs the translational function. It connects strategy to implementation, coordinates resources, and aligns action across units. Middle managers are especially important because they interpret and operationalise strategy in everyday settings (Li et al., 2024; Truong and Tran, 2026). Finally, institutional readiness shapes the conditions under which behavioural and leadership capacity can be converted into action. Psychological safety encourages experimentation and knowledge sharing, while technical debt and rigid procedures constrain integration and slow change (Du and Xie, 2025; Park, 2025).

When behavioural, leadership and institutional readiness align, preparedness emerges; when they do not, institutions may remain formally ready but functionally stalled. In this sense, BIFT explains not only success but also structural resistance.

Boundary Conditions of the Framework

BIFT is not universal in a strict sense. Its explanatory power depends on several boundary conditions. Where basic digital infrastructure is absent, alignment mechanisms alone cannot generate transformation. Similarly, high policy volatility or political instability can disrupt coordination before preparedness stabilises. Deeply entrenched bureaucratic systems may also resist change even when behavioural and leadership readiness are present. These conditions indicate that BIFT is most useful where a minimal threshold of structural and governance capacity already exists. It is a framework for explaining why transformation succeeds or fails under conditions of partial readiness, not a substitute for basic infrastructure.

Theoretical Propositions

The foregoing discourse contemplates the seven propositions shown in Table 1.

Table 1. Core propositions of BIFT

Proposition	Statement
P1	Behavioural readiness contributes to digital transformation preparedness as a foundational but indirect effect.
P2	Leadership readiness mediates the relationship between behavioural readiness and preparedness by translating individual capacity into coordinated institutional action.
P3	Institutional readiness moderates the relationship between behavioural and leadership readiness and preparedness.
P4	Digital transformation preparedness positively predicts the effectiveness and sustainability of transformation outcomes.
P5	Multilevel alignment produces stronger and more durable transformation outcomes than single-level readiness conditions.

P6	Technical debt and bureaucratic rigidity weaken the relationship between readiness and preparedness.
P7	Misalignment across levels produces illusory readiness, where high readiness indicators coexist with failed transformation outcomes.

Conceptual Implication

The central implication of BIFT is that the main barrier to digital transformation is not the absence of resources, but the failure to align them. By shifting the analytical focus from possession to coordination, BIFT offers a more precise explanation of the transformation gap and establishes preparedness as the key construct for both theory and measurement. Figure 1 summarises the framework.

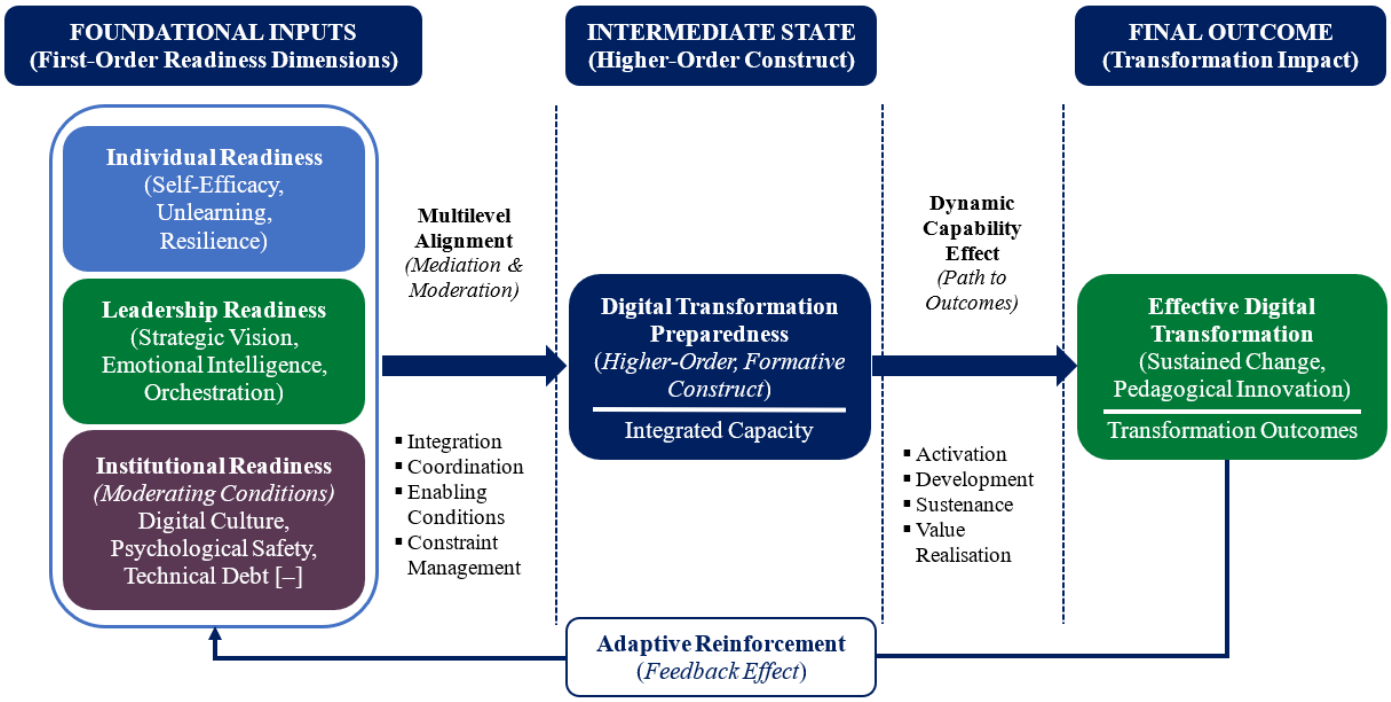

Figure 1: The Behavioural–Institutional Framework for Transformation (BIFT)

IMPLICATIONS FOR HIGHER EDUCATION SYSTEMS

Reframing digital readiness through BIFT shifts attention from resource accumulation to alignment management. The central challenge for higher education institutions is not simply acquiring digital technologies, but ensuring that behavioural, leadership, and institutional conditions reinforce one another. Transformation outcomes depend less on the volume of digital assets than on the extent to which these assets are coordinated into a state of preparedness.

A primary implication concerns governance. From a BIFT perspective, governance is the mechanism through which distributed readiness is either integrated or fragmented. Institutions that encourage experimentation without coordination risk localised innovation with limited institutional impact, while highly centralised systems may achieve consistency at the expense of adaptability (Limanovskaja and Davidavičienė, 2025). Effective governance therefore requires a balance between strategic direction and participatory coordination. Such arrangements help bridge policy–practice gaps by ensuring that institutional objectives are translated into operational realities (Jimenez Garcia et al., 2026). Governance also plays a critical role in managing technical debt, which can impede integration and slow organisational response to change (Park, 2025).

The framework also provides a diagnostic lens for understanding transformation failure. Rather than viewing failure as a consequence of resource scarcity, BIFT interprets it as evidence of misalignment across levels. Institutions may possess extensive digital infrastructure yet experience low utilisation because behavioural readiness remains underdeveloped or unsupported (Le et al., 2022; Qin et al., 2022). Conversely, strong

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leadership initiatives may fail where institutional cultures discourage experimentation or where bureaucratic rigidity constrains implementation (Du and Xie, 2025; Singun, 2025). In both cases, the result is illusory readiness: the presence of apparent capacity without the conditions required for effective deployment.

For managers and policymakers, the practical implication is a shift from technology procurement to capability orchestration. Investments in infrastructure remain necessary, but they are unlikely to generate sustainable transformation unless accompanied by complementary interventions at behavioural and institutional levels. Leadership must coordinate dispersed expertise and align stakeholders around shared goals (Henderikx and Stoffers, 2023; Li et al., 2024). At the same time, institutions must cultivate conditions that support experimentation, learning, and collaboration while reducing structural barriers such as technical debt (Du and Xie, 2025; Park, 2025). Behavioural interventions should likewise move beyond skills training to promote adaptability, self-efficacy, and unlearning, enabling individuals to adopt new ways of working (Zhang et al., 2025). Sustainable transformation emerges when these interventions are pursued as mutually reinforcing components of a single change process rather than as isolated initiatives.

The implications are particularly relevant for resource-constrained higher education systems. In contexts such as Nigeria, uneven infrastructure, rapid enrolment growth, and governance challenges often make transformation difficult to sustain (David, 2025; Ogbonna et al., 2025). Under such conditions, policies that emphasise compliance or technology acquisition alone may produce limited results because behavioural engagement and institutional support lag behind formal mandates. More effective approaches focus on strengthening coordination across levels through stakeholder participation, leadership integration, and supportive institutional environments (Asamoah & Ansong, 2025; Ukeje et al., 2026). From a BIFT perspective, the key challenge is not simply expanding resources but aligning existing capacities so that preparedness can emerge despite constraint.

TOWARD MEASUREMENT: THE BDRI AGENDA

The reconceptualisation of digital readiness as multilevel socio-technical alignment requires a corresponding shift in measurement. The Behavioural–Digital Readiness Index (BDRI) is proposed as the operational extension of BIFT: it is designed to assess not only whether institutions possess digital resources, but whether behavioural, leadership, and institutional conditions are aligned for sustained transformation.

The Need for Integrative Measurement

Existing digital readiness instruments are useful but fragmented. Many conflate readiness with preparedness, treating technical assets and self-reported competence as proxies for transformational capability (Adiwijaya et al., 2025; Michelotto & Joia, 2024). They also rely heavily on self-assessment, which tends to inflate competence and obscure actual performance (González-Mujico, 2024). In developing contexts, imported models such as the UNESCO Six Pillars are often applied with limited adaptation to local constraints and institutional realities (Tsimpanis et al., 2023). The BDRI responds to these limitations by treating *preparedness* as the primary outcome and readiness dimensions as its formative inputs.

Structure and Dimensions of the BDRI

The BDRI reflects the three levels of the behavioural–institutional framework. Unlike technology-centred indices [e.g., the Smart Industry Readiness Index (Abdullah & Al-Ahmari, 2025); the Industrial Transformation Technology Index (Al-Breiki, 2026)], it gives substantial weight to the human and organisational conditions that determine whether digital capacity is activated.

1. *Behavioural readiness (micro):* psychological preparedness for digital change, including cognitive flexibility, adaptability, and willingness to engage with new practices (Sabani et al., 2023).
2. *Leadership readiness (meso):* the ability of management to coordinate change, provide direction, and align resources (Truong and Tran, 2026).
3. *Institutional readiness (macro):* the organisational climate for transformation, including policy coherence, digital culture, and the mitigation of technical debt (Orkamo et al., 2025; Park, 2025).

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Indicative Indicators for Diagnostic Rigor

To illustrate how the BDRI can be operationalised, Table 2 presents the core readiness dimensions, representative indicators, and their corresponding diagnostic functions.

Table 2. Operationalisation of BDRI Dimensions and Diagnostic Indicators

Dimension	Indicative indicators	Diagnostic purpose
Behavioural readiness	Adaptability; unlearning; digital confidence/self-efficacy	Captures whether individuals can move beyond old practices and engage effectively with digital tasks (Zhao et al., 2026; Le et al., 2022; Rehman et al., 2024).
Leadership readiness	Leadership support; trust; orchestration capacity	Assesses whether managers can coordinate action and create conditions for adoption (Li et al., 2024).
Institutional readiness	Psychological safety; policy coherence; technical debt reduction	Evaluates whether the organisational environment enables experimentation, collaboration, and integration (Du and Xie, 2025; Papadonikolaki and Morgan, 2026).

Methodological Pathway

The BDRI should be developed through a multi-method design. Item generation should begin with qualitative work to ensure contextual relevance, followed by psychometric refinement (Nurtjahjanti et al., 2024; Zincirli and Polat, 2025). Confirmatory Factor Analysis (CFA) can then test the measurement structure, especially for reflective constructs such as self-efficacy and trust (Mueller and Hancock, 2015; Voss, 2023). Partial Least Squares Structural Equation Modelling (PLS-SEM) can subsequently examine predictive relationships and compare the relative contribution of each readiness dimension to preparedness and transformation outcomes (Al-Emran et al., 2019; Chin et al., 2020). Discriminant validity and predictive relevance should be assessed using standard diagnostics such as HTMT and PLSpredict (Shmueli et al., 2019).

Contribution of the BDRI

BDRI is more than a measurement tool. As a diagnostic instrument, it can identify specific bottlenecks, such as high infrastructure but low psychological safety. As a policy tool, it can help decision-makers channel investment toward human and organisational capacity rather than hardware alone. As a research platform, it enables longitudinal and comparative studies across institutions and countries. In this way, BDRI gives empirical form to BIFT and offers a practical basis for studying digital transformation preparedness in higher education.

Operationalisation and Validation Pathway for the BDRI

Future research should move beyond conceptual specification by developing a rigorous operational framework for the BDRI. This includes defining the measurement architecture of behavioural, leadership, institutional readiness and preparedness constructs; developing and validating item pools; establishing weighting and scoring procedures; specifying alignment metrics that capture cross-level coherence; and testing measurement invariance across institutional and national contexts. Such efforts would strengthen the diagnostic precision, predictive validity, and practical applicability of the BDRI as a preparedness assessment tool.

CONCLUSION

The persistence of the digital transformation gap in higher education shows that technological capacity alone does not produce institutional change. When digital readiness is defined mainly as infrastructure and skills, it captures potential but not the conditions under which that potential is mobilised. In response, this paper advances a behavioural–institutional reconceptualisation of readiness as a multilevel, interactional phenomenon. The BIFT shifts attention from resource possession to cross-level alignment and introduces digital transformation preparedness as the construct that links capacity to outcomes. In this formulation, preparedness reflects what institutions can coordinate, sustain, and scale.

The paper contributes theoretically by specifying alignment as a causal mechanism, conceptually by distinguishing readiness from preparedness, and methodologically by proposing the BDRI as a way to assess preparedness through integrated, performance-oriented indicators. Future research should empirically test the BIFT–BDRI nexus across diverse institutional settings, especially where structural constraints make alignment difficult.

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