# BRINGING AUSTRALASIAN TECHNOLOGY AND PRACTICE TRENDS INTO FOCUS

## THE 2022-2023 CONTEXTUALISING HORIZON REPORT

ASCILITE

SHAPING THE FUTURE OF TERTIARY EDUCATION

Contextualising

HORIZON

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# Introduction

Imagine your experience as a single pixel on a computer screen. Situated around you are a number of other pixels, each encapsulating the lived experience of another person and their understanding of a moment in time. Looking at each pixel individually provides us only a glimpse of that single pixel, but if we zoom out and focus just right, the pixels observed together comprise a complete picture.

Our colleague and collaborator, Danielle Logan-Fleming, invoked this imagery as we kicked off the 2022–2023 Contextualising Horizon process. The merger of independent pixels into a coherent image summarises the spirit and the aim of scanning the horizon. Each of us has a sense of what is really going on here – the swings and sways of the social, technological, economic, environmental and political (STEEP) influences on the Australasian region and the push and pull on the higher education sector. Each community member and affiliate of the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE) brings individual perspectives and contributions to Contextualising Horizon, and through that process we formulate and clarify a picture of what is on the horizon. Thus, we bring you this second edition of Contextualising Horizon.

Our 2022–2023 edition of Contextualising Horizon highlights what is next for Australasian higher education and the educational technologies and practices likely to be of importance in the near term. With the pandemic behind us, institutions continue to face significant risks and operate in constrained environments. Recession looms, cost of living continues to increase and mental health and well-being continue to be concerns. Meanwhile, political tensions and conflicts abroad raise concerns about the tensions and potential impacts conflict would have within our region. But, opportunities exist for institutions to capitalise on both new ways for working and the momentum of the widespread adoption of remote, hybrid and mobile learning. The impacts of still other influences may be too early to tell, but the potential is significant, as in the case of artificial intelligence (AI).

Given the influences identified in this year's report, panellists identified the five key educational technologies and practices likely to be of importance in our region:

1.  Hybrid and flexible learning

2.  Artificial intelligence literacy

3.  Mental health and well-being

4.  Evolution of mobile learning

5.  Integration of Indigenous knowledges

As with any image generated on screen, this image is a moment in time and fleeting. However, that is the challenge of scanning the horizon. This is the moment we have captured.

# About ASCILITE

The Australasian Society for Computers in Learning in Tertiary Education (ASCILITE is the pre-eminent organisation for technology-enhanced learning research and practice in the Australasian region. With more than 2000 members, ASCILITE contributes to the international progression of educational technologies and practices to enhance learning and teaching. ASCILITE is pleased to sponsor Contextualising Horizon and to support the aims of benchmarking and identifying those technologies and practices of strategic importance today and into the future. To find out more about ASCILITE, visit ascilite.org.

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# STEEP trends

As ASCILITE community members and affiliates came together for the Contextualising Horizon workshops at the end of 2022 and in the early months of 2023, there was both a sense of hope and uncertainty. For the first time since 2019, a full complement of in-person delegates reconnected at the annual conference, which also included remote attendees, an enhancement borne out of pandemic-era innovation. And with the pandemic over, there was a sense of new possibilities for learning and teaching. The great experiment of emergency remote learning enabled institutions to embrace the possibilities of hybrid and remote learning and new ways of working. The pandemic also brought forth the challenges of supporting both student and staff well-being and impacts on work and study.

At the same time, vestiges of the pandemic continued to impact economies and, in turn, higher education funding and institutions. The reshaping of the higher education workforce continued. Volatility and uncertainty within the sector and individual institutions continued to stoke mental health and well-being concerns amongst both staff and students. Continued focus on sustainability continues to pose challenges to institutions. Russia's invasion of Ukraine and war in Europe stoked fears in the region as the relationship between China and Australia grew increasingly tense. Meanwhile, in Australia, the announcement of a referendum to create an Indigenous voice in parliament promised a major win for diversity and inclusion and the reversal of years of post-colonial injustice.

We see this and more reflected in this year's STEEP trends.

# Social

Recent global disruptions have driven broad societal transformations. In higher education, these transformations have expanded the bounds of community for staff, students and stakeholders, with institutions overwhelmingly focusing on engagement, wherever learning is situated. Higher education providers continue to improve digital provisions to enable greater participation, flexibility, collaboration and new ways of working that ensure greater access. Quality education now means more inclusive, accessible and equitable teaching and learning processes.

## Changing learner engagement

The COVID-19 pandemic heavily impacted the higher education sector, creating a demand for new modes of teaching and learning to cater for the changing patterns of student engagement. In the post-pandemic era, higher education providers proactively and strategically adjust their operations to accommodate student needs by creating immersive learning experiences with more choices. The need to balance life, learner feedback, technology improvements, changing pedagogies, access and inclusivity are primary socioeconomic factors influencing the change in delivery modes. Although there was a significant disruption to in-person delivery across Australasian institutions many higher education providers now offer diverse delivery modes, including in-person, hybrid, digital synchronous or asynchronous and fluid options enabling increased flexibility and retention (Selvaratnam, 2022) as well as collaboration and productivity (Johinke et al., 2023).

With stretched budgets, institutions minimise physical spaces and human resources by utilising cutting-edge technologies to offer improved student experiences. Emerging AI applications can improve learner engagement by providing a personalised, accessible and inclusive experience from the enrolment process to graduation (Cao & Dede, 2023). Higher education providers actively invest in and implement AI assistants (chatbots), intelligent tutoring systems and learning analytics to recognise those who may be at risk of failure or dropping out (Crompton & Burke, 2023). To amplify learner engagement, institutions have extended lab activities and internships to incorporate immersion in virtual reality (VR) and augmented reality (AR), strengthening simulations. However, despite institutional efforts to connect peers and promote group work, there are still major concerns over students' emotions and wellness as well as the relationship between their personal lives and educational journeys. Given the traditional campus experience can be replaced, in part, by access to simulated labs and virtual learning environments, the value of coming to a physical campus is in question.

The patterns of engagement are also changing. Micro-credentials have gained popularity in the competitive knowledge-based economy, enhancing opportunities for upskilling and reskilling the labour force (Alsobhi et al., 2023). The UNESCO Microcredential Blueprint paper introduced international policy and continuous transformation with microcredentials (Van der Hijden & Martin, 2023), alerting higher education providers to be prepared to face the new norm. In 2023, Australia achieved a key milestone in ratifying the *Global Convention on the Recognition of Qualifications concerning Higher Education* and piloted short courses in universities. East Asian higher education providers with emerging blockchain technologies established systems for microcredentials management (Wang, 2022) and the infrastructure to provide world-class, research-intensive teaching and learning processes (Razia, 2022).

## New ways of working

The pandemic generated global workplace disruption and accelerated new ways of working. New ways of working are organisational practices and work conditions that follow ideals of flexibility, collaboration, empowerment, freedom and democracy (Aroles et al., 2021). The global transition to a digital workplace and a re-imagination of work-life priorities is challenging the traditional logics of organising. This impact of digital transformation also extends to academe and tertiary education teaching and learning (Alenezi, 2023).

The proliferation of technological platforms and associated software has enabled the digitalisation and flexibilisation of work and study. The future of work and education is increasingly virtual, hybrid and boundaryless (Poethke et al., 2023), where technology enables higher connectivity and collaborative productivity (Dahik et al., 2020). New ways of working exemplify the demands of a new digital epoch because real-time (synchronous) cooperation and interaction can occur irrespective of place, or time (asynchronous) (Gratton, 2020). Remote working, including remote teaching and learning, achieves cost and productivity efficiencies while also reducing stress and costs (time and financial cost) of commuting (George et al., 2022; Gratton, 2020). Across Australasia, where traffic congestion leads to long commutes (e.g., in Thailand and Japan), there may be higher levels of remote working, whereas countries with expensive urban real estate (e.g., Australia and Singapore) may have higher levels of co-working spaces and hybrid models of working (TechRepublic, 2020). Yet, while new ways of working can help worker, teacher and learner engagement, blurring of the work-home boundary creates physical and mental health

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fatigue (Kotera & Vione, 2020). At the same time, the social interaction facilitated by the physical office and campus space (Gratton, 2020) contrasts the potential loneliness of the virtual and hybrid world (Knight et al., 2022). In this way, when working and learning from home, the home space or the place for living (first place) becomes the place for work and study (second place), whereas the physical workplace becomes the third place or place for social relationships (Hopkins & Bardoel, 2023). Notably, remote working and learning has benefitted people with disabilities through greater (virtual) accessibility. Given this advance, renegotiation of the traditional emphasis on being present and visible in the office and classroom will be required. Affirming the centrality of student agency and diversity, the "students as partners" approach to the virtual context empowers students (Breaden et al., 2023).

## Digital equity and inclusivity

Digital equity is crucial to achieve safe, inclusive environments in higher education (Sustainable Development Goal 4.a, UNESCO, 2016). The expectations for accessibility have expanded. In addition to serving students with a visible disability, institutions need to address emotional and mental characteristics, such as anxiety and neurodiversity, within the student and staff communities. The best support for each neurodiverse person may vary significantly; therefore, meaningful consultation between accessibility services, teaching staff and students is required.

Universal design for learning (UDL) is one common institutional approach. Developed in the United States of America in the late 1990s by the nonprofit organisation CAST (Rao et al., 2023), UDL has steadily extended its influence into different education systems at all levels of education. Digital technologies have greatly aided its implementation (Evmenova, 2018). There have been calls to improve the rigour of its evidence base (King-Sears et al., 2023; Matthews et al., 2023); however, when implemented by staff trained in UDL, student access and achievement have demonstrated improvement in many Australasian countries, including Malaysia (Yusof et al., 2019), Indonesia and the Philippines.

One aspect of digital equity actively addressed through social intervention is the digital gender divide. Lower-income countries, such as some Pacific nations, report that women and girls have less access to the Internet and lower mobile phone ownership, but other Australasian countries are closer to achieving gender parity.

A measure of digital equity proposed by the Alliance for Affordable Internet (2022) is "meaningful connectivity", which they define as "four key pillars of access: 4G-like speeds, smartphone ownership, an unlimited access point at home, work, or place of study, and daily use". In Indonesia, for example, they estimate that 34.7 million people (so, less than 13% of the population) have meaningful connectivity, but an additional 35% of the population have basic access, and Indonesia ranks 47th on the Economist Intelligence Unit's (2022) inclusive Internet index.

# Technological

As the technological landscape continues to evolve at a rapid pace, higher education finds itself at an inflection point. Impacted by the unprecedented rise of generative AI (GenAI), higher education has already begun to reshape its paradigms in relation to pedagogy, governance and ethical considerations. In response to this, there is an increasing need to build staff capability not only in the latest technologies but also in digital pedagogies to facilitate a deep understanding of the intersection between technology and pedagogy.

## GenAI

Imagine an AI that does not just compute but actively creates. Welcome to GenAI, which uses advanced algorithms to learn patterns and generate different types of content, such as text, images, audio, video and code (Chan & Hu, 2023).

Although it appears to have burst onto the scene in 2022, GenAI has seen some considerable advancements over the past 2 decades with breakthroughs in how we can access and use large language models (Gartner, 2023). In November 2022, OpenAI made ChatGPT available to the general public; within 2 months, it had 100 million active users and grew to 173 million users by April 2023. We are now in the midst of a pivotal moment in this AI evolution and the ways in which it will potentially transform higher education.

*Universities will need to support staff in the adoption of new technologies such as GenAI by developing policy and support systems that satisfy the diverse needs of staff, students and the community.*

This transformation is multifaceted, and, as such, a collaborative approach is required to address the implications in higher education. Chan and Hu (2023) propose a framework that is organised into three dimensions: pedagogical to use AI to improve teaching and learning, governance to reflect privacy and security issues and operational to address infrastructure and training. Each of these dimensions is an area of concern that will transform the ways we work, teach, and learn in higher education.

In many institutions, the initial discourse was a pedagogical one; it was around academic integrity and the ability for students to easily recreate assessment tasks using generative AI. This is starting to shift to how to redesign assessment and facilitate more meaningful ways of assessing students which may include microcredentialling and/or human-AI collaboration skills that better reflect the current workplace (Bearman et al., 2023; Liu & Bridgeman, 2023). Beyond this, GenAI challenges the existing higher education system with the potential to leverage its capabilities to create more personalised and adaptive learning experiences. As the potential of GenAI continues to evolve, cross-institutional collaboration will be a pivotal strategy to ensure its implementation in higher education is accessible and equitable across diverse institutions. To do this successfully, building student and staff capability needs to be at the forefront.

## Building staff capability

Change has always been a constant in higher education. However, the current acceleration of change is astonishing. From the 2020 pandemic-driven pivot to online learning to the transformative nature of Generative AI, the sector is seeing profound change. This profound change demands a digitally fluent faculty with diverse skill sets. Professional development across the elements of the technological pedagogical content knowledge (TPCK) framework (Mishra & Koehler, 2006), particularly the intersection of technology and pedagogy is required to equip staff to meet the current and emerging challenges of Gen AI literacy, digital assessment and blended synchronous delivery (Bower et al., 2014). For example, to leverage GenAI, new literacies are required for both staff and students. This includes developing ethical

scaffolding, understanding the affordances of various GenAI tools and effectively using tools, such as via prompt engineering and the critical evaluation of outputs (Hillier, 2023).

Universities will need to support staff in the adoption of new technologies such as GenAI by developing policy and support systems that satisfy the diverse needs of staff, students and the community. As part of such a shift, academic staff will need to rethink how assessment will be designed. Gen AI has raised academic integrity concerns that challenge current assessment practices for both how and what needs to be assessed in order to assure learning outcomes are achieved. This may lead to the growth of programmatic assessment and other forms of interactive and active assessment. Hence, in an increasingly digital disruptive environment, faculty need support to review, revise and adapt assessment practice to be authentic, valid and scalable in light of the changes brought by GenAI and the rise of hybrid learning modes.

Just like the contemporary workforce, students want the flexibility to study from home or other off-campus locations in order to fit earning and caring responsibilities into their busy study life. The rise of HyFlex classrooms requires faculty to build their teacher presence across different modalities and cohorts. Faculty are increasingly required to simultaneously teach face-to-face, online and asynchronous student cohorts, engaging and situating the student with the learning while seamlessly managing back channels, online breakout groups, camera angles and face-to-face groups. This type of teaching is a juggling act that requires the development of new skills in technology and pedagogy. Institutional support for faculty is required through professional development, communities of practice, roundtable discussions and sharing of practice to build knowledge and skills. In addition, further investment is required to upgrade venue technologies to support staff to deliver on hybrid delivery and to support new forms of digital assessment both on campus and online.

## Augmented and Virtual Reality

In stark contrast to the big bang of generative AI, augmented reality (AR), virtual reality (VR) and extended reality (XR) have seen a slower yet steady rate of adoption over a longer-time horizon. In 2003, Second Life, a three-dimensional (3D) virtual world was thrust into the spotlight with significant interest from higher education; fast forward 20 years and we still have AR, VR and XR on the horizon.

The promise of VR has not been realised even with the significant investment of the Metaverse by Meta (formerly Facebook). In fact, the failure of the Metaverse venture appears to acknowledge there lacks a broader public appetite for immersive VR experiences. However, in higher education rather than a whole institution adoption, there have been niche applications of this technology, including virtual field trips, medical training, collaborative learning and special education (Baba, 2023). A recent study by Edgar et al. (2023) highlighted the transformative potential of such technologies in clinical placements that can elevate the interest and motivation for students to improve their clinical skills. The benefits include engagement, positive emotions and improved learning outcomes. With an increased need for authentic assessment in higher education, this technology offers an opportunity to reimagine the ways in which assessment can be done differently and this may yet see more wide scale adoption.

Conversely, the challenges remain that include the experience of different cognitive loads and where too much stimulation can become a distraction (Parong & Mayer, 2020). Unlike AI which is readily accessible via existing technologies, Metaverse technologies require investment in specialised hardware for each user and the customisation efforts required to meet educational needs face barriers such as the need for specialised skills and high development costs. Although the upfront costs can be high, amortising the cost over multiple uses over a longer period of time can in some instances be an economical alternative (Farra et al., 2019).

In the higher education landscape, AR and VR technologies can offer skill-building experiences that may otherwise not be achievable. Although there are concerns around the implementation costs, and return on investment, pedagogically AR and VR can offer an authentic experience for students to learn and apply their knowledge.

# Economic

Higher education institutions have experienced the effects of ongoing economic trends, including the rising cost of living, higher education workforce reshaping and increasing use of skills-based hiring practices. The first two trends build on issues identified in the 2021–2022 *Contextualising Horizon* report, whilst the third is a newly recognised trend.

## Cost of living

The increasing cost of living, across Australasia, is having an ongoing impact upon higher education, especially in urban areas (Heffernan & Abbott, 2023). This affects both students and staff, who must cope with rising expenses for housing, transport, food, health care and other necessities. According to the Australian Bureau of Statistics (ABS), the consumer price index rose by 6.0% in the 12 months preceding June 2023. In particular, the rental market demonstrated increased competition for properties and low vacancy rates, resulting one of the strongest quarterly increases since 1988 (Australian Bureau of Statistics, 2023).

This increasing cost of living has several implications for higher education. First, it will deter some potential students, especially those from low-income or disadvantaged backgrounds, from enrolling or continuing their studies (Carey, 2023; Cassidy, 2023; Precel, 2023). This will affect the equity and diversity of the student population as well as the quality and quantity of human capital in the region (Ross, 2023). Second, it will reduce the affordability and accessibility of higher education, unless governments intervene to change funding arrangements (see the Australian Government's Jobs-ready Graduates Package for some proposed changes). Third, it may affect the recruitment and retention of staff, who may seek better remuneration or working conditions elsewhere (Duffy, 2023). This will affect the quality and innovation of teaching and research in higher education institutions.

The rising cost of living also affects other factors that will impact upon the student experience. This includes housing (ET Online, 2023), which is proving difficult to find for many students in eastern Australia,

> *Students who cannot access the Internet or purchase electronic devices to complete their studies will struggle to achieve.*

and power and technology costs (Ludlow & Macdonald-Smith, 2023). Students who cannot access the Internet or purchase electronic devices to complete their studies will struggle to achieve. In New Zealand (Keystone New Zealand Property Education Trust, 2022), transport costs are a major concern for students, meaning they choose when to attend on-campus classes and struggle with costs of attending practicums. A Contextualising Horizon participant from Fiji noted the cost and availability of data and connectivity is a major issue for students, whilst a Singaporean participant noted that students struggle with the high cost of electricity in their region.

Although Australia and New Zealand are currently ranked in the top 5 destinations for international students, student recruitment consultancy IDP found in its survey that 51% of international students noted reconsidering their decision to study overseas, citing cost of living. This trend could impact overall international student numbers in the coming years, especially for universities in eastern urban Australia, as students look for more affordability and availability in housing and ways to reduce living costs. Students also want to be able to work whilst studying, so those universities able to facilitate student employment will become more popular. Countries who have more lenient regulations around the number of hours international students can work may also benefit (ICEF Monitor, 2023).

## Higher education workforce reshaping

Higher education continues to experience workforce reshaping and institutional restructuring, partly due to the pandemic. As institutions attempt to return to normal, the sector recognises that the workforce must look different than it did before the pandemic (Ribiero, 2020).

Higher education's drastic loss of numbers in the professoriate is a direct result of retirement and redundancies brought on by the pandemic, when numerous senior academics left the workforce with no plans to return. Australia's Department of Education, Skills and Employment's higher education staff data showed a 6.9 % decline in permanent and fixed-term staff between March 2020 and March 2021 (Norton, 2022). This has led to a significant capability gap amongst senior researchers. Similarly, casual staff employment saw a 17.5% decrease between 2019 and 2020 according to Australian Bureau of Statistics data. Many casuals did not receive contracts during the pandemic and have now left the higher education sector in pursuit of more permanent opportunities (Norton, 2022). Casual staff have also indicated that they do not wish to return to teaching solely in an online capacity, thus they are not seeking employment where that is the preferred mode of delivery (Cassidy, 2023). In both professional and academic circles, there was a loss of senior leaders in many institutions. Although new leaders have been appointed, these new leaders are less experienced and are still developing their capacities. Similarly, new appointments are often at the lower levels, which adds to the loss of corporate knowledge and experienced workers. Job losses are also driving increases in student-to-staff ratios. This, in turn, impacts on the quality of education and learning outcomes, particularly for those students from disadvantaged backgrounds (Littlejohn & Stanford, 2021).

## Skills-based hiring

Skills-based hiring refers to the practice of assessing candidates based on their demonstrated skills or competencies rather than their formal qualifications or credentials. This trend is driven by the rapid technological changes, the increasing diversity of educational pathways and the growing recognition of informal or experiential learning. According to a survey by LinkedIn, 69% of talent professionals in Australia and New Zealand reported that their hiring process has become more skills-based in the past 5 years.

Skills-based hiring processes have several implications for higher education. First, these processes may challenge the value or relevance of traditional degrees or credentials, as employers may prefer candidates who can show evidence of their skills or abilities rather than their academic achievements. Some universities could begin to emphasize how they can provide to employers these skills by way of graduate outcomes. It may encourage alternative or innovative forms of learning or assessment, such as online courses, microcredentials (Desmarchelier, 2021), portfolios or badges. Alternative credentials may provide more flexible or accessible ways for learners to acquire or demonstrate skills and competencies. Two good examples of this are the increasing demands for portfolios (Jackson & Bridgstock, 2021) and work-integrated learning practices (Ha, 2022). Likewise, alternative credentials may require higher education institutions to adopt skills-oriented or competency-based approaches to teaching and learning, which may involve defining or mapping the learning outcomes or standards for each programme or course, using more authentic or performance-based assessments, or providing more feedback or recognition for learners. More broadly speaking, this demand may also impact the demand for higher education programmes in general, as well as the return on investment or outcomes for graduates as it is now possible to evidence competencies in other ways (Fain, 2020).

The demand for graduates with strong professional skills both positively and negatively impacts universities. In 2023, domestic commencing student numbers in Australia has declined, which could be linked to higher university costs and high school leavers directly transitioning to employment. Universities also face increased costs in reforming curriculum, upskilling academic staff and providing more support for students to develop the skills to succeed at university.

To address each of these challenges, higher education institutions need to adopt various strategies, such as providing more financial aid or scholarships to students, offering flexible or online learning options to reduce travel costs, enhancing staff salaries or benefits to attract and retain talent or collaborating with other stakeholders to advocate for more public investment or support for higher education.

# Environmental

Our lives are guided by the rules, regulations and societal pressures that exist in everyday activities. Teaching and learning in higher education are also shaped by these social conditions. In Australasia, this means our quality of life and how we live can be seen as a direct result of state, governmental and institutional policies. This year's environmental trends focus on how we live and learn in our institutional spaces.

## Design of physical spaces

Having emerged from the pandemic, we have moved to a more dynamic work environment, where many academic institutions are rethinking their delivery practices. Institutions are revisiting the pros and cons of online exams and looking at alternative ways of delivering instruction (i.e., face-to-face, hybrid and other flexible delivery modes). For learners, this may mean attending specialised or limited sessions on campus, whilst using technology for the remainder of their studies. These potential changes in delivery practices can impact students, staff and institutions and inevitably society in different ways. Considering a reduction in physically delivered pedagogical practices means changing institutional infrastructure to support the learner experience. This also means rethinking and possibly retooling our pedagogies to leverage technology.

*The need for flexible infrastructure that adjusts based on needs requires institutions to investigate how remote work may be used to administer and manage the academic services attached to teaching.*

In addition to the learner experience, concerns as to how academics continue to deliver and achieve great outcomes using existing infrastructure is also important. The need for flexible infrastructure that adjusts based on needs requires institutions to investigate how remote work may be used to administer and manage the academic services attached to teaching. The possibilities of transitioning student-to-faculty interactions to a more ad-hoc delivery can have both advantages and disadvantages. Examples of likely solutions that meet these design specifications include virtual consultations, open-plan spaces and hot-desking. James Cook University (2021) and the University of South Australia (n.d.) have remote work policies, and Western Sydney University (2023) is piloting bookable, flexible workspaces for staff. Other universities are considering similar solutions, and some are pursuing them with added vigour. Still, some are still in the process of determining the value flexible workspaces, whilst others have either dismissed this approach because of union discussions. All in all, the discussion of how institutions will plan and use physical spaces in the future will continue to reflect the socio-economic status in the region, as some of these solutions work for some cost savings, but for academic work and morale, it is not yet clear if it is welcomed (Patty, 2021).

## Diversity, equity and inclusion initiatives

Institutions also are considering including diversity, equity and inclusion (DEI) initiatives into every aspect of their goods and services. DEI initiatives are increasingly being incorporated into student support services and pedagogical delivery. Supporting the cognitive needs of students is now reflective of today's societal norms. Unlike physical disabilities, abilities such as neurodiversity are not that obvious and may not be disclosed. To support these DEI practices, budgets for national centres to lead the charge could be a systematic way to delegate this vision.

The question of the social acceptance of diversity is answered by the support provided as a core practice by individual institutions. Most decisions on DEI practices are made after a series of consultations with those who are affected. Moving from consultation to actualisation can be difficult and sometimes less pragmatic for students and academics alike. Solutions that use a more deliberative democratic approach can create a more inclusive environment for all in the higher education sector. This extends to the tools

and islands of relevant practice when it comes to digitization of teaching and learning that are individually implemented but not supported by institutional policy or procedures. Higher education institutions such as the University of Tokyo (2022), Fiji National University (2023) and the Royal Melbourne Institute of Technology (2023) each understand what this means for their students. As such, these institutions and others recognise the need to incorporate DEI practices into business as usual to hopefully embrace the flexibility needed to lead the field towards growth and change.

## Sustainable practices and the Sustainable Development Goals

The last consideration is each institution's response to the United Nations Sustainable Development Goals (SDGs). Organisations are now looking actively at sustainability as a core part of their business without truly acknowledging what it means for business. There is a fear that if we do not say we are sustainable, our market credibility will decline. As education is moving from just being about acquiring technical skills to acquiring broader employability skills (e.g., critical thinking, teamwork, problem-solving), embedding sustainability demands an analysis of our teaching practices. In weighing the value, the cost of being sustainable to invoke policies and procedures, in some instances, far outweighs the cost of being in business. The use of newer technologies, such as Internet of things and AI, to better manage the infrastructure used to keep the facilities going is a start (CDOTrends Editors, 2021). Additionally, the design of the educational offerings reflects the student demands without a keen look at the infrastructure and associated policies. Planning how institutional resources, which are not finite, are used conservatively towards long-term priorities means embarking on methods of reuse and not just appending the "co" prefix throughout institutional communications (e.g., co-design).

## Concluding remarks

Student feedback on their experiences will guide how institutional leaders make decisions based on existing rules and regulations. Transformational changes trending towards how to deliver learning in physical spaces, how to accommodate DEI initiatives and the role of sustainability will guide student and institutional behaviours. Aligning these trends with current occurrences may have an impact on academics and their workloads even as we consider how students' needs and behaviours drive institutional offerings.

# Political

The Australasian tertiary education sector is experiencing a significant number of seemingly unrelated trends that could add up to cause extended pressure on the sector, if they were to converge. They include political issues and escalating geopolitical tensions in East Asia, funding pressures to maintain quality assured practice by institutions and issues related to First Nation identity in the curriculum, that to remediate will take both political and financial acumen. We look at these trends across three geographic areas: Australia and New Zealand; Fiji and the South Pacific; Singapore and Hong Kong. In doing so, we realise we are not covering all jurisdictions within greater Australasia but trust that these cases point to some common trends. There is also enough similarity within these issues across all these countries, though manifesting in slightly different ways, to suggest if they were to evolve negatively, immense financial pressures would be experienced, resulting in a significant shift in public support for the tertiary education sector.

## Global disruption

If the West and China were to go to war over Taiwan, the repercussions for the tertiary education sector in Australasia would be profound. For example, the number of international students from China attending Australasian universities would sharply decline, impacting on the financial viability of the higher education sector, with a projected loss of thousands of jobs. To quantify this, in June of 2023, there were more than 149,288 Chinese student enrolments in Australia (21% of all international students), which also has a very large proportion of students from other countries, with almost a third of all higher education students being international (Australian Trade and Investment Commission, 2023). This vulnerability is not limited to Australia, as New Zealand

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similarly had some 25,000 international students at university in 2022 (Universities New Zealand, 2023). A drop in enrolments of this magnitude would mimic if not surpass the downturn caused by the pandemic (Tran et.al., 2023), particularly if the conflict were to be protracted. The effects of conflict would not be limited to ANZ; it would also greatly affect Japan, the Philippines and South Korea, due to their proximity to China and the military alliance they enjoy with the United States of America (Economist Intelligence Unit, 2023). By way of further example, but from a different perspective, Fiji has thus far stayed neutral in relation to potential conflict with China; it would, however, align itself with Australia if war were to occur. Of the four universities within Fiji, political disruption would probably affect the University of the South Pacific (more than the other three, as the reach of the University of the South Pacific is across a coalition of 14 South Pacific nations. Although Fijian institutions have very few international students, the main threat would be to the aid it receives from Australia, New Zealand and a range of other sources, which is used to significantly prop up tertiary education in the region.

## Government funding models

Government funding models within Australasian countries have common aspirations, that is, to enhance the development, competitiveness, inclusiveness and employability of all levels of the workforce. However, the countries that make up Australasian have very different levels of higher education support and funding from their governments. In Australia and New Zealand, for example, students are required to pay fees to participate in higher education, with some exceptions, notably for certain people groups, such as First Nation students. Unfortunately, New Zealand is currently facing some very real challenges in its tertiary education funding framework, primarily due to lower-than-expected enrolments. This has not been helped by the public funding per domestic student declining by some 20% over the last 10 years (Boston, 2023). The New Zealand government controls around 80% of the revenue from tertiary institutions, consequently only policy changes can rectify the funding shortfalls being experienced by the eight universities who are

all running deficits and are planning large staff reductions over the next couple of years. The longer-term effects of these job losses on the sector will provide significant challenges when and if there is a turnaround in fortune. In Fiji, higher education is also heavily subsidised by the government, through a range of scholarships and bursaries. For example, the Fijian government allocated $148 million in the 2023/2024 Budget to sponsor 10,920 new students (inclusive of study grants) and fund 9,148 existing students. Similarly in Singapore, there are significant subsidies for tertiary education and particularly for Singaporean students from low- to middle-income households, in the form of government bursaries. A total of 55,000 full-time and 2,100 part-time Singaporean undergraduates and diploma students will benefit from enhanced bursaries for diploma and degree courses (Singapore Government, 2023). In Hong Kong, the government also heavily subsidises higher education through its Tertiary Student Finance Scheme. This extends to fees, living expenses, hostel subsidy and other academic expenses (Working Family and Student Financial Assistance Agency, 2023). The implication for those countries, like Australia and New Zealand, which are placing more of the financial burden for education on their students, is that they actively underestimate the value of a highly skilled workforce, an attribute that is not lost by our South-east Asian colleagues who enjoy higher levels of competitiveness at a global level (Hryhorash et.al., 2022).

## Inclusion of First Peoples' content in the curriculum

Although the inclusion of First Nations content into the curriculum in Australian universities has made slow progress over the years, the emphasis placed on this in the release of the "Australian Universities Accord: Interim Report" document in July 2023 has put this in the middle of what universities need to be concerned about (Australian Government Department of Education, 2023a). This is not news to our colleagues in New Zealand, who have for decades been leading the way in this regard, to the extent that both English and Maori languages are taught in school. That is more problematic in Australasia due to the vast numbers of (more than 250) different languages that may be spoken by First Nations peoples (Australian Institute of Aboriginal and Torres Strait Islander Studies, 2023). Nevertheless, there are other factors to consider here, not the least being the formation of the new Aboriginal and Torres Strait Islander Higher Education Advisory Council to give a voice to the needs, aspirations and know-how of First Nations communities (Australian

*The implication for society if higher education institutions are not promoting and reinforcing a national identity for graduates, is that we run the risk of undervaluing and ultimately losing the attributes that make us unique.*

Government Department of Education, 2023b). In Fiji, as described to us, there existed a conflict of authorities, based on ethnic differences that play out as a pseudo democracy, but one that is strongly tempered by the tribal chiefs who control most of the local resources. Fortunately, these clans do not control international funding to education, through the many different bilateral arrangements. For many years, quotas were being imposed on institutions to ensure native Fijians were being adequately represented in higher education; however, these have been relaxed over recent years. Of more concern is the brain drain in countries like Fiji and in the South Pacific, which occurs with many of the brighter learners being encouraged to study in Australia or New Zealand. In many of the Asian countries, this issue seems not to exist or are different. In Hong Kong, for example, there is pressure from mainland China applied to the sector to ensure some preference is given to mainstream Chinese views in the curriculum. This is something the majority of universities are resisting, where they can, due to the large number of international (non-Chinese) students studying there, and to change the status quo may weaken the business opportunities for these institutions. The implication for society if higher education institutions are not promoting and reinforcing a national identity for graduates, is that we run the risk of undervaluing and ultimately losing the attributes that make us unique. Or as Professor Sneider from Stanford University was quoted as saying, "national narratives are very powerful and they remain intact … nationalism remains the most powerful determinant of identity and politics" (Shelton, 2023, para. 59). And this is as true for Hong Kong and Singapore, as it is for Fiji, New Zealand and Australia.

# Technologies and practice trends

This year's educational technology and practice trends reflect a continuation of the momentum in the uptake of online and hybrid learning and the awareness of the stresses and pressures that learners and staff in the sector were feeling. The experiment of massive uptake in online learning technologies during the emergency remote learning during the pandemic illuminated on a broader level the possibilities of online learning. With these possibilities, we are continuing to see new ways of thinking about flexibility in mode and location of learning and working. The shift to these new modes requires re-examining the development of skills and technologies to support online and hybrid ways of learning and working.

Furthermore, the introduction of ChatGPT in late-2022 both astounded and alarmed the world. The tool could produce responses to prompts that were virtually indistinguishable from responses written by humans. Furthermore, it could perform more routing knowledge-based tasks with relative efficiency. The ability of ChatGPT and other generative AI tools to produce text, video and graphics raised questions about the ethics of such technologies and what they meant, particularly for knowledge workers, who were once thought immune to the threats of automation. For higher education, the introduction of such tools also raised questions for what this meant in terms of traditional forms of assessment and in skills for which we should be preparing learners in light of AI technologies likely to continue to evolve. Thus, AI literacy was one of this year's trends.

Lastly, diversity and inclusion, in general, and the integration for First People's knowledge more specifically. were noted among this year's trends. In Australia, the promise of an Indigenous voice in parliament would be a further step towards reconciliation. A few months would pass before the announcement of the constitutional referendum and the subsequent failure to establish the amendment that would ensure an Aboriginal and Torres Islander voice in government. The Contextualising Horizon participants recognised the ongoing need to continue the integration of Indigenous knowledges into the curriculum.

For 2022–2023, the Contextualising Horizon participants identified five trends of strategic importance in the subsequent 12–18 months:

1. Hybrid and flexible learning

2. Artificial intelligence literacy

3. Mental health and well-being of staff and learners

4. Evolution of mobile learning

5. Integration of Indigenous knowledges

# Hybrid and flexible learning

## Overview

Hybrid learning refers to educational arrangements in which student cohort members can attend some of their sessions online and others in situ while being co-located. Other forms of such flexible learning arrangements include blended learning (where a student cohort has access to some of the teaching activities online and others offline and in situ), and HyFlex learning (where hybrid and blended learning approaches are combined in educational arrangements that afford learners a much wider range and a greater level of flexibility. Flexible learning, therefore, in itself is not a mode of learning. It is a value proposition – much like we see equity or equality that all learning and teaching arrangements aspire to, because flexibility enables learners to customise their learning to their own individual needs and circumstances in relation to when, where and how they may choose to study. As such, flexibility in learning and teaching operations sits on a continuum and may extend to choices learners may have in relation to their engagement and interaction with the subject matter content, teachers and their peers, the learning environment and the educational institution, their assessment activities and feedback on them (Lodge et al., 2022; Naidu & Roberts, 2018).

Hybrid and flexible learning are, therefore, not one and the same. A hybrid learning experience can be designed that provides the learner with choices about the mode in which they interact with the learning materials, their peers and their teacher, although the overall structure of the course or unit may not be flexible. And the institution may not be flexible in allowing the learner to shift between modes (online or on-campus, synchronous or asynchronous). The parameters that are in place may be a result of institutional orientations that are beyond the control of the teachers and the learning experience designers. However, there has been a shift towards greater acceptance from both learners and teachers in working across modes due in part to the experience with emergency response to teaching required during the pandemic lockdowns. Socially and culturally, there has been an increased acceptance and a desire for new ways of working (e.g., flexible and hybrid), and these are translating into the expectations of staff and students in higher education.

## Regional impacts and relevance for teaching and learning

There is a widespread assumption that practical learning can only occur in the classroom and not online, so HyFlex learning design is irrelevant. However, the pandemic prompted a re-evaluation of practical learning activities and outcomes by questioning the privilege given to face-to-face practical learning classes, such as laboratories, studios and clinics. A common misconception is that face-to-face classes with hands-on learning are where students are most likely to form a sense of community. However, when deliberate focus is placed on ensuring the equivalency of the experience any mode can be designed to foster socialisation and community building. Apart from non-negotiable hands-on skills and related assessment, practical learning activities can be delivered in a HyFlex mode. Online access to practical learning requires selecting appropriate tools (e.g., clinical simulation, telehealth) and supporting student familiarity with the technology.

In the Australasian region, the impact of geographical remoteness on a student's capacity to engage in practical activities can be overcome through the effective use of HyFlex learning design. For example, the University of Sydney midwifery programme uses a mix of online simulations and a network of clinical training sites to facilitate hands-on clinical skills training.

Flexible learning approaches have the potential to enable learners to access learning modes and environments unique to their needs. This therefore engages and ultimately empowers learners to choose how they learn and who they learn with. Above all, every learner should have equitable opportunity and experience across all modes and environments. Some options include providing learners with digitised resources and choices to present their knowledge and understanding. These include utilising educational

technologies beyond the written word, such as the work being done at the University of Southern Queensland using VoiceThread (Jacka, 2023), video presentations, vivas and portfolios in which assignments can be asynchronously completed.

Providing flexibility is arguably the hardest to achieve due to institutional constraints. Implementation entails costs and relies on flexible design and a vision for planning, infrastructure, adequate resourcing and institutional support. Physical learning environments may need installation and support of specialised equipment, while virtual environments need educational technology tools to support the distribution of learning artefacts and the socialisation of learning. Teaching staff need development opportunities and support to adapt to new pedagogical approaches. Despite resources being available and money spent on refurbishing on-campus learning spaces, institutions still struggle with providing an equivalent experience for the hybrid student, such as those described by Wong et al., (2023).

Enabling flexible and HyFlex (Beatty, 2006) approaches is a shift in mindset from content delivery to learning facilitation supporting increased flexibility, student equity and autonomy within the learning process. In addition, finding and using appropriate technologies is vital for the transformation to HyFlex. For example, moving from hybrid to HyFlex may require the in-class students to utilise mobile devices and be online at the same time as the online students for equivalent interaction via a backchannel and joint online spaces to collaborate polysychronously, which is a way to embrace a range of modes that the student is already utilising in their everyday lives (Dalgarno, 2014).

> *For students to fully engage and use contemporary technology in a flexible way, there needs to be an awareness of the whole range of students and their expectations for different learning environments.*

One enabler is institutional readiness through finding a shared understanding of what flexible and hybrid learning means and the mindset and knowledge to achieve it. This includes infrastructure, policies and educator capacity. Another is identifying technological drivers to enable fluid learning experiences by seamlessly merging physical and virtual learning environments. Appropriate collaboration tools such as Engageli, Padlet and VoiceThread are vital for synchronous and asynchronous interaction. Personal enablement implies a flexible mindset where the student is at the centre of the learning experience. Encouraging students to learn in a choice-driven, flexible mode may be a barrier at first, as many will want to "sit and get" because that is all they know. For students to fully engage and use contemporary technology in a flexible way, there needs to be an awareness of the whole range of students and their expectations for different learning environments.

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### Institutional approaches to flexibility

James Cook University (JCU) and the University of Southern Queensland (USQ) have tried institutional models for flexible learning. JCU Flex invites learners to decide how they attend scheduled classes, regardless of their enrolment. USQ's HyFlex Learning and Teaching leverages Engageli, Padlet and VoiceThread to support learner choice of mode, time and place.

### A staged approach to Hyflex

Despite high connectivity, Singapore was taken by surprise when the pandemic forced remote learning and teaching. The School of Applied Sciences at Temask Polytechnic in Singapore implemented HyFlex principles in their pandemic response and have continued to scale up their HyFlex approaches. The result minimised costs and has resulted in staff and student satisfaction.

### A staged approach to Hyflex

The Ara Institute of Canterbury recognised a need to support students to enter the profession of midwifery despite their physical location or personal circumstances. They developed a networked distributed approach that incorporated aspects of Kaupapa Māori and Pasifika values, eportfolios, simulation and VR.

# AI literacy

## *Overview*

The rapid advancements in AI, specifically GenAI, are transforming the world and the field of education in Australasia. Since November 2022, widespread access to and integration of GenAI has meant educators and learners must prioritise AI literacy, ethics, critical thinking and authentic AI inclusion in our daily processes. This section examines the subsequent impact on learning and teaching in our region, as of August 2023.

AI literacy encompasses vital skills for effectively utilising AI technologies in daily life, education and work (Ng et al., 2021). It includes understanding technical terms, AI ethics, fostering critical thinking and authentic AI applications. We propose an AI literacy framework with three pillars – AI ethics, critical thinking, and authentic AI use – building on Ng et al.'s (2021) work underpinned by Bloom's taxonomy. However, the rapidly evolving pedagogical landscape, driven by AI's growing impact, suggests the need for continuous updates and improvements to the framework. AI literacy empowers educators and learners to leverage AI's potential responsibly and equitably in education, ensuring a transformative and ethical AI-powered future in Australasia.

**The ethical considerations of AI and ensuring integrity with assessments.** The ethical considerations of GenAI in education include data privacy and algorithmic bias along with concerns of the base data in large language models that feed the output being biased and discriminatory. Educators need to make ethically informed decisions when integrating GenAI technologies into learning (Akgun & Greenhow, 2022). Australia is now following the enquiries from the European Union and United States of America with the recent call for submissions to parliament on what AI might mean for education in general and higher education specifically (Australasian Academic Integrity Network, July 2023). Concerns are raised in the responses, including how to reference any output to whether it should be used, along with students producing authentic work, including ascertaining knowledge levels, writing and researching. The creeping use of AI has meant many are using it unconsciously. GenAI has demonstrated the ability to fully or partially produce work that could meet many assessment requirements. Therefore, GenAI use may result in falsely certifying a student's abilities. Issues such as this fall under the responsibility of the regulators, specifically the Tertiary Education Quality and Standards Agency for Australia. To date, it appears other countries in our region are also yet to determine their stance as they remain largely silent (Tertiary Education Commission in New Zealand, the Educational Quality and Assessment Programme in the Pacific Islands along with Malaysia and Indonesia). Other countries, such as Singapore, use a more balanced approach by fostering an ethical AI ecosystem as part of the Smart Nation (Singapore's national AI strategy), sharing the responsibility between the regulators and the organisations.

There are equity concerns, as not all students have equal access to GenAI. Some are free, with limited capacity while premium subscription-based models are trained on larger and more recent datasets which have been demonstrated to be more effective. The social implications, such as the future of work and job automation, must not be ignored. Although GenAI can assist in addressing global challenges, it is essential to consider the United Nations Sustainable Development Goals and the principles of responsible management education) to ensure social inclusion. Acknowledgment of use, as is done with other technology tools, is essential for ethical use. However, when used, the problem lies in ensuring human oversight as AI cannot be held responsible for its output.

**Critical thinking in the age of AI.** Critical thinking lies at the core of AI literacy. Therefore, equipping educators and learners to question, analyse and interpret AI-generated information fosters a healthy scepticism, ensuring learners are active participants rather than passive consumers. Beyond AI literacy and ethical understanding, critical thinking and reasoning are crucial for decision-making. For instance, a professional can use GenAI to support decision-making processes that rely on complex and dynamic

individual knowledge, expertise, experience and available data to determine the best course of action. All information must be carefully analysed to diagnose and make informed decisions about the issue at hand (Giordano et al., 2021). However, as individual decision-making and judgement are greatly influenced by cognitive factors, including heuristics and biases, the length of experience, the depth and accuracy of expertise and knowledge base of the individual, both human and GenAI (Giordano et al., 2021), unconscious bias can inadvertently impact the outcome.

**Authentic application of AI and graduate employability.** With AI as a general-purpose technology that is a complement and occasional equivalent to human intelligence (Eloundou et al., 2023), Australian students and graduates must be trained in the necessary skills and knowledge to identify opportunities for authentic application of GenAI in commercial and creative settings. This should not be limited to operational efficiencies or task automation within an individual role but also incorporate a high-level, strategic mindset of entrepreneurship and innovation that is widely substantiated by the thriving start-up culture of GenAI. The key pillars of technical knowledge, AI ethics and critical thinking that we have discussed are fundamental to ensure this commercial pursuit of AI is not at the expense of ethical and responsible practice. The direct and free access to GenAI models is opportune for role-play, case-based, simulated active learning experiences of authentic AI

> *Looking forward, embracing authentic AI use as the norm is crucial.*

practice in the classroom. Where feasible, AI industry experts should deliver classroom conversations that will motivate students to recognise alternate paths to graduate employability through the high-impact capabilities and low barriers to entry of authentic AI practice. The timely investment in an inclusive AI literacy is an opportunity to enable Australasian nations to lead in technological capacity.

## Regional impacts and relevance for learning and teaching

The Australasian region lags behind Europe and the United Kingdom in providing frameworks and guidelines for integrating GenAI in higher education. Amid an ongoing Australian parliamentary enquiry (as of August 2023), urgent action is needed to develop AI literacy among academic staff, supporting personnel and students and understanding its ethical implications in higher education. Fostering critical thinking skills, integral to higher education's mission for a better society, is essential. Looking forward, embracing authentic AI use as the norm is crucial. Governments and governing bodies must provide guidelines to navigate this evolving landscape. Education providers must consider what is appropriate for AI use in specific disciplines to ensure they have clear terms of use guidelines and processes to uphold academic integrity.

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### K–12 AI pilots

Projects are currently under way in K-12 schools in Australia's Victoria and South Australia states to understand how students can use AI for learning. The outcomes of these projects hold potential impacts for both the use of AI in schools and learners' future expectations for AI use in higher education.

### AI in science, technology, engineering and mathematics

The Royal Melbourne Institute of Technology has already launched a course titled Foundations of Artificial Intelligence for STEM. The interdisciplinary course focuses on the foundational understanding of AI applications to health, science, technology, engineering and mathematics workplaces and future trends.

### Research centre for AI applied to education

The AI Centre for Educational Technologies is a grant-funded entity in Singapore collaborating with Singapore's Ministry of Education, and the National University of Singapore to construct systems to leverage AI to provide learners with feedback andcontent that adapts to their performance  and to improve grading efficiency and effectiveness.

# Mental health and well-being of staff and learners

## Overview

In the previous *Contextualising Horizon* report (Campbell et al., 2022), we identified self-care for staff and learners as one of our technologies and practices (Campbell, 2022). Developing these ideas, in 2023 we see the management of student and staff health and well-being as important in these volatile, uncertain, complex and ambiguous times of being in the academic world (Machin, 2020). As the pandemic has abated, other challenges have emerged both globally and regionally and within the sector. Global climate change and natural disasters, international tensions, technological change and economic uncertainty all present challenges to human mental health and well-being across Australasia.

## Regional impacts and relevance for learning and teaching

Changes in higher education including ongoing restructures and casualisation of academic teaching and marking (Burch et al., 2023), corporatisation and managerialism and heavy workloads place potential psychological strains on higher education staff. Systematic literature reviews by Lee et al. (2022) and Lakeman et al. (2022) identified that occupational stress has been rising for Australian and New Zealand university staff. Triggers of stress include the balancing of academic workload, workforce casualisation, managerialism, transitioning into academia from field practice (e.g., from nursing practice) and specific stresses related to being a professional or academic member of staff. Of particular concern is the potential impact of anonymous student feedback of teaching in the evaluation of courses in many universities in Australasia. Educators reported feedback experiences that were perceived as unconstructive, unfair or even defamatory. Lakeman et al. provided examples of academics feeling highly anxious, unable to focus, psychologically distressed, having disordered sleep, and, in a confronting finding, developing profound psychological disorders needing treatment.

> *Global climate change and natural disasters, international tensions, technological change and economic uncertainty all present challenges to human mental health and well-being across Australasia.*

Students in our region also face challenges to their mental health and well-being. The pressures of funding their studies, balancing work and life, fulfilling assessment requirements and navigating a renewed focus on academic integrity can take a toll. A survey of approximately 15,000 students about their mental health and general health and well-being based in Australia was undertaken by health and medical researchers at the University of Melbourne (Sanci et al., 2022). The report was to help inform an institutional health and well-being framework as well as better understand the challenges to well-being faced by students. Their findings require close attention with one in five students reporting concern about the state of their mental health, and 26% of domestic students and 14% of international students surveyed reporting currently having a mental health condition. It is possible that at least some cohorts of international students may have under-reported negative mental health symptoms due to cultural stigma. A National University of Singapore survey (Teng, 2023) suggests higher levels of mental distress in Singaporean young people, many of whom will be heading to university, with one in 10 reporting meeting the criteria for at least one mental health disorder. Students in this region are often pressured by the expectations of being successful, which means excelling in studies, jobs and in life generally. Many respondents in the survey felt they were unable to discuss these issues with their parents due to stigma and the need to meet academic expectations in a high performing society. A systematic literature review by Dessauvagie et al. (2021) involving university students in six ASEAN countries – Cambodia, Laos, Malaysia, Myanmar, Thailand, and Vietnam – also provided data suggesting stigma and lack of mental health literacy in the region, with levels of mental health problems consistent with the Australian study mentioned previously.

Mental health and well-being is a large, complex and multidimensional topic, and as non-clinicians, we focus only on technologies and practices that aim to help prevent adverse mental health and ill-being (as opposed to treatment). This is of course an important function that higher education providers should provide and builds on our focus from last year's report on self care for staff and learners.

**Mental health and well-being frameworks.** The adage that prevention is better than the cure is most salient when considering mental health. Frameworks grounded in positive psychology research and practice are becoming increasingly useful in developing strategies to tackle well-being issues. Theories such as PERMA (Seligman, 2018), SPIRE (Ben-Shahar, 2021) and self-determination theory (Ryan & Deci, 2017) help in understanding the ingredients for happiness and personal flourishing. Each of these holistic approaches focuses on what makes us happy, with examples including autonomy, intellectual curiosity and learning, and positive relationships. Concomitantly, techniques like mindfulness, in which one focuses on awareness of the moment without personal judgement, are understood to be beneficial techniques to enhance well-being. An exploratory study undertaken at Massey University in New Zealand by Uele (2023) suggests mindfulness could be a useful technique for their Pasifika students, where following a 5-week mindfulness training and intervention, stress levels were reduced and Pasifika identity and well-being were enhanced. Te Herenga Waka – Victoria University of Wellington (2023) are developing a student well-being outcomes framework. Combined with well-being science, their framework incorporates traditional Māori knowledge that involves nurturing Mauriora (cultural and spiritual identity), Waiora (physical environment), Toiora (healthy lifestyles), Taha Whānau (family health) and Te Oranga (participation in society), and as a result, lead fulfilling lives with Ngā Manukura (leadership) and Te Mana Whakahaere (autonomy).

**Psychological literacy and well-being skills development.** For both staff and students, being more psychologically literate and aware of skills and techniques that can counter mental health challenges is valuable. The University of New South Wales (2020) defines psychological literacy as "the adaptive capacity to apply psychological science to achieve personal and societal needs" (para. 1). Whilst focusing on more than just well-being, being psychologically literate potentially gives students and staff the skills to navigate the volatility, uncertainty complexity, and ambiguity of different domains of life. Several universities have developed programmes to build well-being skills. One example is from the University of Western Australia (n.d.), where they have developed a holistic building blocks approach, which includes techniques and online workshops in being active, sleeping well, maintaining relationships, being aware of feelings and knowing when to seek help. A-Skills (Brownlow et al., 2023) is an online and face-to-face study skills and well-being management programme tailored to support autistic students who are presented with specific challenges in navigating academic life in their higher education journey at the University of Southern Queensland. A recent longitudinal evaluation of the programme noted positive student engagement and a particular valuing of the programme's co-creation of bespoke content aimed at specific support needs.

**Apps, chatbots and GenAI.** Mobile apps that support mental health and well-being have been available to users for some time. Such apps allow staff and students to make informed choices about their well-being through information and timely advice. MoodGYM, for example, is a spinoff of an Australia National University project that provides training in cognitive behavioural therapy and therefore the possibility of self-regulation of mental health (NHMRC, 2022) and AI-augmented mental health counselling. In terms of supporting mental health, chatbots and GenAI are in the discovery phase. These technologies offer the capability for more personalised support. Bunji (Rathnayaka et al., 2022) from La Trobe University is a chatbot that uses behavioural activation to provide motivational and emotional support to its users. With further advancement of GenAI and with its sophisticated natural language models, the possibilities of personalised coaching, self-monitoring and (subject to legal and ethical requirements) therapy may see an AI revolution in supporting mental health.

**Approaches to assessment design and academic integrity.** High stakes assessment and an increased focus on detecting breaches of academic integrity are potential sources of maximal levels of anxiety in

students. A review by Eaton et al. (2023) suggests that there is a big gap in understanding of impact on student mental health particularly during alleged breaches and that practitioners should integrate mental health support as a priority. We would also suggest that much of this thinking should be considered in light of changes to assessment design (e.g., authentic assessment, providing more assessment choices and flexibility and the advent of GenAI such as ChatGPT).

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### Embedding well-being

Te Herenga Waka – Victoria University of Wellington are developing a student well-being outcomes framework. The initiative, Ki te rā, combines well-being science and traditional Māori knowledge and encourages students to participate in programs to enhance their well-being.

### Chatbots to support mental and emotional health

La Trobe University in partnership with St. John Ambulance developed Bunji, an AI chatbot. The chatbot uses behavioural activation to provide motivational and emotional support to users. Key features include the ability to track mood, schedule activities to promote positive mental health, and empathetic support via the chat feature. Bunji is available in the Apple and Google app stores.

### Holistic support for autistic students

A-Skills is a holistic co-designed peer mentoring and study/psychological skills programme at the University of Southern Queensland. The programme is designed to help autistic students to navigate university. A-Skills is an example of how well-being supports can be co-developed for neurodivergent students, enabling them to both share their experiences and to receive bespoke support and assistance.

# Evolution of mobile learning

## Overview

Mobile learning has evolved alongside the proliferation of mobile devices and advancements in educational technology. Despite facing scrutiny regarding its validity, mobile learning gained renewed significance in the wake of the pandemic, aligning with several concurrent STEEP trends. One evident shift is the changing learner engagement, with modern learners increasingly seeking personalised and engaging learning experiences in line with emerging social trends. Mobile learning, with its inherent flexibility and interactivity, is well positioned to meet this demand. Furthermore, it may contribute to the advancement of digital equity and inclusivity by serving as a tool to bridge the digital divide, ensuring that all students, regardless of their backgrounds, have access to essential learning resources.

## Regional impacts and relevance to learning and teaching

Technological trends have also played a pivotal role in reshaping mobile learning. The integration of AI into mobile learning applications allows for AI-driven personalisation, tailoring content to individual learner needs. Additionally, the adoption of AR and VR technologies promises immersive and interactive learning experiences through mobile devices, ushering in a revolutionary era in education. From an economic standpoint, the affordability and accessibility of mobile devices make them a cost-effective option for both institutions and students. Finally, considering the political trends, mobile learning has proven to be a strategic choice for institutions in times of global disruption, enabling educational continuity during crises and disturbances. Ensuring equitable access and pedagogical excellence remain key objectives moving forward.

> *From an economic standpoint, the affordability and accessibility of mobile devices make them a cost-effective option for both institutions and students.*

The widespread ownership of mobile devices and improved connectivity led to a shift in focus from fostering new pedagogies to simply providing ubiquitous access to content (Traxler, 2021). This shift was primarily driven by the evolution of the responsive web and the mobile device's emergence as a primary access point for institutional learning management systems. This directional change was met with scepticism, with some, like John Traxler, referring to it as the "death" of mobile learning (Traxler, 2016). This prompted the formation of the ASCILITE Mobile Learning Special Interest Group (MLSIG) in 2016 (see https://ascilite.org/get-involved/sigs/mobile-learning-sig/). The MLSIG sought to revitalise mobile learning by exploring the intersection of new pedagogies, authentic learning, design based research methodologies, scholarship of learning and teaching, user-generated content facilitated by the unique affordances of mobile devices and emerging technology such as VR, AR, geolocation, contextual sensors, drones and wearable technologies.

## A (re)definition of mobile learning post the pandemic

The outbreak of the pandemic in 2020 compelled educational institutions to re-evaluate their approaches, leading to a renewed interest in mobile learning and education. However, many implementations during this period were limited to content delivery, often relying on established technology acceptance models, which assesses technology adoption but not learning. In 2023, the MLSIG initiated a redefinition of mobile learning as "an accessible mobile ecology (including connectivity and infrastructure) across temporal, conceptual, physical, and digital spaces facilitating User Generated Content (UGC) and User Generated Contexts (UGCX)."

This definition encompasses the user-friendly mobile environment that seamlessly connects various aspects of your life, both in the real world and online. This includes everything from your daily experiences

and thoughts to the places you visit and the content you create. In this interconnected space, you have the power to easily share your own content, like photos and videos and also shape the context around them. It is like having a digital playground where you can express yourself, connect with others and make sense of your surroundings, all through your mobile device. This new definition highlights the importance of creating an inclusive learning environment that leverages user-generated content and experiences, while embracing the diverse nature of mobile learning spaces. This redefinition aligns with the collaborative development of the design for transformative mobile learning framework, which aims to provide guidelines for transforming mobile learning praxis (Cochrane et al., 2022).

## The future of mobile learning

The future of mobile learning holds great promise, driven by remarkable technological advancements and innovative pedagogical strategies. To fully unlock its potential, several key considerations come into play.

Addressing the digital divide is crucial, aligning with the trend of digital equity and inclusivity. Therefore, ensuring equitable access to mobile devices and network connectivity for all students is paramount. Mobile learning must seamlessly integrate into institutional strategies and curricula. To achieve this, staff require comprehensive professional development opportunities to enable them to effectively leverage these tools and foster inclusive learning experiences. Providing equitable access to quality education is paramount especially concerning the rise in cost of living. Mobile learning remains a cost-effective solution, aligning with current economic trends.

In line with emerging technological trends, the transition from smartphones to revolutionary spatial computing devices, such the Apple Vision Pro, holds the promise of enhancing human-centered productivity. Mobile AR and VR technologies are poised to redefine education through dynamic content delivery using advanced sensors capturing real-time data. The integration of AI through smartphones and emerging devices will also continue to transform pedagogical practices and authentic assessment methods, revolutionising the learning experience but only with educators with the capacity to learn and adapt their teaching practice.

The evolution of mobile learning has been a transformative journey, witnessing shifts from device-centric approaches to user-generated content and experiences. As we embrace the future of mobile learning, it is imperative to overcome challenges and promote equitable access to education, empowering both learners and educators. By seamlessly integrating cutting-edge technologies with pedagogical expertise, we can create a vibrant and inclusive mobile learning ecosystem that effectively prepares learners for the challenges and opportunities of the digital age.

### VR for language leaching

Researchers in Japan investigated the educational affordances and technological challenges of utilising VR in language learning. A small group of students from various disciplines across Japan engaged in three levels of immersive learning using freely accessible educational VR applications. This self-directed learning approach empowered learners to take ownership of learning and immersively explore academic interests.

### Readiness and perception of Pacific students to mobile phones for higher education

A team of researchers from Fiji explored the increasing importance of mobile learning in the South Pacific. Their findings emphasise the positive attitude of Pacific students towards integrating mobile phones for academic purposes and the potential to address educational challenges and support of the United Nations' SDGs of promoting quality education and reducing poverty.

### Enhancing health care education and practice post-pandemic

This Australia-New Zealand collaboration examined the impact of mobile learning on healthcare education and practice during the COVID-19 pandemic. The researchers identified key practices, such as interprofessional collaboration and the use of mobile technologies, VR and immersive reality played a crucial role in enhancing clinical practice, critical thinking and practical skills.

# Integration of Indigenous knowledges

## Overview

Indigenous peoples undertaking tertiary studies in Australia, New Zealand and the wider Pacific face many challenges (Behrendt et al., 2012); yet they are resilient and have survived many adversities. Integration of Indigenous knowledges and perspectives into the broader curriculum is becoming increasingly important in higher education, particularly in the Australian context and in New Zealand. This is both about access for Indigenous students and about understanding and recognising the importance of Indigenous knowledges and perspectives for non-Indigenous students.

Situated within a rights-based discourse, it is an agenda that recognises the United Nations Declaration of the Rights of Indigenous Peoples, especially Article 14: "Indigenous peoples have the right to establish and control their educational systems and institutions providing education in their own languages, … appropriate to their cultural methods of teaching and learning" (2007, p. 13). In 2017, Universities Australia launched the first whole-of-sector strategy to support the advancement of Indigenous peoples in and through Australia's universities, while the second phase was launched in 2022.

*[Integration of Indigenous knowledges] is both about access for Indigenous students and about understanding and recognising the importance of Indigenous knowledges and perspectives for non-Indigenous students.*

The Universities Australia 2022–2025 Indigenous strategy shifts aspiration to implementation: "Aboriginal and Torres Strait Islander peoples and knowledge are assets to universities and the nation, [and] inclusion in … teaching and research broadens, deepens and improves what we do, giving Australian universities a unique place on the world stage" (Universities Australia, 2022, p. 7).

The idea of genuine inclusion has been advocated for some time, but it requires changes and institutional commitments that have started to gain momentum in recent years, which are likely to accelerate into the future. Increased engagement and visibility of Indigenous content in the curriculum has been identified as one of the 2023 STEEP trends, indicating there were concerns about equity, sustainable practices and a lack of Indigenous perspectives and knowledges in the curriculum. This is addressed in the examples that follow of integrating Indigenous knowledges in curricula in Australia and New Zealand.

In the Australian context, Ma Rhea and Russell (2012) have drawn attention to the important role of lecturers in the reproduction of knowledge, in that the pedagogical decisions they make inform "how Australian society, both Indigenous and non-Indigenous, comes to understand itself" (p. 22). Although this is now widely recognised and acted upon, among initiatives and policies related to the integration of Indigenous knowledges, it also presents some fundamental challenges that need to be negotiated and addressed in the coming years. Walter and Aitken have identified this as "the line between a whole of university responsibility for Aboriginal and Torres Strait Islander engagement and participation and maintaining Indigenous ownership and perspectives of Indigenous knowledges" (2017, pp. 2–3).

At the same time, however, some interesting programmes are beginning to appear, such as Jindaola at the University of Wollongong (Kennedy et al., 2022), which approach Indigenous knowledge as dynamic, rather than pre-packaged, and which adhere to Indigenous methods for conducting business and maintaining knowledge integrity.

Another world-first initiative is the Associate Fellow HEA (Indigenous) at Queensland University of Technology, which allows both Indigenous and non-Indigenous staff to reflect on their initiatives related to the integration of Indigenous knowledges. This follows a module and workshop called Indigenous Perspectives in Learning and Teaching.

In the Australian context, the value of integrating Indigenous knowledges and perspectives in curriculum lies in the acknowledgement and validation of 65 millennia of ways of knowing. Finding authentic, evidence-informed ways to embed Indigenous perspectives in university curricula offers unique opportunities and challenges for growth and greater understanding.

## Regional impacts and relevance for learning and teaching

There is a strong sense that universities are transitioning from Indigenous knowledge contained in a standalone Indigenous unit towards university-wide integration. To do this in meaningful ways requires considerable organisational investment and commitment into professional development for staff as well as time and resources, for example, sharing and showcasing good practice.

A blended networking and showcase event, held in March 2023 by the Waranara (Health Professions Education Research) Network is an example of this investment in staff professional development. The event aimed to bring healthcare education researchers from across Australia and the world together in new ways, to facilitate the sharing of experiences and knowledge around Indigenous and non-Indigenous collaborations, and involving conversations around remote, rural and urban service learning.

An example of good practice in the area of theoretical work and field work has been run at James Cook University's School of Business since 2007. A first-year unit, Linking Indigenousness (Moore & Ireland, 2012) is aimed at creating culturally safe spaces for transformative learning practices to take place by facilitating on Country field trips to Palm Island and Turtle Rock, collaborations with traditional owners, and crafting assessments for students to reflect on the cultural interface work of Professor Martin Nakata (2007). Student feedback about learning from traditional knowledge holders has been overwhelmingly positive. More recently, Professor Tracey Bunda and Dr Katelyn Barney have begun a series of podcasts at the University of Queensland, called Indigenising Curriculum in Practice, where they interview both Indigenous and non-Indigenous academics about their practice, which provides much needed practical exemplars (Bunda & Barney, 2023).

> *Whether in metropolitan, rural or regional areas, universities are not only seeking ways to embed Indigenous knowledges, but also greater accountability for a historical lack of visibility.*

Integration of Indigenous knowledges and perspectives is perhaps most relevant and urgent in the Australian and New Zealand contexts, at least in terms of increasing scholarly debate on this topic. Related debates have occurred around internationalisation of the curriculum and multicultural diversity student cohorts across Australasia. However, it is important to clearly distinguish between being responsive to multicultural diversity in classrooms and integration of Indigenous knowledges and perspectives, as the latter fits in a social and historical justice framework.

This resonates across the Pacific, and especially the need to incorporate local knowledge into the curriculum in the face of the impacts of globalisation and climate change, as learning and teaching have been characterised by an overwhelming dominance of Western resources and perspectives. However, although the importance of local knowledge is recognised within the Australian higher education sector, it has perhaps gained less traction than in New Zealand. In New Zealand, for example, Māori are leading the development of various technology and educational programmes, supported by Marsden funding in some cases, and the EdTech New Zealand network (https://edtechnz.org.nz/) includes many Māori educational technology designers and developers. As with the Australian context, the emphasis is not only on inclusion but on "transform[ing] unjust systems, structures and practices in academia and replace (them) with [Indigenous] ways of being, knowing and doing" (Anderson et al., 2022, p. 46).

The October 2023 referendum on the Indigenous voice to parliament in Australia sharpened the nation's focus on Indigenous rights and perspectives, and the educational system can be more resilient for it. Whether in metropolitan, rural or regional areas, universities are not only seeking ways to embed

Indigenous knowledges, but also greater accountability for a historical lack of visibility. Together, this can serve to strengthen ties and relationships between Indigenous and non-Indigenous educators and students to facilitate honest, respectful dialogue and knowledge transfer across Australasia.

### Improving learning environments in the health disciplines

Waranara is a health professions research network based out of the University of Sydney. The network aims to foster interdisciplinary discussions and research to improve learning environments.

### Indigenising curriculum

The University of Queenland's Indigenising Curriculum initiative is a whole-of-institution approach to incorporating Indigenous knowledges into the curriculum. The initiative considers both the pedagogical and technological developments in curricular design.

### Institutional cultural competence framework

Charles Sturt has implemented the Indigenous Cultural Competency Program and associated framework to achieve the institutional aim of ensuring that all undergraduate programmes incorporate indigenous Australian content.

# Methodology

The methodology in this 2022–2023 report was similar to the previous year; however, we did attempt to streamline the process and build on lessons learnt from the 2021–2022 report. At the Sydney ASCILITE conference in December 2022, we kicked off this process by conducting two workshops with interested members. A variety of people attended, both in person and online, and conversations were in-depth and robust. During these workshops once again, working on a Padlet, the participants identified STEEP trends a focus on the next 12 to 18 months. The online sessions were recorded.

The research team then analysed this data to identify the final STEEP trends. These are shown in the table below.

**2022–2023 STEEP trends**

| Social | Technological | Economic | Environmental | Political |
|---|---|---|---|---|
| Changing learner engagement<br><br>New ways of working<br><br>Digital equity and inclusivity | GenAI<br><br>Building staff capability<br><br>AR and VR | Cost of living<br><br>Higher education workforce reshaping<br><br>Skills-based hiring | Design of physical spaces<br><br>Diversity, equity and inclusion initiatives<br><br>Sustainable practices and the SDGs | Global disruption<br><br>Government funding models<br><br>Inclusion of First People's content in the curriculum |

As part of a series of online workshops in February 2023, we conducted a workshop to identify the technological trends for this year. Following the workshop, we reviewed the trends to refine the list and eliminate duplicates. This resulted in 14 possible trends. An online survey was created in Qualtrics and distributed via email to survey participants from the workshops. We asked them to rank the trends with the intent of identifying the top 5 trends. From this survey, we ended up with the five trends highlighted in the report.

The map below indicates the representation in this year's Contextualising Horizon panel.

# Limitations in 2023 and future directions

We continue to refine the Contextualising Horizon process through an iterative design process that allows for continuous improvement. This year, we improved the writing process for our experts and adhered to deadlines for writing, review and refinement. We also actively reached out to involve our experts from a broader range of countries to cover a larger area within our Australasian region. Although we still have an over-representation of experts from the eastern Australian states, we hope to next year continue to ensure that we engage with our community widely in the region.

This year, we will also investigate if we wish to continue to produce this report yearly for the time being or if we move to a model that engages with the community every second year.

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# References

Akgun, S., & Greenhow, C. (2022). Artificial intelligence in education: Addressing ethical challenges in K-12 settings. *AI Ethics*, *2*, 431–440. https://doi.org/10.1007/s43681-021-00096-7

Alenezi, M. (2023). Digital learning and digital institution in higher education. *Education Sciences*, *13*(1), Article 88. https://doi.org/10.3390/educsci13010088

Alliance for Affordable Internet. (2022, February 28). *Advancing meaningful connectivity: Towards active and participatory digital societies*. https://a4ai.org/research/advancing-meaningful-connectivity-towards-active-and-participatory-digital-societies/

Alsobhi, H. A., Alakhtar, R. A., Ubaid, A., Hussain, O. K., & Hussain, F. K. (2023). Blockchain-based micro-credentialing system in higher education institutions: Systematic literature review. *Knowledge-Based Systems*, *265,* Article 110238. https://doi.org/10.1016/j.knosys.2022.110238

Anderson, P. J., Blue, L., Pham, T., & Saward, M. (2022). *Higher degree by research: Factors for Indigenous student success*. Springer. https://doi.org/10.1007/978-981-19-5178-7

Aroles, J., Cecez-Kecmanovic, D., Dale, K., Kingma, S. F., & Mitev, N. (2021). New ways of working (NWW): Workplace transformation in the digital age. *Information and Organization*, *31*(4), Article 100378. https://doi.org/10.1016/j.infoandorg.2021.10037

Australian Bureau of Statistics. (2023, July 26). *CPI rose 0.8 per cent in the June 2023 quarter*. https://www.abs.gov.au/media-centre/media-releases/cpi-rose-08-cent-june-2023-quarter.

Australian Government Department of Education. (2023a). *Australian universities accord: Interim report.* https://www.education.gov.au/australian-universities-accord/resources/accord-interim-report

Australian Government Department of Education. (2023b). *Aboriginal and Torres Strait Islander Higher Education Advisory Council terms of reference*. https://www.education.gov.au/aboriginal-and-torres-strait-islander-higher-education/aboriginal-and-torres-strait-islander-higher-education-advisory-council-terms-reference

Australian Institute of Aboriginal and Torres Strait Islander Studies. (2023). *Languages alive*. https://aiatsis.gov.au/explore/languages-alive#:~:text=Many%20languages-,In%20Australia%20there%20are%20more%20than%20250%20Indigenous%20languages%20including,of%20one%20language%20are%20spoken

Australian Trade and Investment Commission. (2023). *YTD June 2023 international student data available*. Retrieved November 4, 2023, from https://education.austrade.gov.au/ytd-june-2023-international-student-data-available

Australasian Academic Integrity Network. (2023). *Submission 58 to the House Standing Committee on Employment, Education and Training inquiry into the use of generative artificial intelligence in the Australian education system.* https://www.aph.gov.au/Parliamentary_Business/Committees/House/Employment_Education_and_Training/Alineducation/Submissions

Baba, Y. (2023, March 30). 15 examples of the use of mixed reality in education. *Capsule Sight*. https://capsulesight.com/mixedreality/15-examples-of-the-use-of-mixed-reality-in-education

Bearman, M., Ajjawi, R., Boud, D., Tai, J. & Dawson, P. (2023, May 6). *CRADLE Suggests… assessment and genAI.* Deakin University, Centre for Research in Assessment and Digital Learning. https://doi.org/10.6084/m9.figshare.22494178.v1

Beatty, B. (2006, October 10–12) *Designing the HyFlex world: Hybrid, flexible classes for all students* [Conference presentation abstract]. Association for Educational Communication and Technology International Conference, Dallas, TX, United States. https://aect.org/docs/2006DallasProgram.pdf

Behrendt, L. Y., Larkin, S., Griew, R., & Kelly, P. (2012). *Review of higher education access and outcomes for Aboriginal and Torres Strait Islander people*. Department of Industry, Innovation, Science, Research and Tertiary Education. https://www.education.gov.au/aboriginal-and-torres-strait-islander-higher-education/review-higher-education-access-and-outcomes-aboriginal-and-torres-strait-islander-people

Ben-Shahar, T. (2021). *Happiness studies: An introduction.* Palgrave Macmillan.

Boston, J. (2023, July 18). The crisis in tertiary education caused by inadequate funding. *Newsroom*. https://www.newsroom.co.nz/ideasroom/the-crisis-in-tertiary-education-caused-by-inadequate-funding

Bower, M., Dalgarno, B., Kennedy, G., Lee, M. J. W., & Kenney, J. (2014). *Blended synchronous learning: A handbook for educators*. Australian Government Office for Learning and Teaching. https://blendsync.org/handbook/

Breaden, J., Do, T., Moreira dos Anjos-Santos, L., & Normand-Marconnet, N. (2023). Student empowerment for internationalisation at a distance: Enacting the students as partners approach in virtual mobility. *Higher Education Research & Development*, *42*(5), 1182–1196. https://doi.org/10.1080/07294360.2023.2193728

Brownlow, C., Martin, N., Thompson, D.-M., Dowe, A., Abawi, D., Harrison, J., & March, S. (2023). Navigating university: The design and evaluation of a holistic support programme for autistic students in higher education. *Education Sciences, 13*(5), 521. https://doi.org/10.3390/educsci13050521

Bunda, T., & Barney, K. (Hosts). (2023–Present). *Indigenising curriculum in practice*. [Audio podcast]. University of Queensland. https://indigenisingcurriculum.podbean.com/

Burch, S., Khosa, A., & Ozdil, E. (2023, March 23). "Some of them do treat you like an idiot": What it's like to be a casual academic. *The Conversation.* https://theconversation.com/some-of-them-do-treat-you-like-an-idiot-what-its-like-to-be-a-casual-academic-201470

Campbell, C. (2022). Self-care and wellbeing for staff and learners. In C. Campbell, D. B. Porter, D. Logan-Fleming, & H. Jones (Eds.), *Scanning the Australian ed tech horizon: The 2021-2022 Contextualising Horizon Report* (pp. 18–20). ASCILITE. https://ascilite.org/get-involved/contextualising-horizon/

Campbell, C., Porter, D. B., Logan-Fleming, D., Jones, H. (Eds.). (2022). *Scanning the Australian ed tech horizon: The 2021-2022 Contextualising Horizon Report*. ASCILITE. https://ascilite.org/get-involved/contextualising-horizon/

Cao, L., & Dede, C. (2023). *Navigating a world of generative AI: Suggestions for educators*. Harvard Graduate School of Education, The Next Level Lab. https://bpb-us-e1.wpmucdn.com/websites.harvard.edu/dist/a/108/files/2023/08/Cao_Dede_final_8.4.23.pdf

Carey, A. (2023, April 27). University dropout rates rising as high living costs force some students to make a tough choice. *The Age*. https://www.theage.com.au/national/victoria/university-dropout-rates-rising-as-high-living-costs-force-some-students-to-make-a-tough-choice-20230426-p5d3b0.html

Cassidy, C. (2023, March 5). Urgent calls to end compulsory unpaid internships as students forced to quit due to cost of living. *The Guardian*. https://www.theguardian.com/australia-news/2023/mar/05/urgent-calls-to-end-compulsory-unpaid-internships-as-students-forced-to-quit-due-to-cost-of-living

CDOTrends Editors. (2021, October 26). Aussie university creates center for AI IoT. *CDOTrends*. https://www.cdotrends.com/story/15959/aussie-university-creates-center-ai-iot

Chan, C. K. Y., & Hu, W. (2023). Students' voices on generative AI: Perceptions, benefits, and challenges in higher education. *International Journal of Educational Technology in Higher Education, 20*(1), Article 43. https://doi.org/10.1186/s41239-023-00411-8

Cochrane, T., Narayan, V., Aiello, S., Alizadeh, M., Birt, J., Bone, E., Cowie, N., Cowling, M., Deneen, C., Goldacre, P., Sinfield, D., Stretton, T., & Worthington, T. (2022). Analysing mobile learning designs: A framework for transforming learning post COVID. *Australasian Journal of Educational Technology, 38*(4), 1–21. https://doi.org/10.14742/ajet.7997

Crompton, H., & Burke, D. (2023). Artificial intelligence in higher education: The state of the field. *International Journal of Educational Technology in Higher Education*, *20*(1), 22. https://doi.org/10.1186/s41239-023-00392-8

Daellenbach, R., Kensington, M., Maki, K., Prier, M., Welfare, M. (2022). A networked distributed model for midwifery education. In S. Chan & N. Huntington (Eds.), *Professional and practice-based learning: Vol. 34. Reshaping vocational education and training in Aotearoa New Zealand* (pp. 335–354). Springer. https://doi.org/10.1007/978-3-031-12168-5_18

Dahik, A., Lovich, D., Kreafle, C., Bailey, A., Kilmann, J., Kennedy, D., Roongta, P., Schuler, F., Tomlin, L., & Wenstrup, J. (2020, August 11). *What 12,000 employees have to say about the future of remote work*. Boston Consulting Group. https://www.bcg.com/publications/2020/valuable-productivity-gains-covid-19

Dalgarno, B. (2014). Polysynchronous learning: A model for student interaction and engagement. In B. Hegarty, J. McDonald, & S. K. Loke (Eds.), *Rhetoric and reality: Critical perspectives on educational technology – Proceedings of the 31st Annual ASCILITE Conference* (pp. 673–677). ASCILITE. https://www.ascilite.org/conferences/dunedin2014/files/concisepapers/255-Dalgarno.pdf

Desmarchelier, R. (2021, October 14). Microcredentials: What are they, and will they really revolutionise education and improve job prospects? *The Conversation*. https://theconversation.com/microcredentials-what-are-they-and-will-they-really-revolutionise-education-and-improve-job-prospects-169265

Dessauvagie, A. S., Dang, H.-M., Nguyen, T. A. T., & Groen, G. (2021). Mental health of university students in Southeastern Asia: A systematic review. *Asia Pacific Journal of Public Health, 34*(2–3), 172–181. https://doi.org/10.1177/10105395211055545

Duffy, C. (2023, May 4). University staff strike over insecure work as 'anger and discontent' builds on campus. *ABC News*. https://www.abc.net.au/news/2023-05-04/university-unions-strike-across-australia-over-pay-work/102298204

Eaton, S. E., Pethrick, H., & Turner, K. L. (2023). Academic integrity and student mental well-being: A rapid review. *Canadian Perspectives on Academic Integrity, 5*(2), 34–58. https://doi.org/10.11575/cpai.v5i2.73748

Economist Intelligence Unit. (2022). *The inclusive Internet index.* https://impact.economist.com/projects/inclusive-internet-index/2022

Economist Intelligence Unit. (2023). *Conflict over Taiwan: Assessing exposure in Asia: Which economies are most vulnerable to a potential crisis?* https://www.eiu.com/n/campaigns/asia-exposure-to-a-conflict-over-taiwan/

Edgar, A. K., Armitage, J. A., Arambewela-Colley, N., Chong, L. X., & Narayanan, A. (2023). Virtual simulated international placements as an innovation for internationalisation in undergraduate programs: A mixed methods study. *BMC Medical Education, 23*, 258. https://doi.org/10.1186/s12909-023-04260-x

Eloundou, T., Manning, S., Mishkin, P., & Rock, D. (2023). GPTs are GPTs: An early look at the labor market impact potential of large language models. *arXiv*. https://arxiv.org/abs/2303.10130

ET Online (2023, July 27). Is Australia heading towards a housing crisis for international students? *The Economic Times.* https://economictimes.indiatimes.com/nri/migrate/is-australia-heading-towards-a-housing-crisis-for-international-students/articleshow/102163088.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

Evmenova, A. (2018). Preparing teachers to use universal design for learning to support diverse learners. *Journal of Online Learning Research, 4*(2), 147–171. https://files.eric.ed.gov/fulltext/EJ1184985.pdf

Fain, P. (2020, August 26). Alternative credentials on the rise. *Inside Higher Ed*. https://www.insidehighered.com/news/2020/08/27/interest-spikes-short-term-online-credentials-will-it-be-sustained

Farra, S. L., Gneuhs, M., Hodgson, E., Kawosa, B., Miller, E. T., Simon, A., Timm, N., & Hausfeld, J. (2019). Comparative cost of virtual reality training and live exercises for training hospital workers for evacuation. *Computers, Informatics, Nursing*, *37*(9), 446–454. https://doi.org/10.1097/CIN.0000000000000540

Fiji National University. (2023). *Diversity & inclusion.* https://www.fnu.ac.fj/about-fnu/corporate-governance/diversity-inclusion/

Gartner. (2023). *What is generative AI*? Retrieved September 13, 2023, from https://www.gartner.com/en/topics/generative-ai

George, T. J., Atwater, L. E., Maneethai, D., & Madera, J. M. (2022). Supporting the productivity and wellbeing of remote workers: Lessons from COVID-19. *Organizational Dynamics*, *51*(2), Article 100869. https://doi.org/10.1016/j.orgdyn.2021.100869

Giordano, C., Brennan, M., Mohamed, B., Rashidi, P., Modave, F., & Tighe, P. (2021) Accessing artificial intelligence for clinical decision-making. *Frontiers in Digital Health, 3*. https://doi.org/10.3389/fdgth.2021.645232

Gratton, L. (2020, November 9). Four principles to ensure hybrid work is productive work. *MIT Sloan Management Review*. https://sloanreview.mit.edu/article/four-principles-to-ensure-hybrid-work-is-productive-work/

Ha, N. T. N. (2022). The involvement of industry professionals and barriers to involvement in work-integrated learning: The case of the profession-oriented higher education framework in Vietnam. *Journal of Education and Work*, *35*(1), 92–107. https://doi.org/10.1080/13639080.2021.2018408

Heffernan, M. & Abbott, L. (2023, May 14). 'Not good for Australia': Education costs rise faster than most household bills. *Sydney Morning Herald*. https://www.smh.com.au/politics/federal/not-good-for-australia-education-costs-escalate-faster-than-most-other-household-bills-20230502-p5d4xy.html

Hillier, M. (2023, March 30). A proposal for a generative AI literacy framework. *TECHE*. https://teche.mq.edu.au/2023/03/a-proposed-ai-literacy-framework/

Hopkins, J., & Bardoel, A. (2023). The future is hybrid: How organisations are designing and supporting sustainable hybrid work models in post-pandemic Australia. *Sustainability*, *15*(4), Article 3086. https://doi.org/10.3390/su15043086

Hryhorash, O., Bocharov, D., Korneyev, M., Rudyanova, T., & Hryhorash, T. (2022). The quality of higher education and its funding in countries with different levels of socio-economic development. *Knowledge and Performance Management, 6*(1), 49–61. https://doi.org/10.21511/kpm.06(1).2022.05

ICEF Monitor. (2023, April 19). Global survey shows rising costs of living are significantly affecting international student mobility. https://monitor.icef.com/2023/04/global-survey-shows-rising-costs-of-living-are-significantly-affecting-international-student-mobility/

Jacka, L. (2023). Humanizing online learning: A new framework for educational design. In T. Bastiaens (Ed.), *Proceedings of EdMedia + Innovate Learning* (pp. 881-886). Association for the Advancement of Computing in Education (AACE). https://www.learntechlib.org/primary/p/222589/.

Jacka, L., & Lindsay, J. (2022). Flexible learning and the virtual campus. In S. Wilson, N. Arthars, D. Wardak, P. Yeoman, E. Kalman, & D. Y. T. Liu. (Eds.), *ASCILITE 2022 conference proceedings: Reconnecting relationships through technology*. ASCILITE. https://doi.org/10.14742/apubs.2022.154

Jackson, D., & Bridgstock, R. (2021). What actually works to enhance graduate employability? The relative value of curricular, co-curricular, and extra-curricular learning and paid work. *Higher Education*, *81*(4), 723–739. https://doi.org/10.1007/s10734-020-00570-x

James Cook University. (2021, February 10). Remote working policy. *James Cook University.* https://www.jcu.edu.au/policy/hr-staff-development/remote-working-policy

Johinke, R., Cummings, R., & Di Lauro, F. (2023). Reclaiming the technology of higher education for teaching digital writing in a post-pandemic world.  *Journal of University Teaching & Learning Practice*, *20*(2).  https://doi.org/10.53761/1.20.02.01

Kennedy, J., Almeida, S., Gibbons, B., Clarke, R., Bicego, V., & Phelan, A. (2022). A business faculty, *Jindaola* and a path to embedding Aboriginal knowledges. *Higher Education Research & Development*, *41*(6), 1931–1945. https://doi.org/10.1080/07294360.2021.1962810

The Keystone New Zealand Property Education Trust. (2022, April 6). *The rising cost of living is hitting tertiary students hard*. https://keystonetrust.org.nz/the-rising-cost-of-living-is-hitting-tertiary-students-hard/

King-Sears, M. E., Stefanidis, A., Evmenova, A. S., Rao, K., Mergen, R. L., Owen, L. S., & Strimel, M. M. (2023). Achievement of learners receiving UDL instruction: A meta-analysis. *Teaching and Teacher Education*, *122*, Article 103956. https://doi.org/10.1016/j.tate.2022.103956

Knight, C., Olaru, D., Lee, J., & Parker, S. (2022, May 2). The loneliness of the hybrid worker. *MIT Sloan Management Review*. https://sloanreview.mit.edu/article/the-loneliness-of-the-hybrid-worker/

Kotera, Y., & Vione, K. C. (2020). Psychological impacts of the new ways of working: A systematic review. *International Journal of Environmental Research and Public Health*, *17*(14), Article 5080. https://doi.org/10.3390/ijerph17145080

Lakeman, R., Coutts, R., Hutchinson, M., Massey, D., Nasrawi, D., Fielden, J., & Lee, M. (2022). Stress, distress, disorder and coping: The impact of anonymous student evaluation of teaching on the health of higher education teachers. *Assessment & Evaluation in Higher Education, 47*(8), 1489–1500. https://doi.org/10.1080/02602938.2022.2060936

Lee, M., Coutts, R., Fielden, J., Hutchinson, M., Lakeman, R., Mathisen, B., Nasrawi, D., & Phillips, N. (2021). Occupational stress in university academics in Australia and New Zealand. *Journal of Higher Education Policy and Management, 44*(1), 57–71. https://doi.org/10.1080/1360080x.2021.1934246

Littlejohn, E., & Stanford, J. (2021). *An avoidable catastrophe: Pandemic job losses in higher education and their consequences.* The Australia Institute, Centre for Future Work. https://futurework.org.au/wp-content/uploads/sites/2/2022/11/An_Avoidable_Catastrophe_FINAL.pdf

Liu, D., & Bridgeman, A. (2023, July 12). *What to do about assessments if we can't out-design or out-run AI?* University of Sydney. https://educational-innovation.sydney.edu.au/teaching@sydney/what-to-do-about-assessments-if-we-cant-out-design-or-out-run-ai/

Lodge, J., Matthews, K., Kubler, M., & Johnstone, M. (2022). *Modes of delivery in higher education*. Department of Education. https://www.education.gov.au/higher-education-standards-panel-hesp/resources/modes-delivery-report

Ludlow, M., & Macdonald-Smith, A. (2023, May 25). Power bills to jump as much as 25pc (again). *The Australian Financial Review*. https://www.afr.com/companies/energy/australians-power-bills-to-jump-as-much-as-25pc-again-20230524-p5dawm

Ma Rhea, Z. M., & Russell, L. (2012). The invisible hand of pedagogy in Australian Indigenous studies and Indigenous education. *The Australian Journal of Indigenous Education*, *41*(1), 18–25. https://doi.org/10.1017/jie.2012.4

Machin, M. A. (2020). Enhancing wellbeing for academics. *InPsych, 42*(1). https://psychology.org.au/for-members/publications/inpsych/2020/february-march-issue-1/enhancing-wellbeing-for-academics

Matthews, S., Cavanaugh, C., & Wilson, P. H. (2023). Multiple means of representation? A critical analysis of universal design for learning checkpoint 1.2. *Policy Futures in Education*, *21*(2), 190–204. https://doi.org/10.1177/14782103221097514

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record, 108*(6), 1017–1054. https://doi.org/10.1111/j.1467-9620.2006.00684.x

Moore, S., & Ireland, L. (2012). *For the development of transformative pedagogies through 'courageous conversations' within the cultural interface to motivate student engagement and promote reconciliation* [Citation for Outstanding Contributions to Student Learning]. James Cook University. https://www.jcu.edu.au/__data/assets/pdf_file/0017/121085/jcu_111261.pdf

Nakata, M. (2007). The cultural interface. *The Australian Journal of Indigenous Education*, *36*(S1), 7–14. https://doi.org/10.1017/S1326011100004646

Naidu, S., & Roberts, K. (2018). Future proofing higher education in the Pacific with open and flexible learning. *Journal of Learning for Development*, 5(3). https://doi.org/10.56059/jl4d.v5i3.309

Ng, D. T. K., Leung, J. K. L., Chu, S. K. W., & Qiao, M. S. (2021). Conceptualizing AI literacy: An exploratory review. *Computers and Education: Artificial Intelligence, 2*. https://doi.org/10.1016/j.caeai.2021.100041

NHMRC. (2022). *MoodGYM: Case study.* National Health and Medical Research Council. https://www.nhmrc.gov.au/sites/default/files/documents/Case%20studies/moodgym-impact-case-study.pdf

Norton, A. (2022, February 11). Universities had record job losses, but not as many as feared – and the worst may be over. *The Conversation.* https://theconversation.com/universities-had-record-job-losses-but-not-as-many-as-feared-and-the-worst-may-be-over-176883

Parong, J., & Mayer, R. E. (2021). Cognitive and affective processes for learning science in immersive virtual reality. *Journal of Computer Assisted Learning*, 37(2), 226–241. https://doi.org/10.1111/jcal.12482

Patty, A. (2021, December 14). Uni 'hot-desking' plan expected to save $11 million. *Sydney Morning Herald*. https://www.smh.com.au/education/uni-hot-desking-plan-expected-to-save-11-million-20211208-p59fqz.html

Precel, N. (2023, July 10). Students choosing insecure work over study as cost of living bites. *The Sydney Morning Herald.* https://www.smh.com.au/education/more-students-choose-insecure-work-over-study-as-cost-of-living-bites-20230704-p5dlqe.html

Poethke, U., Klasmeier, K. N., Radaca, E., & Diestel, S. (2023). How modern working environments shape attendance behaviour: A longitudinal study on weekly flexibilization, boundaryless work and presenteeism. *Journal of Occupational and Organizational Psychology*. https://doi.org/10.1111/joop.12437

Rao, K., Gravel, J., Rose, D., & Tucker-Smith, N. (2023). Universal design for Learning in its 3rd decade: A focus on equity, inclusion, and design. In R. J. Tierney, F. Rizvi, & K. Ercikan (Eds.), *International encyclopedia of education* (4th ed., pp. 712–720). Elsevier. https://doi.org/10.1016/B978-0-12-818630-5.14079-5

Rathnayaka, P., Mills, N., Burnett, D., De Silva, D., Alahakoon, D., & Gray, R. (2022). A mental health chatbot with cognitive skills for personalised behavioural activation and remote health monitoring. *Sensors, 22*(10), Article 3653. https://doi.org/10.3390/s22103653

Razia, B. (2022). A systematic review of the use of blockchain in higher education. In B. Alareeni & A. Hamdan (Eds.), *Lecture notes in networks and systems: Vol. 485. Impact of artificial intelligence, and the fourth industrial revolution on business success* (pp. 631–648). Springer. https://doi.org/10.1007/978-3-031-08093-7_42

Ribiero, C. (2020, June 20). 'It's awful for our intellectual life': Universities, COVID-19 and the loss of expertise. *The Guardian*. https://www.theguardian.com/australia-news/2020/jun/20/its-awful-for-our-intellectual-life-universities-covid-19-and-the-loss-of-expertise

Ross, J. (2023, February 16). How should Australia address students' cost of living crisis? *Times Higher Education*. https://www.timeshighereducation.com/depth/how-should-australia-address-students-cost-living-crisis

Royal Melbourne Institute of Technology. (2023). *Inclusion, diversity, equity and access at RMIT*. https://www.rmit.edu.au/about/our-values/diversity-and-inclusion

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness.* Guilford Publications.

Sanci, L., Williams, I., Russell, M., Chondros, P., Duncan, A.-M., Tarzia, L., Peter, D., Lim, M. S. Y., Tomyn, A., & Minas, H. (2022). Towards a health promoting university: Descriptive findings on health, wellbeing and academic performance amongst university students in Australia. *BMC Public Health, 22(*1). https://doi.org/10.1186/s12889-022-14690-9

Seligman, M. (2018). PERMA and the building blocks of well-being. *The Journal of Positive Psychology, 13*(4), 333–335. https://doi.org/10.1080/17439760.2018.1437466

Selvaratnam, R. (2022). *ACODE Learning Modalities 2022: An ACODE Whitepaper*. Australasian Council on Open, Distance and eLearning. https://www.acode.edu.au/pluginfile.php/12503/mod_resource/content/1/ACODElearningmodes2022.pdf

Shelton, T. (2023, September 2). Conflicting histories: The stories we're taught in school can shape our national identity, but how accurate are they? *ABC News.* https://www.abc.net.au/news/2023-09-03/curriculum-of-conflicting-histories-taught-in-schools-worldwide/102618832

Singapore Government. (2023, March 23). *Financial support for Singaporean students at every stage of education.* https://www.gov.sg/article/financial-support-for-singaporean-students-at-every-stage-of-education

TechRepublic. (2020). *Transitioning Asia-Pacific to a new normal of work*. Microsoft. https://news.microsoft.com/wp-content/uploads/prod/sites/43/2020/07/Whitepaper-Transitioning-Asia-to-a-New-Normal-of-Work.pdf

Teng, A. (2023, April 28). NUS study finds gap in parents' understanding of mental distress as 1 in 3 youth reports symptoms. *The Straits Times.* https://str.sg/ioTX

Tran, L. T., Nguyen, D. T. B., Blackmore, J., He, B., & Vu, H. Q. (2023). COVID-19, geopolitics and risk management: Towards framing a reciprocal, coordinated, responsive and empathetic international education sector. *Policy Futures in Education*, 21(4), 423–44. https://doi.org/10.1177/14782103231163480

Traxler, J. (2016, March 1). What killed the mobile learning dream? *Medium*. https://medium.com/@Jisc/what-killed-the-mobile-learning-dream-8c97cf66dd3d

Traxler, J. (2021). A critical review of mobile learning: Phoenix, fossil, zombie or …? *Education Sciences, 11*(9), 525. https://doi.org/10.3390/educsci11090525

Uele, M. F. (2023). *The effects of mindfulness meditation on the well-being of Pasifika students* [Master's thesis, Massey University]. Massey University Theses and Dissertations. http://hdl.handle.net/10179/18284

UNESCO. (2016). *Education 2030: Incheon declaration and framework for action for the implementation of Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*. https://unesdoc.unesco.org/ark:/48223/pf0000245656.locale=en

United Nations. (2007). *United Nations declaration on the rights of indigenous peoples*. https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

Universities Australia. (2022). *Indigenous strategy 2022-25*. https://www.universitiesaustralia.edu.au/wp-content/uploads/2022/03/UA-Indigenous-Strategy-2022-25.pdf

Universities New Zealand. (2023). *Advancing international education.* https://www.universitiesnz.ac.nz/sector-research/advancing-international-education

The University of New South Wales. (2020, July 2). *Psychological Literacy.* https://www.student.unsw.edu.au/psychological-literacy

University of South Australia. (n.d.). *Working from home*. https://i.unisa.edu.au/staff/ptc/safety-and-wellbeing/covid-19-staff/working-from-home/

The University of Tokyo. (2022). *The University of Tokyo statement on diversity & inclusion*. https://www.u-tokyo.ac.jp/en/about/di01.html

The University of Western Australia. (n.d.). *Build wellbeing skills.* https://www.uwa.edu.au/students/Campus-life/Volunteering/Health-Promotions

Van der Hijden, P., & Martin, M. (2023). *Short courses, micro-credentials, and flexible learning pathways: A blueprint for policy development and action* (Policy paper). UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000384326.locale=en

Victoria University of Wellington. (2023, March 15). *Student wellbeing outcomes framework*. https://www.wgtn.ac.nz/students/support/pastoral-care-code/wellbeing-outcomes-framework

Walter, M., & Aitken, W. (2017). Situating Indigenous knowledges and governance within the academy in Australia. In E. A. McKinley & L. T. Smith (Eds.), *Handbook of indigenous education* (pp. 1–17). Springer. https://doi.org/10.1007/978-981-10-1839-8_30-1

Wang, L. (2022). T*owards a common higher education space in Southeast Asia*. UNESCO. https://bangkok.unesco.org/content/towards-common-higher-education-space-southeast-asia

Western Sydney University. (2023, June 20). *Staff drop in*. https://www.westernsydney.edu.au/estate_planning_strategy/staff_dropin

Wong, B. T., Li, K. C., Chan, H. T., & Cheung, S. K. (2023). HyFlex learning research and practice: A longitudinal analysis. *Sustainability*, 15(12), Article 9699. https://doi.org/10.3390/su15129699

Working Family and Student Financial Assistance Agency. (2023). *Tertiary Student Finance Scheme – Publicly-funded programmes (TSFS)*. https://www.wfsfaa.gov.hk/en/sfo/postsecondary/tsfs/level.php

Yusof, Y., Chan, C. C., Chan, C. C., Hillaluddin, A. H., Ramli, F. Z. A., Ramli, F. Z. A., & Saad, Z. M. (2019). Improving inclusion of students with disabilities in Malaysian higher education. *Disability & Society*, *35*(7), 1145–1170. https://doi.org/10.1080/09687599.2019.1667304