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COMMUNITY VOCIES:

Scholarly responses to *UNESCO Global Education Monitoring Report 2024 Pacific Technology in Education*: *A tool on whose terms?*

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AUSTRALIA

The *UNESCO Global Education Monitoring Report 2024 Pacific Technology in Education*, newly released in late October 2024 in Samoa, discusses 17 countries: Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Tokelau and Vanuatu. To respond to the UNESCO Report from an Australian perspective, we considered the four pillars of the Pacific Regional Education Framework (PacREF): Quality and Relevance, Learning Pathways, Student Outcomes and Well-being and the Teaching Profession. These vary nationally, and continued work in each domain remains.

Quality and relevance

The PacREF emphasises integrating local cultural values and knowledge into curriculum and programming. In Australia, there is a strong commitment to embedding culturally relevant education, particularly for Indigenous students. For instance, initiatives like **Digital Creative Storytelling document Indigenous stories** in collaboration with Aboriginal elders promotes engagement and cultural preservation. Research conducted with **270 primary and secondary students in Queensland** revealed that educational games make learning more engaging, encourage socialisation and enhance peer interactions among students. Furthermore, Australia's emphasis on foundational literacy and numeracy underlines that traditional and digital literacy skills must go hand-in-hand, recognising these as crucial for students' readiness for a technology-oriented future.

Learning pathways

The PacREF encourages adaptable education pathways, allowing flexibility in policy and school-level decisions. Australia's approach to distance learning, especially for remote students, demonstrates flexibility and commitment to expanding access. Policies across Australian states endorse distance education. Australia's support for open and distance learning (ODL) through technology could serve as a model for Pacific nations addressing accessibility issues. Additionally, the Australian Government funded **18 million dollars (AUD) for a Cable Connectivity and Resilience Centre** in 2024, aiming to strengthen telecommunications infrastructure in the Pacific, which is crucial for expanding educational reach.

Student outcomes and well-being

Improving student outcomes and well-being is central to the PacREF, and Australia's experience offers insights into technology's benefits and potential educational downsides. Studies show that **42% of approximately 600 Australian adolescents aged 17 to 19** spend more than four hours per day on social media, highlighting potential mental health risks linked to excessive screen time. Australia's balanced approach to technology use in schools includes policies like banning mobile phones in public schools in New South Wales, where primary students can bring phones only with teachers' approval. Furthermore, a study of **164 primary school students** using the ABRACADABRA reading tool found reduced disparities in reading outcomes between Indigenous and non-Indigenous students, underscoring technology's potential to improve equity and outcomes.

Teaching Profession

Supporting educators through professional development is a priority under the PacREF. Australia strongly emphasises equipping teachers with ICT skills, with **65% of educators** receiving formal training in technology integration, according to 2018 TALIS data. The Department of Foreign Affairs and Trade's **Pacific Regional Development Program** supports Pacific educators, offering scholarships and training programs to empower them. Australia's initiatives align with PacREF's goals by fostering a skilled, tech-enabled teaching workforce that promotes accountability and shared understanding. For instance, the **2023–2026 Digital Strategy in South Australia, Queensland's Data Literature Framework, and Victoria Social Media Uses** provide specific guidelines for integrating technology into classrooms, supporting teachers in developing digital literacy and adaptable teaching skills across diverse contexts.

In summary, Australia's experience, as highlighted in the UNESCO Pacific Report, provides insights that support the PacREF pillars. By focusing on culturally relevant education, flexible learning pathways, balanced use of technology, and robust teacher support, Australia is working towards equitable approaches, and such educational strategies can serve as examples of regional exchange and sharing.

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FIJI

Fiji and other Pacific nations have made significant strides in incorporating digital skills into their national education policies. The country has focused on equipping students with computer-related skills within the broader context of responsible citizenship. This approach ensures that students develop technical proficiency and understand the ethical responsibilities of using digital tools. This foundational framework helps students navigate the digital world responsibly. In contrast, neighbouring countries like Australia and New Zealand have expanded their scope to include digital literacy for employability and citizenship skills, preparing students for societal participation and the workforce. To enhance digital education further, Fiji and other Pacific nations could broaden their frameworks to address emerging technologies, such as cybersecurity, data privacy and artificial intelligence. As digital transformation accelerates globally, integrating these areas into the curriculum would better prepare students for a rapidly evolving job market and equip them with the necessary skills to navigate potential risks in a connected world. Expanding digital skills education would also help bridge the gap between technology access and usage, empowering students to use digital tools effectively for personal and professional growth.

Technology in learning and online platforms in Fiji

The University of the South Pacific (USP) and Fiji National University (FNU) have adopted multimodal teaching methods that combine online, blended and print-based learning. This approach was especially vital during the COVID-19 pandemic when the Ministry of Education (MoE) distributed offline content packages to ensure students in remote areas with limited internet access could still access educational materials. Offline resources have been essential in Fiji, where the country's rugged terrain and dispersed population make establishing reliable internet infrastructure difficult, especially in rural and remote areas. To fully realise the potential of digital learning, Fiji needs increased investment in internet infrastructure, particularly in underserved regions. Additionally, providing affordable devices to students will help ensure that access to digital learning is not limited by cost or availability. Addressing these connectivity and device accessibility issues will create a more equitable learning environment where all students have the opportunity to benefit from digital education.

Teacher ICT standards and professional development in Fiji

Like other Pacific nations, Fiji has implemented ICT competency standards for teachers to enhance teaching quality by equipping educators with the necessary skills to integrate digital tools into their classrooms. These frameworks guide professional development, ensuring teachers stay updated with evolving technologies and teaching methods. Fiji could implement ongoing teacher training programs focusing on digital tools and pedagogical strategies to strengthen technology integration. This professional development should be structured to help teachers adapt to new technologies while maintaining the quality and relevance of their teaching. Continuous updates on emerging digital trends and training on culturally relevant

content would also help teachers engage students meaningfully, fostering digital skills development.

Sustainability and scalability in Fiji

Sustainability is a significant challenge for education technology in Fiji because many initiatives rely on donor funding, which may not be sustainable in the long term. To address this, Fiji must develop strategies to make self-sustaining technology investments. This could include local government initiatives, community involvement and partnerships with the private sector. As educators, policymakers and stakeholders, it is crucial to actively participate in making these strategies a reality and ensuring the future success of digital education in Fiji. Fiji has adopted hybrid learning models that combine print-based materials, online learning and face-to-face teaching. These adaptable models cater to varying levels of infrastructure and connectivity, ensuring that education remains accessible to all students, regardless of location. This flexibility is vital for making education technology scalable and sustainable across Fiji's diverse educational landscape.

General information on education technology in Fiji

Fiji's geographical isolation and limited infrastructure present unique challenges for ICT integration in education. While ICT has significant potential to enhance educational outcomes, the costs and limited connectivity remain persistent barriers. However, mobile technology and social media have emerged as effective tools for improving communication between institutions, teachers, students and parents. Platforms like Moodle, Zoom, Google Chat, Seesaw and Teams are widely used for online learning and collaboration, even in areas with limited access to traditional infrastructure. The Fiji Education Management Information System (FEMIS) is another critical tool supporting educational data management, enabling the MoE to make informed decisions about policy development, resource allocation and monitoring progress. These technological innovations underscore the potential of ICT to improve Fiji's education system.

In conclusion, while Fiji has made significant progress in digital education, continued investment in infrastructure, teacher training and sustainable funding strategies are essential to ensure all students benefit from digital learning. By addressing these challenges, Fiji can create a more inclusive and adaptable education system that meets the evolving needs of its society. Aligning with the four priority themes of the Pacific Regional Education Framework—quality, learning pathways, student outcomes and the teaching profession—Fiji can build a resilient, sustainable education system for the future.

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PAPUA NEW GUINEA

Technology in education holds transformative potential for Papua New Guinea (PNG), offering valuable opportunities for personalised, engaging and accessible learning to bridge educational gaps and prepare students for a digital future. While PNG faces notable challenges in technology implementation, especially in rural areas, the right investments and initiatives could leverage technology to enhance educational quality and accessibility nationwide.

A significant contributor of technology to education is through mobile phone access, which is increasingly common even in remote areas. Mobile technology allows for personalised, self-paced learning, much like the Accelerated Christian Education (ACE) curriculum, which adapts to students' individual learning paces and styles. Mobile applications also enable gamified learning experiences where students earn rewards and badges and progress through levels, which enhances engagement and motivates students to participate actively. These tools also provide students with opportunities to gain confidence in using technology. Students build digital literacy and cultivate skills essential for future learning and work environments by accessing mobile-friendly tools and learning to navigate the internet safely. Through technology, students can connect with peers or educational resources worldwide, gaining new perspectives and global awareness. Features like magnification, closed captions and speech-to-text applications make digital content more accessible, offering individualised support for students with disabilities. Additionally, technology can support home-school connections by allowing teachers to share classroom updates with parents, encouraging more active family involvement. Teachers, too, benefit from mobile apps that simplify assessment, grading, attendance tracking and behaviour management.

While the benefits of educational technology are clear, PNG's infrastructure limitations, particularly in rural areas, pose challenges to widespread technology adoption. Schools in urban areas often have better access to resources, such as computers, tablets and internet services, whereas rural schools lack reliable electricity and internet, limiting technology integration. The PNG government has acknowledged these disparities in its National Education Plan (NEP) 2020–2029 and introduced initiatives like the ICT in Schools Program to address them. However, uneven implementation and limited resources have resulted in slow progress. Furthermore, the availability of educational technology resources, such as e-learning platforms and digital learning materials, is minimal, and many teachers are not adequately trained in technology integration. Consequently, many educators continue to rely on traditional methods.

Community and NGO involvement has played a positive role, with some organisations launching localised technology programs, including mobile learning initiatives, to improve educational access. However, these efforts remain limited in reach. Acceptance of technology varies among communities, with some recognising its benefits and others preferring traditional methods, highlighting the need for a gradual and sensitive approach to technology adoption in diverse regions. Economic constraints further limit community and family investment in educational technology because basic needs often precede digital resources. As noted, internet

connectivity remains a significant barrier, particularly in rural areas, where reliable and affordable access is lacking.

The PNG government has committed to integrating technology into education through programs promoting ICT use, primarily concentrated in urban schools. The NEP 2020–2029 includes goals for using technology to improve educational access and quality, but resource constraints lead to slow and uneven progress across provinces. Some urban schools have partnered with NGOs or private sector groups to pilot e-learning initiatives, testing the use of digital resources in classrooms. Training teachers in ICT remains a focus, though many educators lack sufficient support, particularly in rural areas. While the Coral Sea Cable system has improved overall internet connectivity in PNG, infrastructure issues still hinder reliable internet access in many rural schools. Furthermore, financial limitations mean that essential technology, such as computers or tablets, is scarce, especially in remote areas where traditional teaching resources are still prevalent. Nevertheless, the government has expressed a commitment to further integrate technology, with plans to expand ICT infrastructure for education, though exact timelines remain uncertain.

In summary, technology in education offers PNG the potential to create a more inclusive, engaging and future-ready educational environment. However, significant efforts are needed to overcome infrastructure, training, and economic challenges, ensuring that all students, regardless of their location, have equitable access to the benefits that educational technology can provide.

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MARSHALL ISLANDS

The *UNESCO General Education Monitoring Report Pacific Report 2024* highlights the critical educational challenges and advancements across 17 Pacific nations, including the Marshall Islands. The Marshall Islands, a remote yet increasingly connected nation, aligns its educational strategies with the Pacific Regional Education Framework (PacREF), focusing on four core pillars: Quality and Relevance, Learning Pathways, Student Outcomes and Well-being, and the Teaching Profession. This response examines the role of technology in advancing these pillars within the Marshall Islands, exploring its potential to enrich learning experiences, improve academic achievement and empower teachers to create dynamic and inclusive classrooms. The nation's commitment to educational progress is evident in efforts to incorporate digital tools, promote continuous learning and address infrastructure limitations, aiming to build a resilient education system for future generations.

Quality and relevance

Technology is vital for improving the quality of education in the Marshall Islands. By consolidating technological skills into the curriculum, students can develop knowledge that meets universal standards. These abilities encompass media literacy, digital content creation, and problem-solving, essential qualities for succeeding in today's world. Implementing

standards like those from the International Society for Technology in Education guarantees that education stays pertinent and equips students for upcoming challenges.

Learning pathways

Advanced technologies can create a flexible learning course. Digital devices and online programs can improve personalised learning experiences, empowering students to master the course at their own speed and based on their specific needs. For instance, Kiribati's online professional growth development programs suggest how innovation can offer continuous learning opportunities for students and teachers. Discussions with stakeholders ensure collaboration and commitment to make digital instruction accessible to each student regardless of location constraints. A recent development in the Marshall Islands Secondary Public Schools is the launch of pilot tutorial programs for students struggling academically (Math and English. These programs are part of the Education and Skills Strengthening Project (ESSP) financed by the World Bank. They use online resources, such as Khan Academy, and offline sources to offer lessons in Mathematics and English. The teachers receive training through workshops conducted by the STEM department of the College of the Marshall Islands. The project provided all public Secondary schools with laptops and connectivity options to enhance these tutorials. To overcome the problem of frequent power outages prevalent on the island, the ESSP supplied Starlink satellite dishes to guarantee reliable internet access for the schools. The ESSP has employed the expertise of the College of the Marshall Islands to manage the project.

Student outcomes and well-being

There is no doubt that technology can enhance student academic performance. However, it also has challenges relating to the students' well-being, including excessive screen time, which can lead to physical problems and increased possibility of online harassment. Equipping students with digital competencies, such as communication, collaboration and secure online habits, can improve their academic results and foster personal development. It is crucial, however, to establish regulations to manage the use of technology to prevent future mental and physical problems.

The teaching profession

Technology is reshaping the field of instruction within the Marshall Islands. Every educator should improve their digital literacy through professional development. Integration of technology into their instructional methods can be achieved by online training programs and adapted in class independently, depending on the availability of resources. The 2010 Comprehensive Technology Plan sets up standards for advanced competencies, ensuring teachers can utilise innovation to aid student education. However, the absence of advanced infrastructure and assets remains an issue. Handling these issues is vital to totally open the possibilities of technology in education.

Final thoughts

In summary, technology has the potential to significantly enhance the education system in the Marshall Islands by elevating quality and applicability, offering varied learning opportunities, improving student performance, promoting communication and teamwork, and revolutionising the teaching profession. Tackling issues concerning digital safety, data security, and infrastructure will be essential for optimising the advantages of technology in education.

Through the efficient use of digital resources and tools, the Marshall Islands has the potential to develop a fairer and more efficient education system that equips students for the future.

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SAMOA

Ia to'a le va'ai i suiga: Staying vigilant in transformations

In global education today, there is advancement with the integration of technology and the rapid changes in tools for teaching and learning. Teacher competency is paramount for the effective implementation and monitoring of technology use for all learners regardless of their abilities and social inclusion. Whether we think ICT supports or distracts learning, the learners' interests should always be at the centre and educators must be vigilant of transformational changes to ensure equity and inclusivity in education for all regardless of their abilities.

The government of Samoa has invested in supporting the education of teachers at all levels through financial sponsorship to upgrade their skills and improve teacher quality. Digital education requires ongoing training and professional development as technology evolves faster and by the time we learn about a certain tool, another program has replaced it. Within the Faculty of Education (FOE) at the National University of Samoa (NUS), all teacher trainees when entering must enrol in a computing paper This is designed to equip teachers with the knowledge on how to navigate the rapidly growing era of technology we are experiencing today. Teachers being the guardians of knowledge in the classrooms for our young people are to keep abreast with pedagogical knowledge to manage the effective use of technology in teaching and learning.

In over 20 years of being an educator at tertiary institutions, I have witnessed the steady improvement in teacher competency and achievements in their use of technology. Reflecting on my years of being a university student, I can recall submitting written hard copies of assignments into boxes where lecturers collect and mark them before returning to students. Today at NUS, we have established well equipped computer labs with internet connection for all students to access. Additionally, about 40% of students have their own devices like laptops, tablets and smartphones which assist them in their pursuit of knowledge and have extended their smart, innovative thinking skills in using technology.

During the Covid 19 pandemic, NUS was quite successful in its response as staff and students were able to use the NUS television for information sharing and teaching. Other platforms like the use of Moodle for lecture notes, course readings, class activities, assignment submission and marking as well as general communications between staff and students was quite effective.

Since then, a lot of our courses offered within our faculty for teacher trainees from Early Childhood Education (ECE), primary to secondary level have moved from face-to-face mode to becoming fully online using platforms like zoom, teams and Moodle. Our students are

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finding these very convenient and have also encouraged their use of technology to access online resources like peer reviewed journal articles and more. At the same time, NUS has also increased the number of courses available on Open Distance Learning (ODL). It has opened doors for teachers out in the village community and the outer island of Savaii to enrol and be taught using this alternative way of learning. The teachers studying part time do not have to travel into town after school for their classes but could join online, therefore less stress and helps teachers' mental health and wellbeing.

The university also established partnerships with telephones and internet companies in sponsoring and providing credits for our students and staff during pandemic. Although there are positive impacts of technology in transforming teaching and learning, we must stay vigilant of the challenges associated with changes. For instance, teaching online should adhere to professional standards, safe links for students and cultural consideration for teachers. The use of Artificial Intelligence (AI) and tools like ChatGPT, detecting plagiarism using the Turnitin software means teachers need to up their ICT game all the time. National ICT in Education Policies must also be updated to guide and facilitate the integration of ICT tools relevant to an enabling education environment whilst protecting all parties from cyberbullying, cybersecurity from hackers or any other form of abuse. Technology can also be unreliable at times with electricity costs associated with use of technology, and these are some of the challenges faced by teachers. Control on how to handle technology use in relation to students' mental health and wellbeing is also pertinent.

For a small island developing state like Samoa, we are quite remote from the outside world hence the need for a well-developed infrastructure in place to support the use of technology in education. Our national and education leaders need to be mindful in the drive for change ensuring there are legal frameworks in place and to develop a Masterplan for the use of ICT in Education, at the same time recognising the significant of ICT as an enabler and transformer of socioeconomic development. For example, in Samoa one digital provider company has recently launched its 5G network with the hope to enhance connectivity. This also requires proper monitoring of filtered internet use. The support of organisations like UNESCO, UNICEF and UNFPA could assist in this as one of the priorities for educational development in the Pacific including Samoa.

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SAMOA

Quality and relevance

Quality and relevance are reflected through adopting digital technology that offers accessible and flexible approaches to teaching and learning in Samoa. For instance, the National University of Samoa offers blended and distance learning that facilitate student interaction and knowledge acquisition in TVET and higher education programmes. The significance of Indigenous and culturally responsive strategies, such as storytelling, *talanoa* and participation in cultural activities, promote cultural awareness and preservation. Many school textbooks have been digitised and made publicly available, with relevant content contextualised and available in a familiar and understandable language. Such a strategy enhances the parents' role as second teachers in facilitating remote learning and student engagement.

Learning pathways

The report states that the Samoa Ministry of Education, Sports and Culture has operated an education radio broadcasting unit as part of its ICT and Media Services since the 1940s. The continuous development and extension of open and distance learning provide opportunities for flexible learning pathways within Samoa, especially in higher education. Similar to the University of the South Pacific (USP), the National University of Samoa (NUS) is starting to offer online delivery of courses in various faculties. This initiative provides everyone access to quality education and training opportunities (Ministry of Finance Economic Policy and Planning Division, 2016).

Student outcomes and well-being

Integrating content creation skills programmes in the Samoa schools' curriculum aims to engage students to develop skills essential for lifelong learning. The significance of enhancing student outcomes and well-being encourages the inclusion of digital skills into curricula and initiatives outside of formal education. Peer-to-peer learning and collaboration (Ministry of Education, Sports and Culture, 2018a) is promoted as well as awareness of the safety and well-being of individual members within the society. However, the government of Samoa recognises that current regulations do not adequately address threats from the use of technology to privacy, safety and well-being.

Teaching profession

The report identifies that one of the five priorities of the Samoa Education Sector Plan 2019-24 is to increase the use of ICT in teaching strategy to make education and training more inclusive and accessible (Ministry of Education, Sports and Culture, 2018b). Although ICT training varies significantly across the region and the limited digital infrastructure hinders technology integration into classrooms and teacher training, SES is committed to improving ICT connectivity and network infrastructure; managing funds to assist schools and education

providers in meeting MSS and PSET QA standards; and ensuring education and training facilities comply with occupational health and safety laws.

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SOLOMON ISLANDS

In the Solomon Islands, the education system can be improved by thoughtfully integrating technology by aligning with the four key policy areas of the Pacific Regional Education Framework (PacREF): Quality and Relevance, Learning Pathways, Student Outcomes and Well-being, and the Teaching Profession.

Technology has the potential to improve the quality of education by making learning more engaging and accessible. For instance, iResource is the Solomon Islands Ministry of Education and Human Resource Development (MEHRD) platform that supports teachers accessing curriculum resources and using technology to enhance classroom teaching. Platforms such as this can be used to ensure teachers have access to resources relevant to their context. Technology such as generative AI has the potential to make it easier to contextualise quality global open-source content to ensure examples and case studies build on local and Indigenous knowledge and transform curricula into interactive teaching resources, such as lesson plans, activities, slides and assessments.

Studies have found that student learning can be enhanced when teachers use structured pedagogy, which can be easily shared through platforms like iResource. However, more digital devices and affordable internet are needed to ensure all teachers, particularly those in remote areas, can access online learning platforms. Innovative approaches, such as mobile-first learning and satellite internet, are game changers for the Solomon Islands, where the dispersed island geography drives up the costs for traditional internet infrastructure and bulky digital hardware. Core to quality content for teachers and students is the availability of instructional designer staff who can develop interactive and engaging learning content and ICT staff who

can update and manage learning websites. These skills need to be developed and nurtured to provide sustainable support and extend the possible impacts of technology-enabled learning from within MEHRD. MEHRD staff can gain these skills through online training while also learning how to use generative AI and other tools to make their processes for developing learning content more efficient and impactful. Down the track, MEHRD can train teachers to use the curriculum and technology to generate their own customised classroom resources.

Beyond enhancing quality and relevance through access to structured pedagogy, technology can also help teachers connect with mentors and each other. When teachers connect, it improves knowledge sharing, prevents professional isolation, and improves teacher wellbeing. There is also huge potential for teachers to use technology to access professional learning, including short courses on content knowledge, pedagogy, behaviour management and beyond.

The iResource platform was mostly used during the COVID-19 pandemic to provide students with direct resources and enhance family and community engagement in learning. As with teachers, equity challenges persist; not all students and families have access to affordable internet and devices for learning. Technology has the potential to make it easier for students to access quality online learning, but an equity lens must be used to make sure no one is left behind. At the same time, assistive technologies can ensure more students with disabilities have the tools to participate in learning. Online learning resources could also be tailored to develop non-formal pathways for 'second-chance' learners to re-engage with education and training. The economic, societal and democratic imperative for more citizens to have foundational skills is evident. Online and blended pathways pose significant and novel opportunities for reaching the most marginalised Solomon Islanders if lessons from the past around sustainability and engagement are considered.

Finally, an analysis of the current policies and frameworks for learning in the Solomon Islands shows a gap and a need for a more comprehensive approach to developing online safety measures and defining and measuring digital skills within the national curriculum and teaching standards.

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SOLOMON ISLANDS

"As we bring technology into our schools, we must ask: *On whose terms is this transformation happening?* Is it truly for our children, teachers, and future?"

Integrating technology in education is not straightforward in the Solomon Islands, where more than 84% of the population lives in rural villages and communities spread across remote islands. When the One Laptop per Child (OLPC) trial began over a decade ago, it aimed to provide affordable laptops for students to promote independent, quality learning (ACER, 2010). With no electricity access, charging devices became an obstacle and equipment failures were

common. Internet connectivity was also an issue. Despite the challenges, the children's use of the devices was enhanced. However, without continuous support, the program eventually folded, highlighting the major flaw that globally designed solutions introduced without considering local realities often fail.

During the COVID-19 pandemic, the Solomon Islands National University transitioned its Teacher in Training (TiT) program to an online and offline learning format. Tablets were issued to students, providing a lifeline for education, yet rural students still struggled. Many had to travel long distances to charge devices or find internet access. The tablets had limited storage capacity and were prone to technical problems. As a result, the TiT program almost failed because assignments could not be submitted, Zoom sessions were interrupted, and there were communication and storage space issues. Students highlighted the preference for face-to-face learning and using printed materials during the end-of-semester unit evaluation exercise conducted with full-time students. Lecturers indicated an experience of reduced workload with the blended mode of learning.

While technology promises to close educational gaps, it often overlooks the unique challenges faced in the Pacific. In the Solomon Islands, many schools lack computer labs, and those with labs cannot maintain them. Teachers need training to use digital tools to support their students. For families struggling to make ends meet, buying additional devices isn't feasible, deepening the divide for students from disadvantaged backgrounds.

The cultural implication of a digital future also raises concerns. The Elders worry about its impact on cultural values, language and traditions. For example, some church-run schools allow computer labs but prohibit mobile phones because of concerns about outside influences and disturbance to study. There are fears that digital learning could erode traditional knowledge and language.

With technology unlocking new possibilities, we must ensure it aligns with our children's and teacher's needs. To create a future where digital tools truly serve Solomon Islanders, we must prioritise the development of infrastructure and support, train our teachers and maintain a dialogue between communities, schools and cultural groups.

We must continue asking: Can we shape a digital education future that honours our unique context and strengthens our communities without compromising who we are? The technological transformation must be on our terms.

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SOLOMON ISLANDS

The University of the South Pacific Solomon Islands Campus was established in 1971 as the USP Solomon Islands Centre. The establishment intended to service and support local extension (distance) courses; provide satellite communication through USP-Net; provide Community and Continuing Education courses suited to local needs; and act as the University's Main Presence in Solomon Islands (SI Campus Academic Plan, 2015). These continued to be the main activities of the Centre when it changed its name to a Campus. The intention remained, but the pedagogical approaches have changed. Previously, courses and textbooks were sent to those from remote areas in the Pacific region. The pedagogy used now is online learning, and resources are developed for curriculum delivery that fits the current context of the Solomon Islands and the region.

Quality and relevance

The USP has taken the lead on online deliveries for Pacific Island countries, which has influenced Pacific Island nations and, in particular, the Solomon Islands Government and its people to utilise USP to help provide a strong comparative advantage in specialist and important areas of expertise, such as ICT; an area much in need of development in the Solomon Islands. It was believed that ICT may provide the resources to contribute to knowledge-based industries and the development and success of small and medium enterprises (SMEs) in the Solomon Islands. Consistent with this, the Government has stated that USP can assist the Solomon Islands by providing policy advice and research to support future efforts to develop new resource-based industries. With this understanding, the Solomon Islands as a country recognised the use of ICT in its education system and, in particular, to support school leaders in their use of ICT devices to support school curriculum delivery (Irosaki, 2024 unpublished). This support is common throughout the Pacific Island countries regarding teaching for effective learning using ICT devices.

The National Education Action Plan 2022–2026 has highlighted the need to use ICT for effective learning. The Action plan encourages the provision of quality curriculum and teaching materials through digital technology to fit the needs of populations during events like the COVID-19 pandemic. Studies supported the opportunities for new strategies to ensure ICT teachers are provided with quality educational materials, including accessible online resources that meet the needs of learners (Irosaki, 2024, unpublished).

Pathway forward for the Solomon Islands

A study conducted among Solomon Islands USP students has highlighted strong support for using online learning as a pedagogical approach for effective learning and teaching. The experience of COVID-19 changed people's perspective on online learning and teaching. Online learning positively impacts students, their parents, families and communities (Dorovolomo et al., 2021). The shift to the online mode meant that assessments could continue to be conducted, classes ran, and students, who were restricted from movements by the pandemic, could continue their studies. This ensured the sustainability of students' academic work and support.

The study also found that ICT and online learning and teaching provided by USP enabled more accessible communication with students all over the region, not just in Fiji. The Solomon Islands Campus benefited from the pedagogical change despite initial adjustments to courses to bring them fully online. Solomon Islands students participating in the Dorovolomo et al. study agreed that the shift was necessary and timely.

The study also supported the intention to continue offering online learning at USP in the post-pandemic period. One significant supporting factor was the increased retention of students. It was evident from participants that university communication was crucial in students' perseverance with their studies during the pandemic. USP should, therefore, continue to systematically promote technology-based learning so that it reaches even the remote areas of the Solomon Islands, where the majority of the population is located.

While there were drawbacks from the absence of face-to-face opportunities with lecturers and hands-on activities for practical activities and lack of satisfaction and motivation compared to the traditional face-to-face mode of educational delivery, students find it easier to persevere and complete their studies online. Online learning may not be perfect because staff might not reply to emails, and their Moodle set-up and contents might be confusing and ambiguous. Additionally, internet access is costly, particularly for students at the Solomon Islands Campus. However, students get to learn to work independently online and learn new technologies as part of being on Zoom regularly or sitting an online exam (Dorovolomo et al., 2021)

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A COMPREHENSIVE RESPONSE TO THE REPORT

This comprehensive UNESCO report on the Pacific shows numerous encouraging initiatives in the use of technology in education while implying challenges, which may serve as valuable insights for other countries.

The digitalisation of resources in the Pacific has grown, highlighting the importance of content accessibility and the application of technology. Nevertheless, challenges persist in internet connectivity, the availability of devices, costs and skilled manpower. The discontinuation of the School Net initiative in Samoa, which developed 33,000 learning resources for its e-library, is an example of the challenge (UNESCO, 2024). Similarly, it parallels the One Laptop per Child initiative, where Tuvalu is the sole example of success in eight Pacific nations where it was implemented (UNESCO, 2024).

While initiatives focus on local languages in the region, the Solomon Islands, Tokelau, and Fiji have also prioritised cultural relevance (UNESCO, 2024). However, cultural relevance in education remains ambiguous in the Pacific context. Personal critical consciousness is integral to culturally relevant education, fostering critical reflection and cultural aptitude through teachers' attitudes and the curriculum (Gay, 2010; Ladson-Billings, 1995a as cited in Aronson & Laughter, 2016). Thus, defining cultural relevance within each context may be advantageous.

Collaborative efforts and contextual approaches appear to be effective strategies for enhancing open and distance learning for all learners. The Archipels Connect initiative enables students to access distance learning without needing to relocate, which is a commendable example (UNESCO, 2024). Samoa is another notable case that effectively employed radio and television to support learners during a crisis (UNESCO, 2024). These examples reaffirm the need for well-designed technology or approaches encouraging disadvantaged learners to access education.

Most countries have policies that pertain to learners with disabilities. 11 out of 15 Pacific Island nations have policies identifying technology to support them (UNESCO, 2024). Evidence indicates that assistive technologies (AT) facilitate daily activities and enhance the overall well-being of learners with disability (Kamran & Bano, 2024). However, when AT is inadequate, countries pursue alternative options. For instance, Papua New Guinea employed sign language, subtitles for video content and adaptations of materials to effectively reach their learners (UNESCO, 2024). These initiatives highlight the imperative requirement for inclusive and adaptable technologies for all learners.

Variations in definitions of digital skill, applicability, integration into pedagogy and policies concerning digital privacy are evident. Integrating digital privacy and cybersecurity into the curriculum in Australia, Samoa and Kiribati is noteworthy (UNESCO, 2024). Similarly, inconsistencies are apparent in privacy policy. For instance, the Marshall Islands' children's privacy rights do not address technology use in education. Papua New Guinea indirectly

* Note: The views and opinions expressed are solely those of the author and do not reflect the official position of the World Bank.

promotes data privacy by illegalising unauthorised data access (UNESCO, 2024). Thus, a shared regional understanding of digital privacy and clear regulations is necessary.

Teacher training in the Pacific has undergone a significant transformation. Nonetheless, challenges persist. A survey across 15 Pacific Island countries revealed that 77% of teachers report a lack of basic devices for their use (UNESCO, 2024). However, there have been initiatives in New Zealand and Australia where teachers can lease laptops or tablets and borrow kits that include lesson plans at no cost through a national lending library (UNESCO, 2024). As stated in the report, teachers in many Pacific countries indicate not having received ICT training, thereby exhibiting a lack of confidence. Critical, overlooked areas are online safety and teachers' capacity building

In conclusion, to enhance technology integration in education, it is imperative to establish contextualised technology, adequate resources and a robust infrastructure to improve access. Additionally, it is critical to develop both long- and short-term implementation plans to ensure sustainability.

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