

Bridging the Digital Pedagogy Divide in Fiji: Teacher Readiness, Student Competencies, and the Limits of Policy in the Fifth Industrial Revolution

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ABSTRACT

The accelerating transition into the Fifth Industrial Revolution (5IR) has intensified the demand for digitally competent, critically engaged, and adaptive learners. However, in many education systems, particularly in small island developing states such as Fiji, a significant and widening gap exists between students' digital competencies and teachers' technological readiness. This paper critically examines the digital pedagogy divide in Fiji, arguing that while students are increasingly immersed in technology-rich environments, many educators remain constrained by limited digital skills, insufficient professional development, and policy-practice disconnects.

Drawing on a qualitative-dominant analytical framework, the study synthesizes existing literature, policy documents, and contextual evidence to interrogate the extent to which current education policies effectively address this disparity. The analysis reveals that although national frameworks emphasize digital transformation and 21st-century skills, implementation remains fragmented due to infrastructural inequities, limited teacher training, and restrictive institutional practices, including the prohibition or limited integration of digital devices in classroom settings. These contradictions highlight a critical tension between policy aspirations and pedagogical realities.

The paper further argues that the persistence of this divide is not merely a technological issue but a pedagogical and systemic challenge, rooted in traditional teaching models that have not evolved in tandem with the demands of the 5IR. It emphasizes the need to reposition teachers as facilitators of digitally mediated, student-centred learning, supported by continuous professional development, culturally responsive pedagogies, and inclusive digital policies. In the Fijian context, the integration of indigenous knowledge systems and relational approaches to learning is also essential in ensuring that digital transformation is both contextually relevant and socially sustainable.

By foregrounding the limitations of policy-driven approaches alone, this paper contributes to ongoing debates on educational reform by proposing a more holistic model that integrates teacher capacity-building, pedagogical innovation, and systemic alignment. It concludes that bridging the digital pedagogy divide in Fiji requires a paradigm shift, from compliance-based policy implementation to transformative, practice-oriented strategies that empower both teachers and learners to thrive in an increasingly complex and technology-driven world.

Keywords: Digital Pedagogy Divide; Fifth Industrial Revolution (5IR); Teacher Readiness; Student Competencies; Educational Policy; Fiji Education; Digital Literacy; Pedagogical Transformation; Teacher Professional Development; Technology Integration.

INTRODUCTION

The rapid acceleration of technological innovation in the 21st century has fundamentally reshaped the landscape of education, redefining how knowledge is accessed, constructed, and applied. The transition from the Fourth Industrial Revolution (4IR) to the Fifth Industrial Revolution (5IR) marks a significant paradigm shift, from technology-driven efficiency toward a human-centred model that

integrates artificial intelligence (AI), digital systems, and advanced technologies with ethical considerations, social well-being, and inclusive development (Schwab, 2016; Schwab & Zahidi, 2023). Within this evolving context, education systems worldwide are under increasing pressure to prepare learners not only with technical competencies but also with critical thinking, creativity, and digital literacy skills required to thrive in complex, technology-mediated environments (UNESCO, 2021; World Economic Forum, 2020).

However, despite these global shifts, a critical and often underexplored challenge persists: the widening digital pedagogy divide between students and teachers. Contemporary learners, frequently characterized as “digital natives,” are increasingly immersed in digital ecosystems, engaging with technology in intuitive and adaptive ways (Prensky, 2001). In contrast, many educators—particularly in developing and small island contexts, struggle to integrate digital tools effectively into pedagogical practices due to limited training, inadequate infrastructure, and resistance to change (Tondeur et al., 2017; Voogt et al., 2015). This mismatch creates a disconnect between how students learn and how teachers teach, undermining the effectiveness of education systems in the digital age.

In the context of Fiji, this divide is particularly pronounced. Over the past decade, the Fijian government has made significant strides in promoting digital transformation within the education sector, including investments in information and communication technologies (ICT), curriculum reforms, and national policy frameworks aimed at enhancing digital literacy (Ministry of Education, Heritage and Arts [Fiji], 2020; UNESCO, 2023). Despite these efforts, evidence suggests that the integration of technology into classroom practice remains uneven and often superficial. While digital infrastructure may be present in many schools, its utilization is frequently limited to administrative functions or basic instructional support, rather than being embedded within transformative pedagogical approaches.

A key factor contributing to this challenge is the gap in teacher readiness. Research indicates that effective technology integration in education is not solely dependent on access to devices or infrastructure, but on teachers’ pedagogical beliefs, digital competencies, and confidence in using technology to enhance learning (Koehler & Mishra, 2009; Ertmer & Ottenbreit-Leftwich, 2010). In Fiji, as in many similar contexts, teachers often lack sustained professional development opportunities that focus on pedagogical innovation rather than technical skills alone. Consequently, technology is frequently underutilized or used in ways that reinforce traditional, teacher-centred instructional models rather than enabling student-centred, collaborative, and inquiry-based learning.

Compounding this issue is the persistence of policy–practice disjunctions within the education system. While national policies advocate for the integration of digital technologies and the development of 21st-century skills, institutional practices sometimes contradict these goals. For instance, restrictions on the use of digital devices in classrooms, often implemented to address concerns around misuse or distraction, can inadvertently limit opportunities for meaningful digital engagement and innovation in teaching and learning. Such contradictions highlight the limitations of policy-driven approaches that fail to account for the

complexities of classroom realities and the socio-cultural dimensions of technology use.

The implications of this digital pedagogy divide are profound. If left unaddressed, it risks exacerbating educational inequalities, limiting students’ preparedness for the future workforce, and undermining national development goals in an increasingly knowledge-based global economy (World Bank, 2019). Moreover, in the era of the 5IR, where human–machine collaboration and digital fluency are essential, the inability of education systems to align teaching practices with learner competencies may result in a generation of learners who are technologically capable but pedagogically constrained. This paper argues that bridging the digital pedagogy divide in Fiji requires moving beyond policy rhetoric toward systemic and pedagogical transformation. It posits that the issue is not merely technological but deeply rooted in institutional culture, teacher capacity, and the broader educational ecosystem. Drawing on existing literature, policy analysis, and contextual insights, the study critically examines the interplay between teacher readiness, student competencies, and policy limitations in shaping digital learning environments.

Furthermore, the paper adopts a contextually grounded perspective, recognizing the importance of aligning digital transformation efforts with Fiji’s socio-cultural realities. This includes integrating indigenous knowledge systems, relational pedagogies, and community-based approaches to ensure that technological innovation does not come at the expense of cultural relevance and inclusivity (Thaman, 2003; Nabobo-Baba, 2006). In doing so, the study contributes to broader debates on educational reform in the Global South by highlighting the need for culturally responsive and contextually appropriate models of digital pedagogy.

The central argument advanced in this paper is that policies alone are insufficient to bridge the digital pedagogy divide. Instead, a holistic approach is required, one that integrates teacher professional development, pedagogical innovation, supportive institutional structures, and inclusive policy frameworks. By repositioning teachers as facilitators of learning and empowering them with the necessary skills, resources, and support, education systems can better align teaching practices with the demands of the 5IR.

Ultimately, this paper seeks to contribute to the growing body of scholarship on digital transformation in education by offering a critical, context-specific analysis of the challenges and opportunities facing Fiji. It underscores the urgency of rethinking traditional pedagogical models and calls for a transformative approach to education that equips both teachers and students to navigate and shape the future of learning in an increasingly digital and

interconnected world.

LITERATURE REVIEW

Digital Transformation and the Changing Nature of Pedagogy

The integration of digital technologies into education has fundamentally transformed traditional teaching and learning paradigms, shifting from teacher-centred transmission models toward more interactive, student-centred, and technology-mediated approaches. The emergence of the Fourth Industrial Revolution (4IR) and its progression into the Fifth Industrial Revolution (5IR) has accelerated this transformation, emphasizing not only technological proficiency but also human-centric competencies such as critical thinking, collaboration, and ethical awareness (Schwab, 2016; Schwab & Zahidi, 2023).

Scholars argue that digital technologies have expanded opportunities for personalized learning, increased access to knowledge, and enhanced student engagement (Rizk & Davies, 2021). However, these benefits are contingent upon effective pedagogical integration rather than mere access to technology. The literature consistently highlights that technology alone does not transform education; it is the pedagogical application of technology that determines learning outcomes (Voogt et al., 2015). This underscores the need to reconceptualize pedagogy in ways that align with digitally mediated learning environments.

The Digital Divide in Education: Beyond Access to Competency Gaps

The concept of the digital divide has evolved significantly over time. Initially focused on disparities in access to technology, contemporary scholarship emphasizes a more nuanced understanding that includes differences in digital skills, usage, and outcomes (Eynon et al., 2021;). This shift is particularly relevant in educational contexts, where the divide increasingly manifests as a gap between students' digital competencies and teachers' ability to effectively integrate technology into teaching.

Recent studies highlight that digital inequalities persist even in contexts where infrastructure is available. For example, research on school-level digital readiness suggests that while students may exhibit comparable levels of digital familiarity, teachers' preparedness varies significantly, influencing the effectiveness of digital learning environments. Similarly, global studies indicate that disparities in teacher competence, rather than student access, are emerging as a critical barrier to effective technology integration.

This reconceptualization positions the digital divide as a pedagogical and capability gap, rather than merely a

technological one. It shifts the focus toward understanding how digital competencies are developed, applied, and sustained within educational systems.

Teacher Readiness and Digital Pedagogical Competence

Teacher readiness is widely recognized as a central determinant of successful digital transformation in education. The literature emphasizes that effective technology integration requires more than technical skills; it demands a combination of technological, pedagogical, and content knowledge, often conceptualized through the Technological Pedagogical Content Knowledge (TPACK) framework (Koehler & Mishra, 2009).

Empirical studies consistently reveal that many teachers lack sufficient digital pedagogical competence. Research indicates that factors such as limited professional development, inadequate institutional support, and negative attitudes toward technology hinder effective integration (Ertmer & Ottenbreit-Leftwich, (2010). Furthermore, disparities in teacher readiness are often influenced by contextual factors, including geographic location, access to resources, and institutional culture.

Recent evidence also highlights that teacher readiness extends beyond skill acquisition to include mindsets, beliefs, and adaptability. Teachers who demonstrate a growth-oriented mindset are more likely to embrace technological change and adopt innovative pedagogical practices. Conversely, resistance to change and reliance on traditional teaching methods contribute to the persistence of the digital pedagogy divide.

Importantly, studies on pre-service and in-service teachers reveal a consistent gap between theoretical knowledge and practical application. While many teacher education programs emphasize digital competencies, they often fail to provide sufficient opportunities for authentic, practice-based learning, resulting in limited classroom implementation.

Student Competencies and the Rise of Digital Natives

In contrast to teacher readiness, students are often characterized as "digital natives," possessing intuitive familiarity with digital tools and environments (Prensky, 2001). While this characterization has been critiqued for oversimplification, there is substantial evidence that contemporary learners engage with technology in ways that differ significantly from previous generations.

Students' digital competencies include not only technical skills but also the ability to navigate digital platforms, access information, and engage in online communication and collaboration. However, the literature cautions that

digital familiarity does not necessarily equate to critical digital literacy. Students may be proficient in using technology for social or entertainment purposes but lack the skills required for academic and professional contexts.

This distinction highlights a paradox within the digital pedagogy divide: while students may be more technologically adept than their teachers in certain areas, both groups require support in developing higher-order digital competencies, including critical thinking, ethical awareness, and information literacy.

Policy and Practice in Digital Education

Educational policies worldwide increasingly emphasize the importance of digital transformation, 21st-century skills, and technology integration. However, the literature consistently identifies a gap between policy intentions and classroom realities. Studies indicate that policies often focus on infrastructure and access, while neglecting the complexities of pedagogical implementation and teacher capacity-building.

This policy–practice disconnect is particularly evident in developing and small island contexts, where resource constraints, limited professional development, and socio-cultural factors influence the effectiveness of policy implementation. Research suggests that top-down policy approaches are insufficient in addressing the dynamic and context-specific challenges of digital education.

Moreover, institutional practices may sometimes contradict policy objectives. For instance, restrictions on device usage, lack of support for innovative teaching methods, and rigid curriculum structures can hinder the integration of digital pedagogies, despite policy emphasis on technological advancement.

Theoretical Perspectives on Digital Pedagogy Transformation

Several theoretical frameworks have been employed to understand digital pedagogy and technology integration. The TPACK framework (Koehler & Mishra, 2009) provides a comprehensive model for understanding the interplay between technology, pedagogy, and content knowledge. Similarly, constructivist learning theories emphasize the role of technology in facilitating active, collaborative, and learner-centred environments.

Emerging frameworks in the context of the 5IR further emphasize human-centred and ethical approaches to technology integration, highlighting the importance of aligning technological innovation with social and cultural values. These perspectives are particularly relevant in contexts such as Fiji, where education systems must balance global technological trends with local cultural realities.

Digital Pedagogy in Small Island and Developing Contexts

The literature on digital education in small island developing states (SIDS), including Pacific nations, highlights unique challenges and opportunities. Issues such as infrastructural limitations, geographic isolation, and resource constraints contribute to disparities in technology access and utilization. However, these contexts also offer opportunities for contextually grounded and culturally responsive approaches to digital pedagogy.

Research emphasizes the importance of integrating indigenous knowledge systems and relational pedagogies into digital learning environments to ensure cultural relevance and sustainability. In the Pacific context, approaches such as *talanoa* and community-based learning provide alternative models for engaging with digital transformation in ways that align with local values and practices.

LITERATURE GAPS

Despite the growing body of research on digital education and teacher readiness, several critical gaps remain that justify the need for this study.

Limited Focus on Teacher–Student Competency Mismatch

While existing literature extensively examines the digital divide, much of it focuses on access and infrastructure rather than the emerging gap between students' digital competencies and teachers' pedagogical readiness. There is limited research that explicitly analyses this mismatch as a central issue shaping contemporary education systems.

Insufficient Contextualization in Pacific and Small Island Settings

A significant proportion of existing studies are based in Western or large developing country contexts, with limited attention to small island developing states such as Fiji. This creates a gap in understanding how digital pedagogy challenges manifest in resource-constrained, culturally diverse, and geographically isolated contexts.

Overemphasis on Policy, Underemphasis on Practice

Much of the literature focuses on policy frameworks and strategic initiatives, with insufficient attention to classroom-level realities and implementation challenges. There is a need for more research that critically examines the policy–practice disconnect, particularly in relation to

teacher capacity and institutional constraints.

Limited Integration of Pedagogical and Cultural Perspectives

Existing studies often treat digital transformation as a technical issue, neglecting the importance of pedagogical innovation and cultural relevance. There is a lack of research that integrates digital pedagogy with indigenous knowledge systems and culturally responsive teaching approaches, particularly in Pacific contexts.

Inadequate Attention to the Fifth Industrial Revolution (5IR) Context

While there is extensive literature on the 4IR, research on education in the context of the 5IR remains limited and emerging. There is a need to explore how the shift toward human-centric, ethical, and inclusive technological paradigms influences teaching, learning, and educational policy.

Lack of Holistic, System-Level Analysis

Many studies focus on isolated factors such as teacher readiness or student skills, without examining the interconnected nature of policy, pedagogy, institutional structures, and socio-cultural contexts. A more holistic approach is needed to understand how these factors interact to shape the digital pedagogy divide.

Table 1: Comparative Analysis of Students' Digital Competencies and Teacher Readiness in Fiji

Dimension	Students (Learners)	Teachers (Educators)	Implications
Digital Exposure	High exposure to mobile devices, social media, and informal digital tools	Limited exposure to pedagogical technologies and structured digital platforms	Creates imbalance in digital engagement and expectations
Digital Literacy	Functional and social use of technology; limited critical literacy	Varies widely; often limited to basic ICT skills	Need for structured digital literacy development for both groups
Pedagogical Application	Prefer interactive, multimedia, and technology-enhanced learning	Predominantly teacher-centred, lecture-based approaches	Misalignment affects student engagement and learning outcomes
Technology Confidence	High confidence in using digital tools informally	Lower confidence in integrating technology into teaching	Requires targeted teacher training and support
Access to Technology	Increasing access (mobile-first users)	Institutional access may exist but underutilized	Highlights gap between access and effective use
Adaptability	Quick adaptation to new technologies	Slower adaptation due to training and systemic constraints	Professional development must focus on adaptability
Learning Preferences	Collaborative, interactive, and visual learning styles	Traditional, content-driven instructional methods	Need for pedagogical transformation

Source: Developed by the author based on literature (Ertmer & Ottenbreit-Leftwich, 2010; Prensky, 2001; UNESCO, 2021).

THEORETICAL AND CONCEPTUAL FRAMEWORK

Introduction to the Framework

This study is anchored in an integrated theoretical and conceptual framework that explains the digital pedagogy divide as a multi-dimensional phenomenon shaped by the interaction between teacher readiness, student competencies, and policy environments within the context of the Fifth

Industrial Revolution (5IR). Rather than treating these elements in isolation, the framework adopts a systems-oriented perspective, recognizing that effective digital transformation in education depends on the alignment of pedagogical, institutional, and socio-cultural factors.

The framework draws on three complementary theoretical lenses:

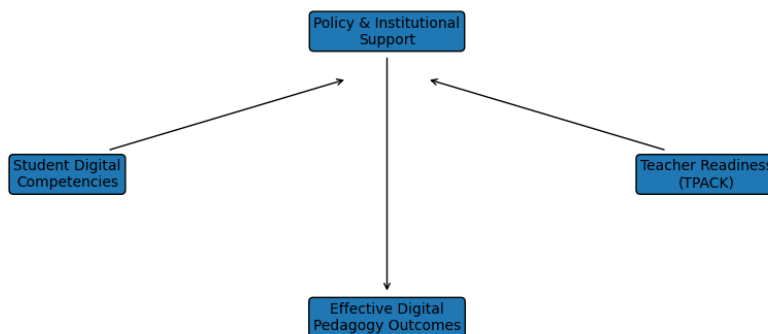
- 1. Technological Pedagogical Content Knowledge (TPACK)**

2. **Constructivist Learning Theory**
3. **Human Capital Theory**

These are further contextualized within the emerging

discourse of the Fifth Industrial Revolution (5IR) and grounded in Pacific indigenous epistemologies, particularly relational and community-based approaches to learning.

Conceptual Framework: Bridging the Digital Pedagogy Divide in Fiji



Technological Pedagogical Content Knowledge (TPACK)

The Technological Pedagogical Content Knowledge (TPACK) framework (Koehler & Mishra, 2009) provides the primary lens for understanding teacher readiness in digital contexts. TPACK posits that effective teaching with technology requires the integration of three core knowledge domains:

- **Content Knowledge (CK)** – mastery of subject matter
- **Pedagogical Knowledge (PK)** – understanding of teaching methods
- **Technological Knowledge (TK)** – ability to use digital tools

The intersection of these domains represents TPACK, where teachers are competent in designing meaningful, technology-enhanced learning experiences. In the context of this study, TPACK highlights that the digital pedagogy divide is not simply due to lack of access or basic technological skills, but rather a deficiency in integrated pedagogical competence. Teachers may possess content expertise and basic digital literacy but lack the ability to synthesize these into effective digital pedagogy. This gap directly contributes to the misalignment between teaching practices and students’ digital learning realities.

Constructivist Learning Theory

Constructivist Learning Theory (Piaget, 1970; Vygotsky, 1978) underpins the pedagogical dimension of this study. It emphasizes that learners actively construct knowledge through interaction, collaboration, and engagement with their environment. Digital technologies, when effectively

integrated, have the potential to enhance constructivist learning by enabling:

- Collaborative knowledge construction
- Inquiry-based and problem-based learning
- Interactive and immersive learning environments

However, the persistence of teacher-centred pedagogies in many classrooms limits the realization of these possibilities. In contexts where teachers are not adequately prepared to facilitate student-centred, technology-enhanced learning, digital tools are often used to reinforce traditional instructional models rather than transform them. This theoretical lens is particularly important in explaining why students, who are often active users of digital technologies, experience a disconnect in classrooms where learning remains passive and teacher-directed.

Human Capital Theory

Human Capital Theory (Becker, 1964) provides a macro-level perspective on the importance of education in developing the skills and competencies required for economic growth and societal advancement. In the context of the 5IR, the nature of human capital is evolving to include:

- Digital literacy and technological fluency
- Critical thinking and problem-solving
- Adaptability and lifelong learning

From this perspective, the digital pedagogy divide represents a systemic inefficiency in human capital

development. When teachers are unable to effectively nurture students’ digital competencies, education systems fail to fully prepare learners for participation in knowledge-based and technology-driven economies.

This theory reinforces the argument that addressing the digital divide is not only an educational imperative but also a national development priority, particularly for countries like Fiji seeking to remain competitive in a globalized economy.

Fifth Industrial Revolution (5IR) as a Contextual Lens

The Fifth Industrial Revolution (5IR) provides the broader contextual framework for this study. Unlike the 4IR, which emphasized automation and technological advancement, the 5IR focuses on human-centric innovation, integrating technology with ethical considerations, social inclusion, and well-being (Schwab & Zahidi, 2023).

In this context, education systems are expected to produce learners who are not only technologically competent but also:

- Ethically aware
- Socially responsible
- Culturally grounded

The 5IR lens highlights that the digital pedagogy divide is not merely a technical issue but a human-centred challenge, requiring alignment between technological capabilities and pedagogical practices that support holistic development.

Pacific and Indigenous Epistemological Perspectives

To ensure contextual relevance, this framework incorporates Pacific indigenous epistemologies, particularly concepts such as:

- **Vanua** (holistic relationship between people, land, and identity)
- **Talanoa** (dialogic, relational approach to knowledge sharing)

These perspectives emphasize relationality, community, and cultural identity as central to learning processes (Thaman, 2003; Nabobo-Baba, 2006; Vaioleti, 2006).

Integrating these perspectives into digital pedagogy is essential in the Fijian context, as it ensures that technological transformation does not lead to cultural dislocation. Instead, it enables a model of education that is both globally relevant and locally grounded.

Conceptual Framework of the Study

Based on the theoretical foundations above, this study proposes a conceptual framework that positions the Digital Pedagogy Divide as the central outcome of three interacting domains:

1. Teacher Readiness

- Digital skills and competencies (TPACK)
- Pedagogical beliefs and adaptability
- Access to professional development

2. Student Competencies

- Digital familiarity and engagement
- Learning preferences and agency
- Critical digital literacy

3. Policy and Institutional Context

- National ICT and education policies
- School-level practices and restrictions
- Infrastructure and resource availability

These domains are influenced by:

- **5IR demands** (human-centred, technology-integrated education)
- **Socio-cultural context** (Pacific values, indigenous knowledge systems)

Dynamic Relationships in the Framework

The framework conceptualizes the digital pedagogy divide as emerging from misalignment across these domains:

- When student competencies exceed teacher readiness, a pedagogical gap emerges
- When policies are not effectively implemented, structural barriers persist
- When cultural contexts are ignored, digital integration becomes disconnected and ineffective

Conversely, alignment across these domains can lead to:

- Effective digital pedagogy
- Enhanced student learning outcomes
- Sustainable and inclusive educational transformation

Table 2: Policy, Practice, and Institutional Strategies for Bridging the Digital Pedagogy Divide in Fiji

Strategic Area	Key Actions	Expected Outcomes	Supporting Literature
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Teacher Professional Development	Continuous, practice-based training (TPACK-focused); mentoring and peer learning	Improved teacher readiness and confidence in digital pedagogy	Koehler & Mishra (2009); Ertmer & Ottenbreit-Leftwich (2010)
Curriculum Reform	Integrate digital literacy, critical thinking, and 5IR competencies	Development of future-ready learners	Schwab & Zahidi (2023); UNESCO (2023)
Policy Alignment	Align national ICT policies with classroom realities; remove restrictive device policies	Reduced policy-practice gap	UNESCO (2021)
Institutional Leadership	Strengthen leadership support, innovation culture, and resource allocation	Enhanced institutional capacity for digital transformation	Kezar & Lester (2011)
Technology Integration	Promote pedagogically driven use of digital tools (not just access)	Improved teaching and learning effectiveness	Voogt et al. (2015)
Equity and Inclusion	Address digital divide in rural and marginalized communities	Inclusive access and participation	UNESCO (2021)
Cultural Integration	Embed indigenous pedagogies (e.g., <i>talanoa</i> , <i>vanua</i>) into digital learning	Contextually relevant and culturally responsive education	Thaman (2003); Nabobo-Baba (2006)

DISCUSSION AND ANALYSIS

Introduction to the Discussion

This study set out to examine the growing digital pedagogy divide in Fiji, characterized by a widening gap between students’ digital competencies and teachers’ pedagogical readiness, within the broader context of the Fifth Industrial Revolution (5IR). The findings, interpreted through the lenses of TPACK, Constructivist Learning Theory, and Human Capital Theory, reveal that this divide is not merely a technological issue but a systemic misalignment involving pedagogy, policy, institutional culture, and socio-cultural realities.

The discussion critically analyses how these dimensions interact to shape teaching and learning outcomes, and why policy-driven approaches alone are insufficient in addressing the challenges of digital transformation in education.

The Digital Pedagogy Divide as a Pedagogical, Not Technological, Problem

A key insight emerging from this study is that the digital divide in Fiji is no longer primarily about access to technology, but about how technology is pedagogically integrated. While infrastructure and connectivity have improved in many schools, the persistence of traditional, teacher-centred pedagogies limits the transformative potential of digital tools. This aligns with the argument that technology does not inherently improve learning outcomes; it is the pedagogical application that matters (Voogt et al., 2015). The findings

reinforce the relevance of the TPACK framework, which emphasizes the integration of technological, pedagogical, and content knowledge (Koehler & Mishra, 2009). In many cases, teachers possess basic technological skills but lack the ability to design interactive, student-centred learning experiences, resulting in superficial or ineffective use of digital tools.

Consequently, the digital pedagogy divide should be understood as a pedagogical capability gap, rather than a purely technical deficiency. This reframing is critical, as it shifts the focus from infrastructure investment to teacher professional development and pedagogical innovation.

Teacher Readiness: The Central Bottleneck in Digital Transformation

The analysis identifies teacher readiness as the most significant constraint in bridging the digital pedagogy divide. Despite policy emphasis on ICT integration, many teachers face challenges related to:

- Limited training in digital pedagogy
- Lack of confidence in using technology for teaching
- Resistance to changing established teaching practices

These findings are consistent with existing literature, which highlights that teacher beliefs, attitudes, and competencies are critical determinants of technology integration (Ertmer & Ottenbreit-Leftwich, 2010). Importantly, the issue extends beyond technical skills to include pedagogical mindsets and adaptability.

In the Fijian context, these challenges are further

compounded by:

- Inconsistent access to ongoing professional development
- Limited institutional support
- Policy–practice gaps at the school level

This suggests that teacher readiness must be conceptualized as a dynamic and context-dependent construct, requiring sustained investment in capacity-building rather than one-off training initiatives.

Student Competencies and the Emerging Expectation Gap

In contrast to teacher readiness, students demonstrate relatively higher levels of digital familiarity and engagement, reflecting their exposure to technology in everyday life. However, this does not necessarily translate into critical digital literacy, as students may lack the ability to evaluate information, engage ethically, or apply digital tools for academic purposes (Eynon et al., 2021).

The analysis reveals a significant expectation gap:

- Students expect interactive, technology-enhanced learning environments
- Teachers often rely on traditional, lecture-based methods

This mismatch contributes to reduced engagement, disengagement from formal learning, and underutilization of digital potential. From a constructivist perspective, this represents a failure to create active, learner-centred environments that align with how students learn in digital contexts (Vygotsky, 1978).

Thus, the digital pedagogy divide is not only about skill differences but also about misaligned expectations and learning cultures.

The Policy–Practice Disconnect

One of the most critical findings is the persistent disconnect between policy intentions and classroom realities. While national education policies in Fiji emphasize digital learning, 21st-century skills, and technological integration, their implementation remains uneven and often contradictory.

For example:

- Schools may have access to digital infrastructure but restrict device usage
- Policies promote digital learning, yet teachers lack adequate support
- Curriculum structures may not accommodate innovative pedagogies

This reflects a broader issue identified in the literature, where top-down policy approaches fail to account for contextual and institutional complexities (UNESCO, 2021). Policies often

prioritize access and infrastructure, while neglecting the human and pedagogical dimensions of digital transformation.

The findings suggest that effective policy implementation requires:

- Alignment with classroom realities
- Teacher involvement in policy design
- Context-sensitive approaches

Without this alignment, policies risk becoming symbolic rather than transformative.

Cultural Context and the Need for Locally Grounded Digital Pedagogy

A significant contribution of this study is its emphasis on the Pacific and Fijian context, highlighting the importance of integrating indigenous knowledge systems and cultural values into digital pedagogy.

Concepts such as:

- *Vanua* (relational identity and community)
- *Talanoa* (dialogic and participatory communication)

offer valuable frameworks for rethinking digital learning in culturally responsive ways (Thaman, 2003; Vaioleti, 2006; Nabobo-Baba, 2006).

The analysis suggests that the digital pedagogy divide is exacerbated when technology integration is disconnected from cultural contexts. Western-centric models of digital education may not fully align with local values, leading to:

- Reduced relevance of learning
- Resistance from educators and communities
- Missed opportunities for contextual innovation

Integrating indigenous epistemologies can support the development of relational, inclusive, and contextually meaningful digital pedagogies, bridging both technological and cultural divides.

Implications for Human Capital Development in the 5IR

From a Human Capital Theory perspective, the digital pedagogy divide represents a critical barrier to developing future-ready skills. In the 5IR era, economies require individuals who are not only digitally literate but also:

- Adaptable and innovative
- Ethically aware
- Need of critical thinking and problem-solving

When education systems fail to align teaching practices with these demands, they risk producing graduates who

are underprepared for the evolving labour market (Schwab & Zahidi, 2023).

For Fiji, this has significant implication

- Reduced global competitiveness
- Limited participation in digital economies
- Increased socio-economic inequality

Thus, addressing the digital pedagogy divide is not only an educational priority but also a national development imperative.

Reframing the Digital Divide in the 5IR Era

The findings call for a fundamental reframing of the digital divide in education. Rather than viewing it as a problem of access, it should be understood as a multi-dimensional challenge involving:

- Pedagogical alignment
- Teacher capacity
- Policy coherence
- Cultural relevance

The 5IR context further emphasizes the need for human-centred approaches, where technology serves educational and societal goals rather than driving them (Schwab & Zahidi, 2023).

This reframing, highlights that bridging the divide requires systemic transformation, including:

- Rethinking teacher education and professional development
- Redesigning curricula to support digital and critical competencies
- Aligning policies with practice
- Integrating cultural and ethical dimensions into digital learning

Synthesis of Key Insights

The discussion reveals several key insights:

1. The digital pedagogy divide is primarily a pedagogical and systemic issue, not a technological one.
2. Teacher readiness is the central bottleneck in digital transformation.
3. A significant expectation gap exists between students and teachers.
4. Policy–practice misalignment limits the effectiveness of digital education initiatives.
5. Cultural context matters, particularly in Pacific settings.
6. The divide has profound implications for human capital development in the 5IR.

Contribution to Knowledge

This study contributes to the literature by:

- Introducing the concept of the digital pedagogy divide as distinct from traditional digital divide discourse
- Providing a contextualized analysis of Fiji and Pacific education systems
- Integrating pedagogical, policy, and cultural perspectives
- Situating the discussion within the emerging 5IR framework

CONCLUSION

This study critically examined the digital pedagogy divide in Fiji, conceptualized as the growing misalignment between students' digital competencies and teachers' pedagogical readiness, within the broader context of the Fifth Industrial Revolution (5IR). Drawing on Technological Pedagogical Content Knowledge (TPACK), Constructivist Learning Theory, and Human Capital Theory, the analysis demonstrates that this divide is not merely a function of technological access but a systemic, pedagogical, and socio-cultural challenge.

A central conclusion of this study is that technology alone does not transform education. While investments in digital infrastructure are necessary, they are insufficient without corresponding investments in teacher capacity, pedagogical innovation, and institutional alignment (Voogt et al., 2015). The persistence of traditional, teacher-centred instructional practices in digitally equipped environments highlights a critical failure to translate policy aspirations into meaningful classroom transformation. This finding reinforces the importance of the TPACK framework, which emphasizes the integration of technological, pedagogical, and content knowledge as essential for effective digital teaching (Koehler & Mishra, 2009).

The study further reveals that teacher readiness remains the most significant bottleneck in achieving effective digital pedagogy. Limitations in professional development, institutional support, and pedagogical adaptability constrain teachers' ability to engage with technology in transformative ways. As Ertmer and Ottenbreit-Leftwich (2010) argue, teachers' beliefs and competencies play a decisive role in shaping the success of technology integration. Without addressing these human dimensions, digital education initiatives risk remaining superficial or performative.

At the same time, the study highlights the emergence of a student–teacher expectation gap, where students' familiarity with digital technologies contrasts sharply with the predominantly traditional pedagogical approaches

employed in classrooms. However, this does not imply that students possess advanced digital literacy; rather, it underscores the need for structured pedagogical support to develop critical, ethical, and academic uses of technology (Eynon et al., 2021). The failure to bridge this gap contributes to disengagement, ineffective learning experiences, and missed opportunities for meaningful educational innovation. Another critical conclusion is the persistence of a policy–practice disconnect. While national education policies in Fiji emphasize digital transformation and 21st-century skills, their implementation is often inconsistent and constrained by institutional realities. This aligns with broader global findings that top-down policy approaches frequently overlook contextual complexities, limiting their effectiveness (UNESCO, 2021). Policies that prioritize infrastructure without addressing pedagogical and cultural dimensions are unlikely to produce sustainable change.

Importantly, this study underscores the significance of cultural context in shaping digital pedagogy. In Fiji and the wider Pacific, indigenous knowledge systems and values, such as *vanua* (relational identity) and *talanoa* (dialogic engagement), offer powerful frameworks for reimagining education in culturally responsive ways (Thaman, 2003; Vaioleti, 2006; Nabobo-Baba, 2006). The integration of these perspectives is essential to ensure that digital transformation is not only technologically advanced but also socially meaningful and culturally grounded.

From a broader perspective, the findings highlight the implications of the digital pedagogy divide for human capital development in the 5IR era. As economies increasingly demand digital fluency, critical thinking, and adaptability, education systems must evolve to prepare learners for these realities (Schwab & Zahidi, 2023). Failure to address the divide risks producing graduates who are ill-equipped for the demands of a rapidly changing, technology-driven world, thereby undermining national development goals.

In conclusion, this study argues that bridging the digital pedagogy divide requires a paradigm shift in how digital education is conceptualized and implemented. It calls for a move beyond technology-centric approaches toward holistic, human-centred, and contextually grounded educational transformation. In the age of the 5IR, the success of education systems will not be measured by their technological sophistication alone, but by their ability to align pedagogy, policy, and practice in ways that promote inclusive, ethical, and meaningful learning.

WAY FORWARD: POLICY, PRACTICE, AND RESEARCH IMPLICATIONS

Addressing the digital pedagogy divide in Fiji requires a multi-level, systemic response that integrates policy reform, pedagogical innovation, institutional transformation, and

culturally grounded practices. The following strategic directions are proposed as a way forward.

Reimagining Teacher Professional Development

A fundamental priority is the transformation of teacher professional development from one-off training programs to continuous, practice-based learning ecosystems. Professional development should focus not only on technical skills but also on:

- Digital pedagogy (TPACK integration)
- Student-centred and constructivist teaching approaches
- Critical and ethical use of technology

Research indicates that sustained, collaborative, and context-specific professional learning is more effective in supporting teacher change (Ertmer & Ottenbreit-Leftwich, 2010). Mentoring systems, professional learning communities, and peer collaboration can further enhance teacher readiness and confidence.

Aligning Policy with Classroom Realities

There is a critical need to bridge the gap between policy intentions and implementation. Policymakers must adopt a more bottom-up, participatory approach, involving teachers, school leaders, and communities in policy design and evaluation.

Key actions include:

- Reviewing restrictive school-level policies on device usage
- Ensuring coherence between digital learning policies and classroom practices
- Providing adequate resources and institutional support

As UNESCO (2021) emphasizes, effective policy implementation requires alignment with local contexts and stakeholder engagement.

Redesigning Curriculum for the 5IR

Curriculum reform is essential to align education with the demands of the 5IR. This involves integrating:

- Digital literacy and computational thinking
- Critical thinking and problem-solving
- Ethical and responsible use of technology

Curricula should also incorporate interdisciplinary and project-based learning approaches, enabling students to apply knowledge in real-world contexts. Such reforms

support the development of holistic competencies required for future labour markets (Schwab & Zahidi, 2023).

Embedding Culturally Responsive Digital Pedagogy

In the Fijian and Pacific context, digital pedagogy must be grounded in indigenous knowledge systems and cultural values. This includes:

- Incorporating *talanoa* as a pedagogical approach in digital learning environments
- Embedding *vanua*-based relational learning principles
- Developing locally relevant digital content

Such approaches ensure that digital transformation is not culturally alienating but contextually meaningful and inclusive (Thaman, 2003; Nabobo-Baba, 2006).

Strengthening Institutional Capacity and Leadership

Educational institutions must play a proactive role in fostering digital transformation by:

- Establishing clear institutional strategies for digital learning
- Providing leadership support for innovation
- Investing in infrastructure and technical support systems

Leadership is critical in creating an enabling environment for change, where teachers are supported and encouraged to experiment with new pedagogical approaches (Kezar & Lester, 2011).

Promoting Equity and Inclusion in Digital Education

Efforts to bridge the digital pedagogy divide must prioritize equity and inclusion, ensuring that all students have access to meaningful learning opportunities. This includes:

- Addressing disparities in access to devices and connectivity
- Supporting marginalized and rural communities
- Ensuring gender and socio-economic inclusivity

Equitable digital education is essential for achieving broader development goals and reducing inequality (UNESCO, 2021).

Advancing Research in the 5IR Context

Finally, there is a need for ongoing research to deepen understanding of digital pedagogy in the 5IR era, particularly in Pacific contexts. Future research should focus on:

- Longitudinal studies on teacher readiness and student outcomes
- Impact of culturally responsive digital pedagogies
- Evaluation of policy implementation and effectiveness

Such research will contribute to evidence-based decision-making and support the development of contextually relevant educational models.

Final Reflection

The transition into the Fifth Industrial Revolution presents both unprecedented opportunities and profound challenges for education systems in Fiji and beyond. Bridging the digital pedagogy divide requires more than technological solutions; it demands a reimagining of education itself.

By aligning teacher capacity, student needs, policy frameworks, and cultural values, Fiji has the potential to develop an education system that is not only digitally advanced but also inclusive, ethical, and future-ready. In doing so, it can position itself as a model for other small island developing states navigating similar challenges.

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