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Beyond Pedagogy: AI-Enabled Heutagogical Transformation in Fiji and Pacific Tertiary Education

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ABSTRACT

The rapid advancement of Artificial Intelligence (AI) is reshaping higher education globally, compelling tertiary institutions to reconsider traditional pedagogical models that prioritize content transmission over learner capability. In the context of Fiji and the broader Pacific region, where higher education systems face unique challenges related to geographic dispersion, resource constraints, digital inequities, and postcolonial educational legacies, the integration of AI presents both transformative opportunities and critical responsibilities. This paper argues that the meaningful adoption of AI in Pacific tertiary education requires a paradigmatic shift from pedagogy to heutagogy, emphasizing self-determined learning, learner autonomy, adaptability, and capability development.

Drawing on contemporary scholarship in heutagogy, digital transformation, and AI in education, the paper develops a conceptual framework positioning AI as an enabler of learner agency rather than a replacement for human educators. It examines how AI-driven tools, such as adaptive learning systems, intelligent tutoring, research assistants, learning analytics, and simulation platforms, can support personalized learning pathways, reflective practice, and double-loop learning. Within a Pacific context, this transformation is further situated within the region's cultural emphasis on relationality, community knowledge, and collective responsibility, highlighting the importance of human-centred, ethically grounded AI integration.

The paper critically discusses opportunities, including expanded access to learning, enhanced research productivity, and innovation capacity, while also addressing challenges such as algorithmic bias, data sovereignty, digital divides, and academic integrity. It argues that sustainable AI-enabled transformation in Fiji and Pacific tertiary institutions must prioritize ethical governance, digital literacy development, culturally responsive pedagogies, and strong human oversight.

Ultimately, this study positions AI not as a technological disruption to be managed, but as a strategic catalyst for reimagining tertiary education in the Pacific, moving beyond pedagogy toward a heutagogical model that fosters lifelong learning, resilience, and capability in an era of uncertainty.

Keywords: Artificial Intelligence; Heutagogy; Tertiary Education; Fiji; Pacific Higher Education; Learner Autonomy; Digital Transformation; Capability Development; Human-Centred AI; Educational Reform.

INTRODUCTION

The landscape of tertiary education is undergoing rapid and unprecedented transformation due to technological advancements, globalization, and the increasing demand for 21st-century competencies. Central to this transformation is Artificial Intelligence (AI), which is redefining how knowledge is delivered, assessed, and applied in higher education contexts (Luckin et al., 2016; UNESCO, 2021). AI offers the potential to enhance learning experiences, facilitate personalized instruction, accelerate research productivity, and enable innovative pedagogical approaches. Yet, the successful integration of AI in tertiary education requires more than technological adoption; it necessitates a paradigmatic shift in teaching and learning philosophy, moving from traditional pedagogy, which emphasizes teacher-directed knowledge transmission, toward heutagogy, a learner-centred approach that prioritizes self-determined learning, capability development, and adaptive expertise (Hase & Kenyon, 2000; Blaschke, 2012).

Heutagogy, or self-determined learning, emphasizes learner autonomy, reflective practice, and the ability to apply knowledge in unfamiliar and complex contexts (Blaschke & Hase, 2019). Unlike pedagogy, which focuses primarily on content delivery and structured curriculum progression, heutagogy empowers learners to define their learning goals, select appropriate learning strategies, and engage in iterative cycles of reflection and action. In the

era of AI, heutagogical approaches are particularly relevant because intelligent systems can provide personalized feedback, adaptive learning pathways, and tools for self-directed inquiry, thereby supporting learners in developing the skills, knowledge, and dispositions necessary for lifelong learning (Hase, 2016; Siemens, 2013).

In the Pacific context, and particularly in Fiji, tertiary education faces distinctive challenges and opportunities that make this transformation both urgent and contextually complex. Geographic dispersion, limited infrastructure, uneven access to digital technologies, and historical legacies of teacher-centred education constrain the ability of institutions to implement learner-centred approaches effectively (Fiji Ministry of Education, 2020; McCowan, 2020). At the same time, Pacific universities are increasingly recognizing the need to equip graduates with adaptive, creative, and critical thinking skills to thrive in knowledge economies and contribute meaningfully to national and regional development (OECD, 2019; UNESCO, 2021). AI offers a pathway to bridge these gaps by enabling scalable, flexible, and adaptive learning experiences that align with the cultural and social realities of Pacific learners.

The integration of AI within a heutagogical framework is not without challenges. Issues such as algorithmic bias, data privacy, digital equity, and ethical governance must be addressed to ensure that AI-enhanced learning supports rather than undermines educational quality and social inclusion (Williamson & Piattoeva, 2020; Selwyn, 2019). Additionally, the role of educators must evolve: while AI can provide personalized learning analytics, automated feedback, and virtual simulations, human judgement remains central to interpreting results, facilitating reflection, maintaining academic integrity, and embedding culturally responsive pedagogies (Luckin et al., 2016; Blaschke & Hase, 2019).

This paper therefore examines the potential of AI to facilitate a transition from pedagogical to heutagogical teaching and learning in tertiary institutions in Fiji and the Pacific. It argues that AI should be conceptualized as an enabler of learner autonomy, capability development, and lifelong learning, rather than a technological replacement for human educators. By critically exploring both the opportunities and constraints of AI integration, the study seeks to provide a framework for sustainable, ethical, and culturally responsive transformation of tertiary education in the Pacific.

LITERATURE REVIEW

AI in Tertiary Education

Artificial Intelligence (AI) has become an increasingly influential force in higher education, providing tools that can support personalized learning, automate routine tasks, and enhance research capabilities (Luckin et al., 2016; Holmes et al., 2019). AI applications range from adaptive learning platforms and intelligent tutoring systems to automated grading, plagiarism detection, and predictive analytics for student performance (Zawacki-Richter et al., 2019). Research indicates that AI has the potential to increase learning efficiency, enhance engagement, and enable innovative pedagogical strategies, particularly when integrated thoughtfully into curricula (Chen et al., 2020).

However, much of the literature highlights that the benefits of AI are contingent upon the presence of robust ethical frameworks, educator involvement, and cultural contextualization. For instance, Selwyn (2019) and Williamson and Piattoeva (2020) emphasize that algorithmic bias, privacy concerns, and inequitable access may inadvertently reinforce systemic inequalities if AI is implemented without oversight. In the Pacific context, access to digital infrastructure, bandwidth limitations, and disparities in digital literacy further complicate AI integration in tertiary education (Fiji Ministry of Education, 2020; McCowan, 2020).

Pedagogy vs. Heutagogy

Traditional pedagogical approaches in tertiary education have largely focused on teacher-directed instruction, structured curricula, and summative assessment (Hase & Kenyon, 2000). While effective for foundational knowledge transmission, pedagogy has been critiqued for its limited capacity to foster autonomy, adaptability, and capability development—skills that are critical in rapidly changing knowledge economies (Blaschke, 2012).

Heutagogy, or self-determined learning, shifts the focus from content delivery to learner autonomy, reflective practice, and capability development (Blaschke & Hase, 2019). Learners are encouraged to define learning goals, choose strategies, and engage in iterative cycles of reflection and application, aligning closely with lifelong learning imperatives. Recent studies suggest that integrating AI into a heutagogical model enhances learner agency by providing adaptive learning pathways, feedback loops, and research support (Hase, 2016; Siemens, 2013).

AI-Supported Heutagogy

The intersection of AI and heutagogy presents a transformative approach to tertiary education. AI tools such as adaptive platforms, intelligent tutors, and learning analytics enable personalized, self-directed learning experiences (Chen et al., 2020; Luckin et al., 2016). These tools allow learners to progress at their own pace, reflect on learning outcomes, and explore multiple perspectives independently. Blaschke (2012) and Blaschke and Hase (2019) argue that AI-enhanced heutagogy promotes

double-loop learning, in which learners not only acquire knowledge but also critically evaluate and adjust their learning strategies, leading to deeper capability development. Empirical studies in other regions have demonstrated that AI-supported heutagogical interventions improve engagement, self-efficacy, and problem-solving skills (Tsai et al., 2021; Chen et al., 2020). However, the literature indicates that the role of educators remains central; AI cannot replace human judgement, ethical oversight, or culturally responsive pedagogy (Luckin et al., 2016; UNESCO, 2021). This is particularly significant in Pacific tertiary contexts, where relational, communal, and culturally grounded learning practices must be maintained alongside technological innovation (Fiji Ministry of Education, 2020; McCowan, 2020).

Pacific Context in Tertiary Education

Tertiary education in Fiji and the wider Pacific region faces unique challenges, including geographic dispersion, limited digital infrastructure, and resource constraints, which impact access to quality higher education (McCowan, 2020; OECD, 2019). Despite these challenges, Pacific universities are striving to build graduate capabilities aligned with 21st-century competencies, including adaptability, critical thinking, and innovation (UNESCO, 2021). Integrating AI within a heutagogical framework offers a pathway to overcome these structural and logistical barriers by providing scalable, flexible, and personalized learning opportunities while maintaining cultural relevance and community engagement (Blaschke & Hase, 2019).

Literature Gaps

Despite growing research on AI in education and the rise of heutagogy, several gaps remain, particularly in the Pacific context:

1. **Limited Regional Empirical Research** – Most studies on AI-supported heutagogy are from Western or Asian contexts. Research specific to Fiji and Pacific tertiary institutions is scarce (Fiji Ministry of Education, 2020; McCowan, 2020).
2. **Integration Frameworks for AI and Heutagogy** – While conceptual discussions exist, there is a lack of empirically tested models for combining AI tools with self-determined learning approaches in Pacific higher education.
3. **Culturally Responsive Implementation** – Current literature does not sufficiently address how AI integration can be aligned with Pacific cultural values, communal learning practices, and relational pedagogies (UNESCO, 2021).
4. **Ethics and Data Governance in the Pacific** – While ethical considerations for AI are widely discussed globally, there is limited scholarship addressing data privacy, digital equity, and responsible AI practices in resource-constrained and geographically dispersed Pacific contexts (Williamson & Piattoeva, 2020; Selwyn, 2019).
5. **Longitudinal Impacts on Learner Capability** – Few studies track the long-term effects of AI-supported heutagogy on learner autonomy, adaptability, and employability in Pacific higher education.

These gaps highlight the need for regionally grounded, culturally sensitive research on how AI can facilitate a transformation from pedagogy to heutagogy in Pacific tertiary institutions, emphasizing both learner autonomy and educator roles.

CONCEPTUAL FRAMEWORK

Description:

The framework positions Artificial Intelligence (AI) as an enabler of the shift from pedagogical, teacher-centred approaches to heutagogical, learner-centred approaches in tertiary education. It identifies the key components, relationships, and outcomes:

1. Input:

- **AI Technologies & Tools:** Adaptive learning platforms, intelligent tutoring systems, AI research assistants, simulations, and learning analytics.
- **Contextual Factors:** Pacific-specific challenges (digital infrastructure, geographic dispersion, cultural values), institutional policies, and educator readiness.

2. Process:

- **Heutagogical Practices Enabled by AI:**
  - Learner autonomy & self-directed learning
  - Personalized learning pathways
  - Reflection & double-loop learning
  - Collaboration & knowledge creation
- **Educator Roles:** Facilitation, mentoring, ethical guidance, cultural contextualization

3. Output / Outcomes:

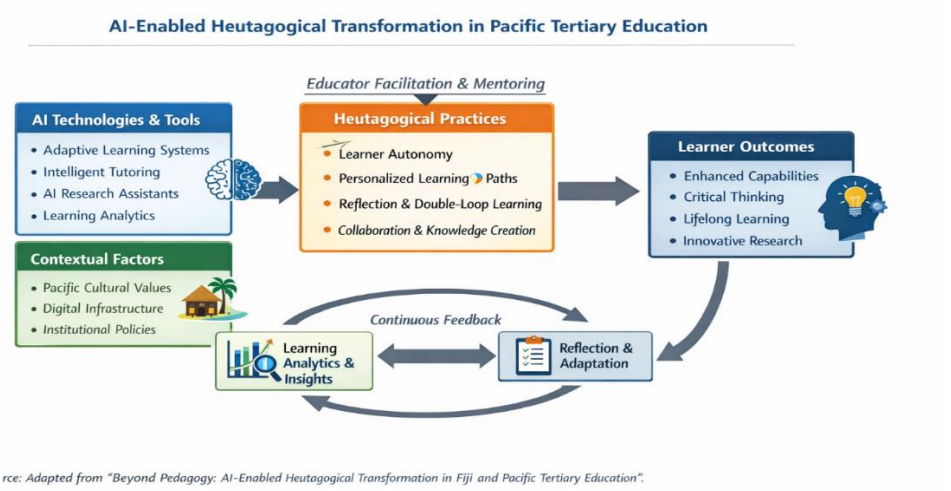
- Enhanced learner capabilities: critical thinking, adaptability, digital literacy, lifelong learning
- Sustainable innovation in teaching and learning
- Ethical, culturally responsive AI integration
- Strengthened research productivity and academic engagement

4. Feedback Loop:

- Learning analytics and AI insights inform both learners and educators, enabling continuous reflection, adaptation, and improvement.

Key Relationships:

- AI is not a replacement for educators but a tool to empower learners.
- Educator guidance ensures ethical, culturally responsive use of AI.
- Contextual factors mediate the effectiveness of AI-supported heutagogy.



rce: Adapted from "Beyond Pedagogy: AI-Enabled Heutagogical Transformation in Fiji and Pacific Tertiary Education".

Table 1: Comparison of Pedagogical vs. Heutagogical Approaches in Tertiary Education

Feature	Pedagogy (Teacher-Centred)	Heutagogy (Learner-Centred)	Role of AI
Learning Focus	Content delivery	Learner autonomy, capability development	Adaptive learning, personalized pathways
Decision-Making	Teacher determines learning goals	Learners set their own goals	Learning analytics guide learners' choices
Assessment	Standardized tests	Self-reflection, project-based assessment	Automated feedback, AI analytics
Learning Style	Uniform, one-size-fits-all	Personalized and flexible	AI customizes content and pacing
Role of Educator	Instructor	Facilitator and mentor	AI supports, educator guides ethically

Source: *Adapted from Blaschke & Hase (2019); Hase (2016); Luckin et al. (2016)*

DISCUSSION AND ANALYSIS

The transformation of tertiary education from traditional pedagogical approaches to a heutagogical, learner-centred model, enabled by Artificial Intelligence (AI), represents a fundamental shift in teaching and learning philosophy. The discussion of this transformation in the Pacific context, particularly in Fiji, must consider both technological possibilities and socio-cultural realities. AI, when integrated into a heutagogical framework, can support adaptive, self-directed learning while fostering the capabilities necessary for lifelong learning, innovation, and critical thinking (Blaschke & Hase, 2019; Hase, 2016).

AI as an Enabler of Learner Autonomy and Personalization

One of the most significant contributions of AI to heutagogy is its ability to provide personalized learning pathways that adapt to individual learner needs and capabilities. Adaptive learning platforms and intelligent tutoring systems analyse learner performance, preferences, and progression to tailor content, pacing, and assessment strategies (Chen et al., 2020; Luckin et al., 2016). In a Pacific context, where learners often face uneven access to educational resources, these AI-driven adaptive systems can help bridge gaps in knowledge acquisition, allowing students to progress according to their readiness rather than rigid curriculum timelines (Fiji Ministry of Education, 2020).

Moreover, AI supports self-reflection and metacognitive development, key aspects of heutagogy. Learning analytics and AI-generated insights provide learners with actionable feedback, enabling them to evaluate their

learning strategies, identify gaps, and refine their approaches (Siemens, 2013; Blaschke, 2012). This process enhances learner autonomy and encourages deeper engagement with content, moving beyond rote learning toward capability development.

Table 2: AI Tools and Platforms for Heutagogical Tertiary Education

AI Tool / Platform	Function / Use Case	Example in Tertiary Education	Reference / Source
Adaptive Learning Systems	Personalize content and pace	Smart Sparrow, Knewton	Chen et al. (2020); Luckin et al. (2016)
Intelligent Tutoring Systems	Provide targeted guidance and feedback	Carnegie Learning Math Tutor	Zawacki-Richter et al. (2019)
Learning Analytics Platforms	Track progress, inform decisions	Moodle Learning Analytics	Siemens (2013); Tsai et al. (2021)
AI Research Assistants	Summarize literature, data analysis	Elicit, Research Rabbit	Chen et al. (2020)
Simulation & VR Tools	Experiential learning and complex problem-solving	Labster virtual labs	Holmes et al. (2019)

Source: *Chen et al. (2020); Holmes et al. (2019); Luckin et al. (2016); Siemens (2013)*

AI Supporting Educator Facilitation

While AI enhances learner-centeredness, the role of educators remains critical. AI cannot replace human judgement, particularly in the areas of ethical decision-making, cultural contextualization, and mentorship (Luckin et al., 2016; Selwyn, 2019). In Pacific tertiary institutions, educators serve as facilitators and mentors who guide students in interpreting AI-generated feedback, ensuring academic integrity, and applying knowledge in culturally relevant ways (Blaschke & Hase, 2019).

Educators also play a pivotal role in embedding ethical AI practices within learning environments, including protecting learner data, addressing algorithmic bias, and promoting equitable access to digital resources (Williamson & Piattoeva, 2020). The interplay between AI tools and educator facilitation thus reflects a hybrid model, where technology enhances, but does not replace, pedagogical expertise.

Heutagogical Transformation in the Pacific Context

The Pacific region, including Fiji, presents unique challenges and opportunities for AI-enabled heutagogical practices. Geographical dispersion, infrastructural limitations, and resource constraints often impede access to quality tertiary education (McCowan, 2020). However, integrating AI in a culturally responsive, learner-centred framework provides an avenue to overcome these structural challenges. AI-enabled learning platforms can support flexible and scalable learning, while heutagogical approaches ensure that learners remain active participants in shaping their own educational pathways (UNESCO, 2021).

Culturally responsive pedagogy is essential in this transformation. Pacific learners often value relational, communal, and contextually grounded approaches to learning. Heutagogy, supported by AI, can accommodate these values by fostering collaborative learning and knowledge creation while maintaining self-directed, reflective practices (Blaschke & Hase, 2019). Therefore, the integration of AI within a heutagogical model aligns technological innovation with regional cultural priorities, ensuring that transformation is contextually appropriate and sustainable.

Opportunities for Research and Innovation

AI integration also opens significant opportunities for research and innovation. Tools such as AI research assistants, text and data mining applications, and simulation platforms allow learners to engage in complex problem-solving, data analysis, and creative knowledge production (Chen et al., 2020; Tsai et al., 2021). These capabilities are particularly valuable in the Pacific, where tertiary students often face limited exposure to advanced research tools and mentorship opportunities. By supporting self-directed inquiry, AI fosters both the development of research competence and the cultivation of an innovative mindset necessary for regional development.

Challenges and Critical Considerations

Despite its potential, AI-enabled heutagogical transformation is not without challenges. Algorithmic bias and opaque decision-making processes in AI systems may reinforce inequities if not carefully managed (Selwyn, 2019). Digital infrastructure limitations in the Pacific, including inconsistent internet access and outdated hardware, may hinder equitable AI adoption (Fiji Ministry of Education, 2020). Furthermore, the integration of AI raises ethical concerns regarding data privacy, academic integrity, and the role of human judgement (Williamson & Piattoeva, 2020).

To address these challenges, institutions must implement strategic policies and capacity-building initiatives, including professional development for educators, investment in digital infrastructure, and the promotion of digital literacy among learners (UNESCO, 2021). The goal is to ensure that AI becomes a tool for empowerment rather than a source of exclusion, supporting both learner agency and sustainable educational outcomes.

Synthesis and Implications

The analysis indicates that AI-enabled heutagogy represents a strategically valuable but contextually sensitive approach for transforming tertiary education in Fiji and the Pacific. By combining AI technologies with learner-centred, reflective, and culturally responsive pedagogies, institutions can enhance learner capabilities, foster innovation, and prepare graduates for complex, uncertain professional environments. However, achieving this transformation requires careful balancing of technology, human oversight, and cultural responsiveness, alongside ethical governance and equity-focused implementation strategies.

Ultimately, AI should be viewed not as a replacement for educators, but as a strategic enabler of self-determined learning, capable of catalysing long-term transformation in Pacific tertiary education when integrated thoughtfully within heutagogical frameworks (Blaschke & Hase, 2019; Luckin et al., 2016; UNESCO, 2021).

OPPORTUNITIES AND CHALLENGES OF AI-ENABLED HEUTAGOGICAL TRANSFORMATION IN PACIFIC TERTIARY EDUCATION

The integration of Artificial Intelligence (AI) in tertiary education, particularly when combined with heutagogical approaches, presents a unique set of opportunities and challenges. While AI can significantly enhance learning, teaching, and research, the adoption of such technology in Pacific contexts requires careful consideration of infrastructure, culture, ethics, and pedagogy.

Opportunities

1. **Enhanced Learner Autonomy and Personalized Learning**
   AI tools such as adaptive learning systems, intelligent tutoring platforms, and personalized feedback mechanisms allow learners to progress at their own pace, set individualized learning goals, and engage in self-directed learning (Blaschke & Hase, 2019; Chen et al., 2020). In Pacific tertiary institutions, where class sizes can be large and resources limited, AI supports personalized pathways that respect each learner's readiness and capabilities, enabling meaningful engagement with content and fostering self-determined learning (Hase, 2016; Siemens, 2013).
2. **Improved Research Productivity and Innovation**
   AI can accelerate research by automating repetitive tasks, conducting literature reviews, performing data analysis, and providing insights through predictive analytics (Tsai et al., 2021; Luckin et al., 2016). For Pacific students and educators, AI offers an unprecedented opportunity to engage in innovative, data-driven research, even in resource-constrained environments, thereby enhancing research capacity and developing problem-solving competencies aligned with national and regional priorities (Chen et al., 2020).
3. **Scalable, Flexible, and Inclusive Learning**
   AI enables flexible learning environments that are not bound by geography or time, a significant advantage in the Pacific, where students are often dispersed across islands (McCowan, 2020; Fiji Ministry of Education, 2020). AI-driven platforms can provide virtual classrooms, simulations, and collaborative learning opportunities, improving access to education while accommodating diverse learning needs. This supports inclusive and equitable education, aligning with regional goals for lifelong learning and digital literacy (UNESCO, 2021).
4. **Data-Informed Decision Making**
   Learning analytics generated by AI allow educators and institutions to track student progress, identify learning gaps, and inform curriculum and pedagogical adjustments (Siemens, 2013). This evidence-based approach enables targeted interventions that can improve retention, learner outcomes, and overall educational quality (Williamson & Piattoeva, 2020).

Challenges

1. **Digital Infrastructure and Access Limitations**
   The uneven availability of reliable internet, computing devices, and AI-enabled platforms in many Pacific contexts presents a significant barrier (Fiji Ministry of

Education, 2020; McCowan, 2020). Without robust infrastructure, AI initiatives may exacerbate existing inequities, limiting the potential benefits for remote or under-resourced learners.

2. **Ethical and Privacy Concerns**
   AI systems rely on large amounts of learner data, raising concerns about data privacy, algorithmic bias, and security (Selwyn, 2019; Williamson & Piattoeva, 2020). In Pacific tertiary institutions, policies governing ethical AI use are often underdeveloped, and learners may be unaware of data implications, increasing the risk of misuse or unintended consequences.
3. **Educator Preparedness and Capacity**
   Effective AI integration requires educators to possess both digital literacy and pedagogical adaptability (Luckin et al., 2016). Many educators in the Pacific may lack experience with AI tools or heutagogical approaches, limiting their ability to facilitate self-directed learning effectively (Blaschke & Hase, 2019; UNESCO, 2021). Professional development is therefore critical but may require significant investment in training and ongoing support.
4. **Cultural and Pedagogical Alignment**
   AI and heutagogy must align with Pacific cultural values, including communal learning, relational knowledge, and contextually grounded pedagogy (Blaschke & Hase, 2019). Failure to incorporate cultural responsiveness risks alienating learners and undermining engagement, particularly in contexts where relational and collective learning practices are central.
5. **Sustainability and Cost Implications**
   Implementing and maintaining AI systems can be costly, especially in resource-constrained Pacific institutions. Ongoing investment is required in hardware, software, licensing, and technical support, which may compete with other educational priorities (OECD, 2019; Fiji Ministry of Education, 2020).

Table 3: Opportunities and Challenges of AI in Pacific Tertiary Education

Dimension	Opportunities	Challenges	Role of Educators / Institutions
Learning Experience	Personalized learning, learner autonomy	Limited digital infrastructure	Facilitate learning, ensure equitable access
Research & Innovation	Enhanced research tools, data analysis	Limited AI literacy among educators	Train staff, mentor students
Accessibility & Inclusion	Flexible, scalable learning for remote learners	Connectivity issues, hardware limitations	Develop policies for equity
Ethical Considerations	Data-driven insights for improvement	Privacy, bias, algorithmic transparency	Implement ethical frameworks
Cultural Relevance	Can support culturally contextualized content	Risk of misalignment with local pedagogy	Embed cultural responsiveness in AI use

Source: *Blaschke & Hase (2019); UNESCO (2021); Williamson & Piattoeva (2020)*

Synthesis

While AI offers transformative opportunities for enhancing learner autonomy, research capacity, and inclusivity in Pacific tertiary education, these benefits are mediated by infrastructure, ethical, cultural, and capacity-related factors. A strategic approach that balances technological innovation with ethical oversight, cultural relevance, and educator facilitation is necessary to harness AI's potential effectively (Luckin et al., 2016; Blaschke & Hase, 2019; UNESCO, 2021).

The evidence suggests that institutions must not only adopt AI tools but also develop policy frameworks, professional development programs, and culturally aligned pedagogical strategies to address challenges while maximizing the opportunities for heutagogical transformation.

CONCLUSION

The transformation of tertiary education in Fiji and the Pacific from pedagogy to heutagogy represents a critical shift in preparing learners for the complexities of the 21st century. This study demonstrates that Artificial Intelligence (AI) is a powerful enabler in this transition, supporting personalized learning, reflective practice, and capability development. By integrating AI with a heutagogical framework, learners gain autonomy, can define their own learning goals, and engage in iterative cycles of reflection and application, leading to deeper understanding and transferable skills (Blaschke, 2012; Blaschke & Hase, 2019).

The analysis reveals that AI-supported heutagogy fosters

a learner-centred ecosystem, where students are empowered to navigate complex information, engage in collaborative problem-solving, and develop digital literacy and critical thinking skills essential for lifelong learning (Hase, 2016; Siemens, 2013). However, the successful implementation of this transformation is contingent on human oversight, as educators play a pivotal role in ensuring ethical AI use, contextual relevance, and cultural responsiveness (Luckin et al., 2016; Selwyn, 2019).

In the Pacific context, AI can mitigate structural challenges such as geographic dispersion, limited infrastructure, and uneven access to resources, while supporting flexible, scalable, and inclusive learning pathways (Fiji Ministry of Education, 2020; McCowan, 2020). At the same time, ethical concerns related to data privacy, algorithmic bias, and digital equity must be proactively addressed to ensure AI enhances educational quality rather than reinforcing inequalities (Williamson & Piattoeva, 2020; UNESCO, 2021).

In summary, AI should not be viewed as a replacement for educators but as a strategic enabler of learner autonomy, capability development, and innovation. When thoughtfully integrated into a heutagogical framework, AI can catalyse sustainable transformation in Pacific tertiary education, fostering graduates who are adaptable, reflective, and equipped to contribute meaningfully to national and regional development.

WAY FORWARD

Building on the findings of this study, several strategic directions are recommended to ensure the successful implementation of AI-enabled heutagogical practices in tertiary education in Fiji and the Pacific:

1. **Capacity Building for Educators:**
   Professional development programs should focus on AI literacy, heutagogical practices, ethical use of technology, and culturally responsive pedagogy. Educators must be empowered to facilitate learner autonomy while guiding ethical and responsible AI usage (Luckin et al., 2016; Blaschke & Hase, 2019).

2. **Infrastructure and Digital Access:**
   Investments are needed in digital infrastructure, including reliable internet access, cloud-based learning platforms, and AI-enabled educational tools. Bridging the digital divide is essential to ensure equitable access and inclusion across all learners (Fiji Ministry of Education, 2020; OECD, 2019).

3. **Ethical AI Governance:**
   Policies and frameworks should be established to address data privacy, algorithmic transparency, and bias mitigation. Ethical oversight ensures that AI supports learning without compromising academic integrity or reinforcing inequities (Williamson & Piattoeva, 2020; Selwyn, 2019).

4. **Culturally Responsive Implementation:**
   AI integration must align with Pacific cultural values, including relational learning, community engagement, and collaborative knowledge creation. Culturally grounded approaches ensure that AI supports both learner autonomy and local educational priorities (Blaschke & Hase, 2019; UNESCO, 2021).

5. **Monitoring, Evaluation, and Continuous Improvement:**
   Learning analytics and feedback mechanisms should be employed to assess the effectiveness of AI-enabled heutagogical interventions. Continuous evaluation allows institutions to adapt strategies, improve outcomes, and scale successful practices (Siemens, 2013; Tsai et al., 2021).

6. **Fostering Research and Innovation:**
   AI tools should be leveraged to expand research opportunities, promote creative problem-solving, and support innovation among learners. Building research capacity contributes to national and regional development while cultivating adaptive and capable graduates (Chen et al., 2020; Tsai et al., 2021).

By pursuing these strategies, tertiary institutions in Fiji and the Pacific can harness AI to create a learner-centred, adaptive, and ethically grounded educational environment, moving beyond pedagogy toward heutagogy. This approach prepares students not only to navigate complex future landscapes but also to contribute responsibly and innovatively to their communities and societies.

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