

NAVIGATING MULTIFACETED COMPLEXITIES: INTERNATIONAL STUDENTS' ADAPTATION TO ONLINE LEARNING IN AUSTRALIA DURING COVID-19

Mehdi Ebrahimi

<https://orcid.org/0009-0003-7807-5045>

m.ebrahimi@skillsacademia.org

ABSTRACT

The global outbreak of the SARS-CoV-2 (COVID-19) pandemic precipitated an unprecedented disruption in educational systems worldwide, impacting students profoundly. The abrupt shift to online learning introduced a multitude of challenges, particularly for international students. This paper aims to delve into the existing literature to gain a deeper understanding of the online learning experiences, readiness, and eLearning challenges faced by international students during the COVID-19 pandemic. Focusing primarily on the context of international students in Australia, this review encompasses a selection of research published between early 2020 and late 2023, providing a broad overview of the available literature during this period. Drawing on the insights from the literature, this paper engages in comprehensive discussions, followed by a set of recommendations. These findings hold significance for higher education providers, educators, and policymakers seeking insights into improving effectiveness of eLearning practices, online teaching, student engagement, student welfare, and support practices and strategies aimed at better assisting international students. The article advocates for a more profound acknowledgment and efficient addressing of the diverse challenges and needs of international students in the midst of major disruptions and unfortunate events such as a global pandemic.

Keywords: COVID-19, International students, Challenges, eLearning, Online teaching, Higher education

INTRODUCTION

The global COVID-19 pandemic introduced an unparalleled disruption to the field of education on a global scale. In response to social distancing measures implemented in numerous countries, including Australia (Thacker et al., 2021), traditional face-to-face courses and educational services were temporarily suspended. In their place, a rapid transition to online learning, sometimes referred to interchangeably as “distance learning”, “eLearning”, “distance education”, “virtual learning”, and “online education”, became the primary mode of instruction.

Before the COVID-19 pandemic, the results of the Australian Government's 2016 International Student Survey revealed that 94% of respondents viewed the reputation of the education system in Australia as a key factor, and 93% of survey participants highlighted personal safety and security as significant considerations in deciding to study in Australia (International Education, 2016). During the COVID-19 pandemic, Australian universities faced significant challenges, particularly regarding governance and their reliance on international students (Thatcher et al., 2020). The higher education sector was predominantly occupied with addressing ongoing uncertainties, implementing health and safety protocols (Cheng et al., 2020), addressing administrative and workforce-related issues (Littleton & Stanford, 2021), ensuring regulatory compliance (Gamage et al., 2020), and mitigating the financial repercussions of the pandemic (Carnegie et al., 2021).

International students bore the brunt of what can be described as a "double dose of stressors" (Tseu et al., 2023, p.1). This encompassed not only the typical challenges of university life but also the unique obstacles and experiences associated with studying in a foreign country during a global pandemic (Kristiana et al., 2022). International students' higher tuition fees, compared to their domestic counterparts, significantly contributed to bolstering the financial stability of Australian institutions for a long time prior to the COVID-19 pandemic (Welch, 2022). International education constitutes one of Australia's largest export sectors (Lucas, 2023), and it remains a significant contributor to the Australian economy while providing a substantial source of income for higher education institutions (Department of Education, 2022).

Despite the significant contribution of the international student market to tertiary education revenue in Australia, comprehensive research investigating the eLearning experiences, adaptability, challenges, and vulnerabilities of international students during times of crisis, characterised by distress and uncertainty, only gained momentum with the onset of the COVID-19 pandemic. Even in the early years of the post-pandemic period, this aspect remains relatively underexplored in the literature.

This paper seeks to understand how international students in university settings adapted to eLearning and online education, assessing their readiness and unique challenges encountered during the COVID-19 pandemic, with a

specific focus on those in Australia. The insights and discussions in this paper draw from a review of the literature, inclusive of research published between early 2020 and late 2023, within the context of international students.

THEORETICAL PERSPECTIVE

Many educators worldwide grapple with challenges related to student motivation—a complex construct rooted in human needs. Maslow's (1943) *Theory of Human Motivation*, also known as the Theory of Human Needs, posits hierarchical needs fulfillment, where addressing unsatisfied basic needs is a natural desire and a prerequisite for moving towards satisfying more advanced needs. The five needs in Maslow's hierarchy are 1) physiological, 2) safety, 3) love and belonging, 4) esteem, and 5) self-actualisation (Maslow, 1958). Echoing Maslow's focus on belonging and esteem needs as well as the need for self-actualisation, Alderfer's *ERG Theory* emphasises existence, relatedness (including interpersonal relationships and social interactions), and growth. Alderfer believes that motivation may not strictly depend on satisfying these needs in a specific order (Alderfer, 1969). Nevertheless, both theories underscore the importance of satisfying the human need for belonging, connectedness, recognition and social interactions.

Belonging, broadly conceptualised as a fundamental human need, is intricate in its structure, involving various components, predictors, and outcomes (Allen et al., 2022; Allen et al., 2021; Baumeister & Leary, 1995). The recognised phenomenon referred to as the "*desire for social connection*" has been identified at both neural and peripheral biological levels as well as in behavioural and social dimensions (Allen et al., 2021; Brewer, 2007; Kross et al., 2007). The four dimensions of human involvement as outlined in the work of Pollini (2005) can be helpful to delve into the empirical aspects of human involvement and belonging. The dimensions or states in the involvement of individuals in the context of human relations include (1) territorial location, (2) ecological participation, (3) social belonging, and (4) cultural commonality (Pollini, 2000).

The individual's territorial location delineates the restricted area where they, as an organism, are positioned and engage in their primary daily activities. Ecological participation encompasses a form of mutual relational connection among the individual members of a human population residing, whether permanently or temporarily, in the same territorial region. Social belonging, or the condition in which an individual, through taking on a role, is identified by their inclusion in the social collective. Cultural commonality diverges from social belonging as it entails individuals sharing value systems (Pollini, 2005). Discussions on student belonging have primarily revolved around relational belonging, as indicated by Chen and Zhou (2019) and Slaten et al. (2016). This mostly entails a sense of belonging that revolves around interactions of students within the learning environment, such as a campus (Cena, 2021). International students are integral to the learning environment, and as highlighted earlier in this section, the need for recognition, interaction, and connection to the broader community, or as Cooley (1902) put it, the need to satisfy a *sense of we-ness* must be acknowledged and addressed.

The lack of a sense of belonging, where individuals are aware that they are not fully accepted for various reasons, combined with uncertainty, results in unmet basic human needs (Svensson, 2022). Social belonging entails what has been termed the *sense of affinity* (Shils, 1975) or the *we-feeling* (MacIver & Page, 1949). The feeling of belonging is an innate experience that significantly affects one's wellbeing. Low sense of belonging is said to lead to declined psychological wellbeing (Arslan & Allen, 2021). Lack of a sense of belonging contributes to diminished engagement with studies in university students (Morris, 2021). Moreover, studies suggest that enhanced psychological wellbeing correlates with improved academic performance (Coronel et al., 2020). There are close associations between social belonging and the *Theory of Social Constructivism*. In accordance with social constructivism (Vygotsky, 1978), the learning process within small groups is socially contextualised.

Social constructivists assert that the collaborative process of sharing individual perspectives, referred to as collaborative elaboration (Van Meter & Stevens, 2000), leads to the joint construction of understanding among learners, emphasising that this construction is not achievable independently by individuals. Moreover, Vygotsky (1978) introduced the concept of *Zone of Proximal Development (ZPD)*, underscoring the facilitative role of instructors who initially provide support by using scaffolding techniques and gradually decrease it to foster independent learning in the framework of social constructivism.

Within the framework of social constructivism, learning is intricately connected to both social and cultural contexts, interweaving with the individual and subjective processes of learners (Carwile, 2007). In this context, the presence of a sense of belonging, the fulfillment of esteem and social interaction needs, and collaborative efforts with peers to construct knowledge play crucial roles in shaping students' learning experiences and influencing the anticipated outcomes. The role of educators, equally significant, profoundly impacts students' learning experiences, specifically in terms of designing teaching and learning activities, creating visual aids, and fostering a relaxed atmosphere (Erciyes, 2020). Some scholars have suggested that students instructed using a

social constructivist approach exhibit greater self-efficacy compared to those taught through traditional lecture methods (Glasson & Lalik, 1993).

According to Bandura (1977, 1986, 1997), *self-efficacy*, which is rooted in social cognitive theory, is the degree to which an individual believes in their ability and capacity to executive behaviours to master a task or succeed under specific conditions. Self-efficacy is identified as a fundamental factor in motivating behaviour (Bandura, 1989). Marzillier and Eastman (1984) voiced a notable disagreement with Bandura, specifically in their conceptualisation of self-efficacy's theoretical framework. While Bandura predominantly emphasises outcome expectations, guiding our focus toward outcome assessment in evaluating self-efficacy, Marzillier and Eastman (1984) insist on a dissimilar stance, advocating for an equal recognition of both outcome and personal self-efficacy as equally pivotal in fostering transformative change. Nevertheless, in the domain of education, some scholars have reported an association between self-efficacy and the usage of computer technology (Işman & Çelikli, 2009), and an association exists where digital skills self-efficacy is crucial for online learning experiences among learners from diverse demographic backgrounds (Kaspar et al., 2023).

Online learning establishes a distinct cultural context of its own (Anderson, 2008). Benedikt (1991, as cited in Anderson, 2008) argues that online space “has a geography, a physics, a nature, and a rule of human law” (p.123). In online learning, the concepts of academic performance, learner engagement, and scaffolding learning become intricate, encompassing various dimensions (Wu, 2023). In this context, fostering self-efficacy of learners (Stephen & Rockinson-Szapkiw, 2021) and educators (Billett et al., 2023; Mok & Moore, 2021), social interactions, student-teacher and peer relationships (Yu et al., 2023), and creating conditions in which learners better adapt to the virtual environment and overcome potential challenges becomes crucial. Furthermore, employing an instructional design and approach that enhance learners' engagement not only improves their overall satisfaction but also contributes to the cultivation of positive learning outcomes (Stavredes & Herder, 2013). Hence, learners' engagement with the learning experience is interconnected with the learning environment, instructional tools, facilitation approach, social interactions, self-efficacy, motivation, and elements that support their adaptation and behavioural engagement in online learning, which, in turn, synergise knowledge construction (Han et al., 2021; Han & Wang, 2021).

Mayer's *Cognitive Theory of Multimedia Learning*, widely applied in eLearning, promotes the utilisation of multimedia instructional messages without overloading the learner's cognitive system (Mayer, 2014). Clark and Mayer (2016) argue that multimedia learning is a crucial principle within eLearning. According to their perspective, integrating two formats from audio, visual, and text, rather than utilising only one or all three, facilitates deeper learning. Likewise, Cope and Kalantzis's (2017) *e-Learning Ecologies* expound on the role of new technologies in knowledge representation, making the case that multimodal learning—emphasising visual, auditory, and kinaesthetic engagement—is a key aspect of engaging learners with different learning styles. Aligned with emerging eLearning frameworks are the concepts of gamification and game-based learning (Sandrone & Carlson, 2021), which scholars emphasise for their imperative role in guiding real-time adaptive scaffolding (Emerson et al., 2020) and increased levels of student learning, motivation, and engagement as a result of the reward structure in these innovative learning techniques (Hartt et al., 2020; Park et al., 2019).

From a social constructivist perspective, some studies indicate that integrating media artefacts, video projects, and blog entries into the learning experience enhances students' environmental awareness and perceived need for activism (Karahan & Roehrig, 2015). Moreover, behaviourist learning theories, speculating on the process of learning, propose that rewards and reinforcement also contribute to learning experiences and performance of learners (Yusra et al., 2022).

eLearning is widely recognised as the use of both software-based and online learning, while in sectors such as Business, Higher Education, the Military, and Training, it specifically refers to a range of online practices (Nicholson, 2007). The incorporation of e-learning and instructional tools for promoting self-regulated learning (Garcia et al., 2018) and the integration of interactive multimedia to enhance student learning outcomes in online education have become essential components for improving overall student achievements (Khamparia & Pandey, 2018). Furthermore, learning and teaching involve a variety of stakeholders, primarily learners and educators/instructors. Educators' proficiency in ICT skills for both synchronous and asynchronous delivery, coupled with their pedagogical approach, significantly contribute to shaping students' active learning experiences (Krassadaki et al., 2022; Jimoyiannis, 2010).

An important theoretical framework that has emerged to guide research in developing educators is the *Technological Pedagogical Content Knowledge (TPACK)* developed by Mishra and Koehler (2006). The TPACK model emphasises the role of content, pedagogy, and technology, as well as the integration of innovative tools (Mishra and Koehler, 2006) and the development of digital skills of educators for effective teaching (Mouza et al.,

2014). Other researchers have proposed similar ideas on the relationship between technology and pedagogy (e.g., integration literacy by Gunter & Baumbach, 2004) and the *Technology Enhanced Student-Centred Learning* (Hannafin & Land, 1997; Kang et al., 2015). At the heart of most of these contemporary frameworks and models are strategies to develop educators' skills and knowledge, as well as the utilisation of innovative tools for fostering active learning and creating a motivating learning environment, integral to fostering an enriched and dynamic educational experience for students (Jaipal-Jamani & Figg, 2015; Ullah et al., 2019).

LITERATURE REVIEW

Understanding the Impact of COVID-19 on International Student Experiences

In 1951, under the Colombo Plan, Australia actively fostered international education collaborations, representing a strategic investment to exercise soft power and diplomacy (Lowe, 2015). This approach allowed Australia to pursue diverse goals, such as nurturing understanding and establishing relationships with various countries and their economies. Consequently, international students have since become integral to the Australian education system and economy. In recent years, both state and federal governments in Australia have enacted legislation, providing university leaders the additional autonomy to establish offshore campuses and conduct targeted marketing, resulting in a substantial increase in international student enrolment (Lucas, 2023). The Tertiary Education Quality and Standards Agency (TEQSA, 2023) provides comprehensive information through its National Register, the authoritative source detailing the status of registered higher education providers in Australia. As of 2023, it reports the operation of 202 higher education providers in the country, including 42 Australian universities, 153 Institutes of Higher Education, 6 university colleges, and 1 overseas university (TEQSA, 2023).

In Australia, the first case of coronavirus (2019-nCoV) was reported in Victoria on 25 January 2020, with initial border restrictions implemented by various state and territory governments starting on 19 March 2020 (Australian Parliament House, 2023). According to statistics from the Australian government's Department of Education, between January and December 2020, there were a total of 687,023 international students enrolled in various courses across the country (Department of Education, 2023). This number decreased to 572,349 for the same period in 2021, marking a 17% decline in international student enrolment compared to the previous year. It is noteworthy that the COVID-19 pandemic began to significantly impact the \$37.5 billion in annual revenue associated with international education in Australia (Hurley, 2020).

Most international students enrolled in Australian universities and higher education institutions are made aware of specific visa conditions that require their attendance at a minimum of 80% of on-campus face-to-face classes throughout their studies (Department of Home Affairs, 2023; TEQSA, 2022). Compliance with this visa condition not only ensures students' progress in their studies but also grants them access to various benefits, including on-campus transition activities and orientation programs (Penman et al., 2021; Townsend & Huay, 2008), on-campus learning communities (Fronek et al., 2021), social events, networking opportunities (Wilcox & Winn, 2005), and access to campus facilities such as laboratories, accommodation, and recreational and wellness activities (Devi et al., 2016; Stenson et al., 2022).

While most universities in Australia initially began the new academic year in 2020 with a 'business as usual' approach (Pather et al., 2020), the unexpected disruptions and subsequent restrictions caused by the pandemic compelled the majority of Australian universities to shift to online delivery for their classes. A similar situation was observed in Europe, where the European University Association (EUA) estimated that 90% of higher education institutions in Europe transitioned to delivering all or most of their classes online (Gaebel, 2020).

In Australia, the challenges faced by students, particularly international students, during the pandemic were substantial. The exclusion of international students from federal government relief packages and income support left them in an exceptionally vulnerable position during their studies (Farbenblum & Berg, 2021; Gallagher et al., 2020; Nguyen & Balakrishnan, 2020). As a result of the pandemic and associated lockdown laws, international students were compelled to temporarily adapt to an online learning model (Tseu, 2023) while simultaneously experiencing significant reduced work hours, or job loss (Hastings et al., 2023) as well as risk of homelessness (Cortis & Blaxland, 2021; Fronek et al., 2021; Nguyen & Balakrishnan, 2020).

Even though the practice of combining face-to-face and online learning delivery modes, often referred to as blended learning, is not a novel concept (Stacey & Wiesenbergs, 2007) and that online learning and distance education, which allow both domestic and international students to engage in learning remotely, have been in existence for three decades (Shea, 2020), it was the multifaceted challenges posed by the pandemic and the responses of government departments and institutions that had a significant impact on international students in Australia during this unprecedented period (Qi & Ma, 2021).

Uncertainty and Value for Money Concerns

During the pandemic, the 'watch and wait' approach adopted by most universities created considerable distress among staff and students due to the apparent lack of decisive action (Pather et al., 2020). This situation was further compounded for international students in Australia when they were confronted with the statement made by Australia's Prime Minister, on the 3rd of April 2020, suggesting that international students should 'go home' (Fronek et al., 2021). This intensified the uncertainty they were already experiencing due to the perceived lack of decisive action on the part of institutions and the Australian Government's announcement, which prioritised its citizens and encouraged international students who couldn't support themselves during the pandemic to leave Australia (Ross, 2020).

The 2018 International Student Survey reported an overall university satisfaction rate of 89% among international students in Australia (International Education, 2018). However, earlier studies conducted before the pandemic had also suggested that international students' experiences in Australia had been impacted by a limited sense of social integration and belongingness (Arkoudis et al., 2019). International students in Australia had previously reported that places where they received respect and were accepted improved their feelings of belonging (van Gijn-Grosvenor & Huisman, 2019). Although the literature suggests that the cost of getting belonging wrong is not easily quantifiable (Kondonijakos, 2021), it is not unreasonable to propose that the announcement at the onset of the COVID-19 pandemic may have exacerbated international students' already challenging situation, potentially negatively impacting their sense of belonging.

It is plausible to posit that such announcements, depending on the gravity of the situation, can potentially induce severe uncertainty, fear, stress and anxiety among international students. This was notably evident in Australia, as demonstrated by an empirical study conducted by Dodd et al. (2021). The study collected responses from 787 university students (aged 18 or older) through an online cross-sectional survey to investigate the psychological wellbeing and academic experiences of university students during the COVID-19 pandemic. The findings of their study (Dodd et al., 2021, p. 6) indicated that, when comparing the psychological wellbeing of domestic students and international students, "future anxiety was higher among international students ($M = 3.83$ international vs. 3.50 domestic, $p = 0.001$)".

Similarly, the sense of uncertainty and helplessness experienced by international students in Australia became evident in a study conducted by Coffey et al. (2020). One of the interview participants highlighted the profound sense of lost belonging experienced during uncertain and distressing times, especially without adequate support:

When I lost all my work and then heard the Prime Minister say, "go home," I say, why do I stay in a country where I'm not wanted? They don't want me. I have no help (p.1342).

The 'I have no help' feedback from an international student in Coffey et al.'s study, as discussed above, contradicts suggestions from pre-Covid Australian government reports. For example, Lawson (2012), in a report by Australian Education International (AEI), an Australian government initiative, indicated that "most international education providers offer a range of support services for their domestic and international students, and as the international student surveys conducted by AEI have shown, when they are used, these support services generally receive high levels of satisfaction" (Lawson, 2012, p. 16).

Expanding on this discussion, the sentiment expressed in the student comment 'when I lost all my work' in Coffey et al.'s study points to a connection with one of the indicators of migrants' sense of thriving and flourishing. A study conducted by researchers at La Trobe University in Australia, published just before the pandemic and based on a national online survey of 1446 migrants to Australia, revealed that migrants associated positive feelings and a sense of flourishing with identifying as being Australian, satisfaction in relationships, and the source of income (du Plooy et al., 2019). Therefore, 'when I lost all my work,' indicating that the student had lost sources of income, suggests a potential impact on the feelings of flourishing and thriving, aligning with findings from the study by researchers at La Trobe University.

Drawing from the works of Lawson (2012) and Du Plooy et al. (2019), in conjunction with the research findings presented by Coffey et al. (2020), one could argue that international students in Australia were likely satisfied with the support they received in the pre-COVID years. Nevertheless, it seems that circumstances underwent a significant change for international students during the pandemic.

An issue affecting international students pertained to their online learning experience, including class duration and education quality, which sometimes did not align with the expectations and needs of these students (Lin & Nguyen, 2021). According to a report by Martin (2020) from the Tertiary Education Quality and Standards Agency (TEQSA), published in November 2020, the disruptions and class rescheduling resulting from the sudden shift to

online learning during the pandemic, as well as the shorter duration of online classes compared to traditional on-campus classes, had an adverse impact on international students' satisfaction. The report revealed that:

The students expressed feelings of unsettlement and many commented that they didn't feel they were receiving 'value for money' from their online tuition. This was particularly the view of overseas students (Martin, 2020, p.10).

These insights from the literature underscore the significance of promoting open communication and dialogue among government organisations and students, institutions and students, as well as students and teachers. They emphasise the necessity of providing students with tools and platforms to voice their concerns, offer feedback, and express their viewpoints (Ashton-Hay & Williams, 2023; Barkas et al., 2022). Additionally, these insights from the literature highlights the significance of university public communications for crises response (Zhang et al., 2022) which should take into consideration the vulnerability of the international student population during unfortunate events such as the COVID-19 pandemic (Qi & Ma, 2021).

It is worth noting that the academic literature still lacks comprehensive exploration and in-depth insight into the impact of government announcements, crises management, institutional communications, and internal notifications (e.g., from educators, faculty, and administration) on international students, and whether student voice, feedback, and concerns were adequately factored into the decision-making processes.

Psychological Distress, Social Support, and Students' Interest in their Studies

Unsurprisingly, the COVID-19 pandemic prompted extensive research and investigation into various facets of student learning experiences during this unprecedented global crisis. A multitude of studies delved into the psychological (Antwi et al., 2022; Blankenship & Jones, 2021; Schartner, 2023) and sociocultural (Mbous et al., 2022; Tseu et al., 2023) ramifications of the pandemic on students, encompassing both domestic and international cohorts. International students, however, bore a heavier burden, grappling with fear of COVID-19, academic stress, loneliness (Kivelä et al., 2022), coupled with self-isolation and travel restrictions, which significantly impacted them (Dingle et al., 2022).

Online learning brings forth practical advantages, such as on-demand access from anywhere, flexibility and convenience (Du et al., 2022; Yan et al., 2021), and the elimination of commutes, saving both time and money for learners (Chen, 2023). Nevertheless, it can also be isolating. As noted by Duncan and Young (2009, p.21), "life events may hit online students particularly hard as frequently they have no access to the support systems often available to campus." Research has indicated that a lack of social support, limited social interactions, hindered mental growth, and insufficient peer support can predict poor educational performance (Abdullah & Kauser, 2022).

Some studies exploring the role of social support in children, have shown a positive correlation between social support and hope levels (Sahranc, 2018). In an academic context, social support, positive beliefs about the future, and hope have been found to predict improved academic performance and increased life satisfaction among university students (Rand et al., 2020). The significance of social support and nurturing relationships in the context of online learning during times of crises came to the forefront in a study conducted by Lin and Nguyen (2021) within the Australian higher education institutions. Their research delved into the viewpoints of international students regarding eLearning during the pandemic, revealing a profound facet of their experiences. Through the utilisation of the Autoethnography approach—an immersive qualitative research method rooted in self-reflexivity (Tracy, 2013) the study uncovered the depth to which some international students in Australia found empowerment through their positive interactions with educators, particularly in the face of the challenges posed by the pandemic. As evident from an extract of results from their study, the need for more effective strategies to foster connections among students is underscored.

Writing to the tutor on a regular basis helps me maintain a level of motivation, especially when the tutor always replies to me positively. However, she did not make any connections with peers and I explored the course alone. I would feel motivated for days and immersed myself into the knowledge. These moments were so enjoyable that I could forget the fact that I am isolated in a small room (Lin & Nguyen, 2021, p.247).

The findings of another study support the notion of empowerment and the positive influence of lecturers on their students, as highlighted in Lin and Nguyen's study mentioned above. Gunasekara et al. (2022) conducted research using focused group interview method to collect data from undergraduate students at an Australian university. While the study did not explicitly specify what percentage of interview participants were international students, the results indicated that lecturers' emotional intelligence, understanding of students' struggles, and expressing empathy were crucial in providing support to students. A student feedback excerpt serves as a testament to the positive impact of these initiatives, with a student noting, "One of the lecturers provided a session prior to the exam, just trying to relax us. So, I think some of them really did a great job in supporting students" (Gunasekara et al., 2022, p. 117).

Despite the positive experiences highlighted earlier, some studies have indicated that many students encountered challenges in their personal and social wellbeing during the COVID-19 pandemic. These challenges were reflected in heightened instances of alcohol consumption, binge-eating, clinical insomnia, and depression, as reported in studies conducted by Antwi et al. (2022), Buckner et al. (2022), Kim et al. (2022), Kivelä et al. (2022), Tseu et al. (2023), and Zhang et al. (2021). A study conducted by Al-Oraibi et al. (2022), which collected data through conducting eight online focus groups with international students ($n = 29$) and semi-structured interviews with university staff ($n = 17$), revealed evidence suggesting that despite raising mental health concerns among international students during the COVID-19 pandemic, they reported that they did not access counselling services. Staff attributed this to “the perceived stigma around mental health in certain cultural groups” (p.1). This highlights the importance of social support, student-student and student-teacher interaction opportunities, and a supportive online learning community in the face of distress and uncertainty so students can better adjust to eLearning under difficult circumstances.

Another study by Ben Salah et al. (2023) investigated the relationship between uncertainty and symptoms of depression and anxiety during the COVID-19 pandemic. It comprised 3786 survey responses from 94 different countries and found evidence suggesting that social support mitigated the link between uncertainty and symptoms of depression and anxiety. Other researchers support these findings and speculate that individuals' self-efficacy and their ability to respond to stressors, such as COVID-19, may be improved when their perception of available social support is positive, and they feel there is support available when needed (Özmete & Pak, 2020; Prati & Pietrantonio, 2010).

Melbourne city of Australia, endured one of the longest lockdowns in the world (Analysis and Policy Observatory, 2021). Riaz et al. (2022) investigated the repercussions of extended COVID-19 lockdowns in Melbourne city of Australia on international students and discovered that 74% of the study's international student participants in Melbourne received no support from the Victorian Government. The findings also revealed that 67% of the students reported reduced interest in their studies, while 74% indicated a decrease in peer learning. The literature strongly suggests that both perceived social support and social interactions serve as effective coping strategies to reduce stress and anxiety (Elmer et al., 2020; English et al., 2022; Friedman, 2011; Jung, 2013; Rekenyi et al., 2023) and enhance academic resilience (Permatasari et al., 2021). This notion is further substantiated by the findings of a mixed-methods study in the context of Australian tertiary education conducted by Humphrey and Forbes-Mewett (2021) on social value systems of international students during the COVID-19 pandemic, which underscored the significance of maintaining close social connections for improving the psychological wellbeing of international students.

Given the unbearable disruptions, uncertainty, distress, and lack of adequate financial support that international students experienced in Australia during the pandemic (Gomez 2022; Nguyen & Balakrishnan, 2020) there was a need to provide effective eLearning support combined with student-centred facilitation and teaching approaches, and additional micro skills training and wellbeing support programs in which students could engage to remain motivated and inspired (Chiu, 2022; Mohtar & Md Yunus 2022) to successfully navigate through their online studies, gain necessary skills and knowledge, and complete their courses.

Multifaceted Complexities in Students' Adjustment and Adaptation to Online Learning

Adaptability refers to the capacity to modify one's actions, cognition, and emotions in response to new, fluctuating, uncertain, and unforeseen conditions and contexts (Martin et al., 2021). Navigating change and uncertainty demands a high degree of adaptability, adjustment, and resilience. This need is particularly pronounced among international students, as articulated brilliantly by Gomez et al. (2021), who noted that the temporary migrant nature of international students during the COVID-19 pandemic in Australia brought with it a range of challenges distinct from those faced by domestic students. Prior to the pandemic, Robin (2016) from Monash University in Australia, had suggested that international students find guaranteed-entry foundation studies attractive, as it provides a direct pathway into university enrolment with lower English language requirements. Yet, Robin argues that the low literacy and weak language fluency can impede students' integration into broader campus communities, potentially leading to social exclusion. Earlier discussions in this paper, from a theoretical standpoint, have already established the importance of self-efficacy, social inclusion, belonging, motivation, the learning environment, pedagogical and instructional approaches in shaping how learners navigate through various tasks and achieve their diverse learning goals and objectives.

In online education, the pivotal role of students' skills, readiness, and the support mechanisms provided to them becomes increasingly pronounced. These factors significantly contribute to the nuanced processes of adjustment, adaptation, and overall success in online learning (Rotar, 2022). As underscored by Brindley (2014, as cited in

Rotar, 2022) “studying at a distance requires maturity, a high level of motivation, the capacity to multi-task, goal-directedness, and the ability to work independently and cooperatively” (p. 278).

Adaptation and success of students in online learning involves their digital competencies (Williams et al., 2022), and both pedagogical and technology-related aspects of online teaching and learning (Turnbull et al., 2022). Nevertheless, adjusting to online learning and navigating through the sudden changes in their studies during the pandemic proved to be an exceptionally complex process. It is important to acknowledge that a single article cannot comprehensively cover all facets of this complexity. However, some of the critical aspects of this multifaceted challenge will be discussed in the subsequent sections.

Technological Barriers, Digital-Readiness, and eLearning Competencies

Studies, conducted before, during, or after the pandemic, suggest that student adaptation to eLearning depends on various factors. These include demographic factors (Islam et al., 2011; Duan et al., 2018), program of study (Xhelili et al., 2021), affordability and the cost of acquiring electronic equipment (Maatuk et al., 2022), and prior experience with the internet and technology (Katz et al., 2021). Furthermore, the literature suggests that students' experiences with online education are associated with several factors, including digital readiness (Yan et al., 2021), home study environment (Agopian, 2022), access to technology, the quality of broadband and internet connectivity (Cullinan, 2021; Rodriguez-Moreno et al., 2021), and learners' digital literacy skills (Williams et al., 2022).

Digital readiness, which assesses the extent to which a country offers information technology and associated infrastructure, to its population, is reported to be more advanced in developed countries like Australia when compared to developing or underdeveloped nations (Yan et al., 2021). Although, Australia experienced a decline in digital readiness rankings in 2022, a drop attributed to reduced student and skilled migration due to the pandemic (Sadler, 2022), it is reasonable to assume that there may be notable variations in the digital readiness of international students in Australia based on the digital infrastructure and online education systems in their home countries. This may also link to the concept of 'remote learning proficiency,' as described by Katz et al. (2021), suggesting that university students with minimal exposure to online learning and limited prior experience, coupled with lower digital readiness, may exhibit lower remote learning proficiency.

Furthermore, digital readiness can be tied to students' ICT skills, as explored by Werfhorst et al. (2020), who emphasised that students' ICT skills may be directly correlated with their socioeconomic background. Students may also encounter varying challenges in adapting to online learning depending on the duration of their university experience. For instance, a study by Bączek et al. (2021) found that nearly 54% of students in the early years of their university education reported more frustration and difficulties with IT equipment than students in later years of their studies. This highlights the potential heightened significance for international students in the early years of their studies, especially when confronted with additional challenges and disruptions, such as those experienced during the COVID-19 pandemic.

Certain researchers have also highlighted students' concerns related to data privacy (Almahasees et al., 2021) and confidentiality issues when utilising webcams in online classes during the pandemic (Rajab & Soheib, 2021). This aligns with the findings of a study conducted by Fang et al. (2023), which reported that, during the pandemic, some educators at Australian universities encountered challenges in engaging students during online classes, as many students had their cameras and microphones turned off and were not actively responsive. This was said to result in an inadvertent obstruction of non-verbal facial cues, presenting a considerable difficulty for educators when trying to communicate with students in online classes. (Simok et al., 2021). Some studies reported that students often cited 'having a weak internet connection' (Castelli & Sarvary, 2021), and 'Zoom Fatigue' tiredness associated with overusing videoconferencing platforms (Bailenson, 2021), as common reasons for not participating in synchronous classes with their cameras turned on.

Discussing digital readiness and eLearning competencies, it is crucial to consider the educators' perspective as well. In a study conducted within the Australian higher education context by Chen et al. (2020), a small sample of lecturers teaching during the COVID-19 pandemic showed a notable interest in using their webcams to display their faces during online instruction and store the recordings for student access within the university's secure learning management system. However, other researchers suggest that educators compelled by their institutions to create videos for asynchronous classes and share them on publicly accessible platforms, such as blogs, experienced discomfort and a sense of reduced autonomy (Kulikowski et al., 2020). Currently, there is insufficient research available in the literature to investigate the extent to which such expectations and teaching conditions were prevalent in the Australian context, as well as how academics, whether affiliated with higher education institutions, public or private, in Australia, dealt with these issues during the pandemic.

A growing body of literature has explored how university students from different parts of the world have embraced video conferencing tools such as Zoom, Google Meet, and Microsoft Teams (Adipat, 2021; Lexman & Baral, 2023; Serhan, 2020), social networking apps like WhatsApp, WeChat, and Facebook Messenger (Mulyono et al., 2021; Roy & Brown, 2022; Qi & Ma, 2021), learning management systems (Makumane, 2021; Roy and Brown, 2022), gamification, instructional videos, and animations (Liu et al., 2022; Nieto-Escamez & Roldán-Tapia, 2021; Rincon-Flores & Santos-Guevara, 2021), as well as a myriad of educational technologies (Adhya & Panda, 2022; Moluayonge, 2020) to navigate the challenges posed by remote learning.

Serhan (2020) gathered survey data from 31 university students in the USA to explore their attitudes and perceptions of transitioning into remote learning environment and using Zoom during the COVID-19 pandemic. The results indicated that the majority of students (48.39 %) did not find learning via Zoom enjoyable, which subsequently affected their motivation. The results showed that only small group of respondents (22.58%) reported that using Zoom was enjoyable. While it is worth considering the small sample size as one potential limitation of the study, other researchers have also reported that many students were not comfortable using synchronous meeting technologies during the pandemic (Jiang et al., 2022). One way to explain this is based on what Yan et al. (2021) reported, indicating that students who faced difficulties in setting up online learning applications and videoconferencing technologies during the pandemic were found to be more likely to experience a lack of confidence (Yan et al., 2021). This lack of confidence could, in turn, impact their motivation to engage in learning through video conferencing tools and platforms. Another reason could be what was discussed earlier in relation to students' confidentiality of data and privacy concerns when engaged with videoconferencing platforms (Almahasees et al., 2021).

However, the utilisation of Zoom and online learning through video conferencing applications doesn't consistently invite criticism or potential disadvantages, as some researchers had previously indicated. For example, Powell et al.'s (2021) study within the Australian higher education context investigated experiences of Social Work students (n=119) transitioning to online learning during the COVID-19 pandemic. Their findings indicated that the convenience and the development of technological skills were reported as positive aspects of Zoom classes. Despite these positive aspects, some researchers argues that videoconferencing tools, such as Zoom or Google Meet, are not fundamentally designed for the purpose of group work and student collaboration, and in spite of attempts being made to improved discussion features on such tools and platforms, the drawbacks were noticeable during the COVID-19 pandemic (Tan et al., 2022).

Chen (2023) underscores the significance of institutional decisions related to the selection of videoconferencing apps and the quality of learning platforms and learning management systems, as these choices can profoundly impact students' motivation to participate in online learning. This institutional decision-making is particularly crucial because student motivation, interests, and their likelihood of engaging in online learning, as well as their use of educational technology, may hinge on their ICT skills and digital literacy. Additionally, Duan et al. (2018) examined student experience in online discussion forums prior to the COVID-19 pandemic and found that international students often felt underrepresented in online forum activities compared to their domestic counterparts. This has significant theoretical implications from social constructivist point of view and for student's ability to collaborate and construct knowledge as well as develop in personality and cognitive levels. The Theory of Social Constructivism, as developed by Lev Vygotsky in 1968, underscores the paramount importance of communication and social interaction in enabling students assume ownership of their own learning, information sharing for knowledge construction, and fostering lifelong personality development (Agopian, 2022; Saleem et al., 2021). Therefore, participation, interaction, discussion, and knowledge sharing are indispensable for international students' success in the online learning context discussed.

These insights from the literature underscore that adapting to online learning, deriving enjoyment from it, and actively participating in online interactions for educational purposes are influenced by a combination of factors, including but not limited to institutional decisions, student's ICT and digital skills, privacy concerns, and technological limitations.

Educators' eLearning Competencies, Teaching Approach, and Instructional Tools

Teaching is a complex task that involves weaving together various forms of specialised knowledge. The intricacies of incorporating technology into online teaching are magnified when considering the challenges introduced by newer technologies for educators (Koehler & Mishr, 2009). Krivokapic (2018) categorised the skills necessary for teaching into three groups: practical knowledge, applied knowledge, and theoretical knowledge about teaching. As Krivokapic (2018) asserts, while knowledge required for practice is acquired through educators' training and formal education, it is crucial to note that the knowledge used in practice and the knowledge about practice require educators to continually build expertise in their subject, excel in skills, and enhance personal competencies,

particularly regarding new technologies, pedagogical frameworks, and emerging trends in instruction. This is of particular importance in online teaching and eLearning contexts (Esteve et al., 2020).

eLearning leverages information and communication technologies as its fundamental technical framework for the dissemination of knowledge (Razzaque, 2020). Several scholars have delved into the scholarly discourse regarding the role of educators' digital skills proficiency (Myyry et al., 2022), self-efficacy in online teaching (Blonder, 2022; Ma et al., 2021), pedagogical techniques, and techno-pedagogical knowledge in online teaching (Blonder et al., 2022; Islam & Mca, 2020; Kulikowski et al., 2022; Setua, 2022) during the COVID-19 pandemic. Educators' competence and familiarity with innovative eLearning and instructional tools and approaches to support a smooth transition of international students in the face of the uncertain conditions presented by the pandemic could potentially play a pivotal role in improving learning outcomes, student satisfaction, and the overall experience of distance study during the COVID-19 pandemic, an event that "posed a contemporary threat to humanity" (Adedoyin & Soykan, 2023, p.1).

Hako et al. (2021), in their examination of the online teaching skills and learning experiences of university lecturers amidst COVID-19, reported that the temporal commitment demanded of lecturers to showcase proficiency in utilising various technologies and eLearning tools was constrained by the limited timeframe available for training and preparation, owing to the abrupt transition to online teaching. Schlenz et al. (2023) and Frutiger and Whillier (2022) highlighted the limitation of online teaching in disciplines like dental education and clinical neuroscience, where extensive practical components were not traditionally integrated into online delivery before the pandemic. Despite this, university educators were required to adapt to new circumstances and deliver both practical and theoretical content digitally to facilitate learning during the pandemic. Two other studies, Myyry et al. (2022) and Lorenza and Carter (2021), made important observations, indicating that during the pandemic, two primary concerns revolved around learning and teaching. The first concern related to the digital skills of students, while the second centred on the proficiency of educators in eLearning to deliver effective online instruction.

It is important to note that the successful transition of educators to online teaching during the COVID-19 pandemic was reported to be linked to several factors, including teaching platform options, educators' self-efficacy in using educational technology tools, and the amount of training received (Kaqinari et al., 2021). This highlights the potential significance of educators' skills and competencies, along with the effective integration of appropriate technology and instructional tools in online teaching, in positively influencing student engagement, satisfaction, and ultimately, improving learning outcomes (Chakraborty & Nafukho, 2014).

Notably, within the study conducted by Lorenza and Carter (2021) in the context of Australian tertiary education, a university student's comment shed light on the concerning issue of educators' digital skills: 'some lecturers seem like they are just learning what the internet is' (Lorenza & Carter, 2021, p. 5). Comments of this nature, particularly in the context of online teaching amid sudden changes prompted by the pandemic, not only underscore the significance of lecturers' techno-pedagogical skills (Setua, 2022), but also draw attention to educators' perceived self-efficacy. This concept, derived from Bandura's social-cognitive theory of behavioural change (Bandura, 1977), plays a pivotal role in understanding the challenges educators may face when adapting to new technology and teaching modalities.

While this paper primarily explores the eLearning experiences and challenges faced by international students during the pandemic, it's important to recognise that historically, making changes to the curriculum and delivery methods has been a meticulous process that involved extensive research, planning, implementation, and evaluation. However, the COVID-19 pandemic forced educators to swiftly introduce significant changes in both curriculum and delivery methods (Frutiger & Whillier, 2020). Consequently, it is not unreasonable to assume that the adaptation of students to online learning and the effectiveness of their navigation and success in eLearning during the COVID-19 pandemic represented a multifaceted concern.

The absence of suitable learning strategies and opportunities for student interaction may lead to boredom (Özerk, 2020). In the realm of education, boredom is a "quiet" yet intricate and multifaceted facet of achievement-related emotions, and it is linked to suboptimal learning outcomes in formal educational environments (Bekker et al., 2023). Throughout the COVID-19 pandemic, a concerning number of university students reported disengagement and boredom in online classes (Pawlak et al., 2021). A growing body of literature has been dedicated to examining the outcomes of students' adaptation to remote learning (Ackah-Jnr et al., 2022; Schartner, 2023) and investigating the effectiveness of innovative instructional tools, multimedia technology, and facilitation styles in the digital realm (Coman et al., 2020; Owolabi & Bekele, 2021; Stecula & Wolniak, 2022) to enhance student motivation and engagement.

While instant messaging applications such as WeChat and WhatsApp were reported to be effective during the pandemic for improving peer interaction after online classes (Jiang et al., 2022), eLearning and instructional tools have shown promise in facilitating active learning, preventing boredom, fostering student engagement, and enhancing learning outcomes. For example, Norziha et al. (2021) found that the use of Padlet as an instructional and learning tool was effective in engaging and stimulating students in active learning during the COVID-19 pandemic. Similarly, Gao and Li (2022) suggest that a combination of text and commentary to design and develop online lesson presentations can be effective in improving students' learning outcomes during the pandemic. Other researchers highlighted the effectiveness of gamification-based formative assessments, including gamified quizzes and quiz competitions, in enhancing student engagement (Zainuddin et al., 2022). Some studies also found that animated and interactive videos integrated into synchronous and asynchronous classes improved engagement with learning materials and motivation to learn among students during the pandemic (Pujiani et al., 2022; Tugtekin & Dursun, 2022).

The significant importance of active learning, teaching approaches, and the use of instructional tools to engage students is evident from the findings of a research conducted by Fang et al. (2023) in the context of online learning at an Australian university. Semi-structured interviews conducted with students, both males and females, during the period of lockdown in Australia, revealed evidence suggesting that some students were dissatisfied with their eLearning experience. This is evident from the following extracts from interview data:

[The lecturer] tends to run through the slides and then go through some questions ... it's just a lot of talking at us ... I can find myself really easily switching off and just doing something else (S1).

The quality has decreased ... I just don't think [the lecturers] work well with technology, which makes it hard on the students. And then the class was just not very engaging (S14)
(Fang et al., 2023, p.4).

The study by Manea et al. (2020) in the context of online education during the COVID-19 pandemic in Romania further highlights the importance of active learning. An extract of students' feedback regarding their online learning experience exemplifies this significance:

students are connected but they are doing something else since the presentation is boring- the online class is boring if students get not involved (Manea et al., 2020, p.207)

The findings of a study conducted by Smith and Kaya (2021), who were both educators in Australian universities during the pandemic, offer a potential solution to address student boredom in online classes. In their research, Smith and Kaya experimented with their own student cohorts, and they proposed breaking down lengthy synchronous online classes, such as 90-minute lectures, into smaller segments (e.g., 15 minutes each) with periodic question-and-answer activities to enhance student engagement and attention. This approach signifies a positive step away from the conventional 'sage-on-the-stage', rooted in traditional transmittal models of teaching, which assumes that students are passive recipients of information (Nouri, 2016; King, 1993). In her 1993 publication "From Sage on the Stage to Guide on the Side," Alison King astutely advocated for a shift in the role of university educators, emphasising the need to evolve beyond being solely knowledge transmitters. This perspective holds particular significance in the realm of online education.

However, what proved even more effective in Smith and Kaya's experimentation with their own classes was the incorporation of game-based activities, like Kahoot's online quiz games, into their teaching approach. This integration created a vibrant learning community where students could engage with creative, innovative, and entertaining elements of game-based learning, resulting in improved student engagement and enhanced learning outcomes (Smith & Kaya, 2021).

Research published before, during, and after the COVID-19 pandemic suggests that game-based learning experiences, including its individual and group formats, contribute towards enhancing learner's autonomy (Pham et al., 2021; Shok, 2022), collaborative knowledge construction (Sung & Hwang, 2018), motivation (Silva et al., 2019) learning performance and learning outcomes (Chan et al., 2021; Koivisto & Hamari, 2019). One notable benefit of integrating eLearning tools and game-based activities into pedagogy and learning environments is highlighted by Koivisto and Hamari (2019, p. 206), who suggest that incorporating game-based learning strategies, tools, and applications into pedagogy can evoke 'positive emotional arousal, such as enjoyment, excitement, or interest' in learners. Some researchers, however, highlight the disadvantages of utilising game-based learning techniques, arguing that this approach can negatively impact student engagement and learning outcomes in cases where there is a lack of direct relevance to learning objectives (Rahmadi et al., 2022) or when the game or activities are gender-specific and lacks inclusivity (Whitton, 2012).

The current paper, while acknowledging potential disadvantages, proposes that several of the benefits of game-based experiences in online learning may have some potential to contribute to improving the sense of belongingness among international students. For example, engagement in collaborative activities that promote

positive emotions may enhance international students' connectedness to their peers in online learning. This aligns with some studies in the literature, which suggest that human beings have an inherent need to belong and feel a part of a community (Pardede et al., 2021), and that the fulfillment of the desire for belonging occurs when reciprocal connections are established within one's social relationships (Baumeister & Leary, 1995). Furthermore, collaborative knowledge construction and interactions among students from different cultures, as a result of engaging in game-based activities, align with social constructivist views, which emphasise that knowledge can be co-constructed through collaboration among students, teachers, and peers.

It can be proposed that the utilisation of instructional tools, diverse learning strategies, multimodal materials, and learner-centred facilitation approaches to actively engage university students in online learning not only has the capacity to benefit both domestic and international students but also holds the potential to empower the entire eLearning ecosystem. This encompasses stakeholders, e-Learning platforms, ICT infrastructure, and associated processes (de Heyde & Siebrits, 2019). International students, in particular, stand to gain from an online learning environment that affords them diverse opportunities for proactive engagement with learning platform, educators and peers, offering solutions to the multifaceted challenges and difficulties explored in this paper.

RECOMMENDATIONS AND IMPLICATIONS FOR HIGHER EDUCATION PROVIDERS

Drawing from the insights and findings garnered from the literature and the preceding discussions, four primary categories have been identified, as illustrated in Figure 1. The ensuing section outlines these categories in the form of a series of recommendations the author makes. These recommendations have potential to benefit institutions, educators, policymakers, and other stakeholders involved in international education and in designing and delivering higher education programs and services, both in Australia and on the international stage, with the aim of enhancing the eLearning experience of international students.



FIGURE 1: Four categories for improving international student eLearning experience and learning outcomes in the face of crises. Source: author's own research.

1. Technology Resources & Digital Skills Support

The literature revealed evidence suggesting that during the COVID-19 pandemic, many international students encountered frequent challenges, such as a lack of personal laptops or suitable electronic devices, connectivity issues (e.g., limited internet access or the inability to afford data packages), insufficient digital literacy and ICT skills, and privacy concerns. The following steps are recommended to be taken by institutions:

- Institutions can identify students facing technology-related challenges and provide them with access to essential technological resources (e.g., the option to borrow a tablet/laptop), or offer financial support in the form of interest-free loans, internet data vouchers, or other immediate assistance to help international students overcome technological limitations and connectivity issues during times of distress, change, and disruption
- Institutions can develop and deliver culturally-responsive synchronous and asynchronous digital skills training, cybersecurity and privacy rights workshops specifically tailored to international students. These workshops should address their privacy rights, digital literacy, ICT, and digital skills needs, particularly in cases of sudden transitions to online classes.

2. Social Support, Wellbeing and Welfare Programs

It is imperative for government organisations, policy makers, higher education providers and educators to allocate ample resources to establish online support communities, culturally responsive wellness programs, resilience training workshops, context-relevant employability guidance and support programs, and proactive peer support networks. These initiatives are essential to address the unique needs of international students, who may experience a lack of sense of belonging, along with uncertainty, unemployment, financial stress, isolation, and psychological distress. Recognising the potential decline in a sense of belonging, particularly during times of crisis, is crucial, as it can significantly impact students. Therefore, prioritising efforts to mitigate this decline is strongly recommended.

Moreover, institutions are urged to establish a comprehensive library of pre-recorded online video resources, collaboratively crafted with subject matter experts. These resources can empower international students, both those currently enrolled and newcomers, with essential life skills and personal development guidance. The topics covered can encompass effective self-care techniques, honing communication skills (covering verbal and non-verbal communication, effective listening, online chat and email etiquette), equipping students with cross-cultural communication and conflict resolution skills (essential for developing online learning community and resolving group work issues), and other indispensable micro-skills to ensure the seamless transition, adjustment, and enhanced learning experience for international students.

3. Communication and Student Voice

In the context of online education, and especially during unforeseen crises such as the COVID-19 pandemic, it is imperative that communication strategies and responses to the needs of international students adhere to principles of inclusivity, equity, compassion, and a human-centric approach. This article proposes the following recommendations, which carry profound implications for government authorities, universities, educators, and policymakers:

- Crisis communication and official public announcements can be thoughtfully curated to mitigate stress and anxiety among international students during distressing events. It is advisable to engage experts with expertise in mental health, welfare principles, cross-cultural communication, and health promotion in drafting these communications during times of crisis
- Internal university communication, including messages related to student performance, administrative processes, assessments and exams, can prioritise a human-centric approach that identifies challenges and offers potential solutions, particularly during times of crisis. It is recommended that these communications take into account potential vulnerabilities of the international student population in the times of crises, acknowledging their unique needs, circumstances, and concerns
- To enhance student voice and address their concerns effectively, suitable tools and communication platforms can be intentionally deployed and utilised by the government departments, universities, educators, and other stakeholders responsible for international education. These tools and platforms can facilitate the collection of students' insights, perspectives, and feedback pertaining to their online learning experiences, academic and administrative procedures that impact students, as well as personal and study-related challenges. During this process, it is of utmost importance to implement effective measures to prevent the abuse of power at the institutional level (Bravo-Moreno, 2022). Both domestic and international students must be assured that there will be no retaliation, and all feedback will be handled with empathy and humanity (Riegel, 2023)
- Committees and special workgroups within institutions, comprising international student representatives and educators' representatives, supported by a team of experts with a deep understanding of the international student lifecycle, can be established. Their mission can be to proactively analyse student feedback and provide strategic advice, practical solutions, and sustainable action plans during crises. These efforts should ideally serve as "prominent drivers for student-centred decision making" (Varga-Atkins et al., 2021).

4. Teaching Approaches, Educators' Skills and Instructional Tools

In their book titled 'Effective Teaching Styles and Instructional Design for Online Learning Environments,' Quitadamo and Abbie (2001) underscore the significance of teaching styles that foster the development of a vibrant online learning community, ultimately aiming to facilitate productive student interactions.

Expanding on their focus on community-building, and drawing upon the insights provided in this paper, along with the recognised importance of educators' online teaching approach and eLearning competence, this article proposes the following two key recommendations:

- International students often face adjustment difficulties due to the disparities between their home and host educational cultures (Smith et al., 2021). Educators' adaptability, flexibility, and expertise in using various pedagogical approaches, emphasising active learning and social constructivism, are crucial for effective scaffolding and promoting student engagement in online learning, especially during high-stress situations

like the COVID-19 pandemic. It is advisable that educators with limited prior exposure and training in online course delivery remain cognizant of the potential limitations of their pedagogical approach, ICT and online teaching skills and take necessary steps to fill those potential gaps

- Tailor-made teacher training and development programs, with financial support allocated for continuing professional development (CPD) and “instructional development” (a component of professional development as defined by Brouwer et al., 2022), can be seamlessly integrated into the teaching and learning culture within faculties and schools for university staff in their roles as educators. These initiatives can be designed to consistently enhance educators' technological pedagogical knowledge (Liu et al., 2022), teaching methods aligned with learner-focused pedagogies (Garnjost & Lawter, 2019), digital skills, and instructional competencies specific to online teaching (Junus et al., 2021). Supported by the appropriate learning management systems and tailored learning resources for distance education and online delivery, these recommendations have the potential to significantly elevate student satisfaction, a commonly assessed variable in evaluating learning outcomes (Zainal et al., 2020).

Finally, the deliberate and strategic incorporation and integration of educational technology, multimodal material, and instructional tools within the learning environment is recommended. These tools encompass various elements such as visual tools, polling tools, discussion forums, self-assessment tools, interactive video and animation resources, infographic tools, and gamification tools and techniques. The careful planning and purposeful integration of educational and instructional technology aligned with pedagogical objectives (Christopoulos & Sprangers, 2021) not only enhance student engagement, participation, and collaborative work but also foster positive relationships between students and their educators, and the learning platform.

LIMITATIONS AND FUTURE RESEARCH

While this paper did not explore the role of course and assessment design in relation to international students' eLearning experiences during the pandemic, it's important to acknowledge its limitations in this regard. Similarly, it didn't include the eLearning experiences of research higher degree candidates (e.g., international PhD candidates), a topic deserving of in-depth exploration by researchers. The number of published empirical papers with large samples and in-depth analysis in the literature with regards to the unique experiences of international students during the pandemic are still in their infancy stage and while this gap may persist for quite some time this may have caused some limitations in terms of synthesis. Despite these limitations, the discussions and recommendations presented in this paper offer valuable insights for institutions, academic leaders, educators, and policymakers striving to enhance the eLearning experiences of international students.

Moreover, given that the existing literature on this topic is still in its early stages, it offered limited insights into the measurable impacts of government, university, and faculty communications and policies during the pandemic and the consideration of international students' voices and feedback in decision-making processes. The importance of further research and exploration in this field is underscored by the insights presented in this research. This is particularly important for enhancing the overall satisfaction of international students, especially those engaged in online learning, and is even more crucial during times of crises, uncertainty, and for students in the early years of their studies.

CONCLUSION

The COVID-19 pandemic imposed significant disruptions and several challenges to higher education sector and students in most countries (Pather et al., 2020). In response to social distancing measures implemented in numerous countries, including Australia (Thacker et al., 2021), traditional face-to-face courses and educational services were temporarily suspended, and classes were delivered online. The temporary migrant nature of international students during the COVID-19 pandemic in Australia brought with it a range of additional challenges distinct from those faced by domestic students (Gomez et al., 2021). The topic of international students' adaptation, adjustment, and experiences in online learning during the pandemic is complex, and there is a relative lack of exploration in the literature regarding various aspects of this topic.

This article aimed to explore the issues, challenges, and experiences related to the unique experiences of international students in relation to online learning during the COVID-19 pandemic, with a primary focus on those based in Australia. The findings from the literature review provided evidence suggesting that international students faced various challenges significantly affecting their online learning experiences. These challenges encompassed issues such as technological limitations, digital skills, privacy concerns, as well as aspects related to social support, student voice, psychological wellbeing, a sense of belonging, online interactions, educators' online teaching approaches, digital skills, and familiarity with eLearning and instructional tools for effective online delivery.

This paper offered a set of recommendations in the form of four primary categories, derived from the evidence presented in the literature review. These recommendations aim to assist those involved in international education, particularly at the tertiary level, in enhancing the online learning experiences of international students. As Lawson (2012) wisely noted, "the initial experiences of international students are extremely important, laying the foundation for their success in Australia" (p.12). Prioritising students' multifaceted educational experiences and addressing their concerns is essential for alleviating academic, financial, and psychological stressors that can lead to mental health challenges, lower learning outcomes, declined retention rate, reduced student motivation and decreased life satisfaction. Recognising international students "as agents of international education, rather than as its objects (Deuchar, 2022., p.3), can yield broader benefits for the host institutions beyond financial considerations. The insights gleaned from this paper have the potential to benefit higher education providers within and beyond Australia.

REFERENCES

- Abdullah, F., & Kauser, S. (2023). Students' perspective on online learning during pandemic in higher education. *Quality & quantity*, 57(3), 2493–2505. <https://doi.org/10.1007/s11135-022-01470-1>
- Ackah-Jnr, F., Appiah, J., Udah, H., Abedi, E., Yaro, K., Addo-Kissiedu, K., Agyei, I., & Opoku-Nkoom, I. (2022). COVID-19 Pandemic Experiences: Cross-Border Voices of International Graduate Students in Australia and America. *International Journal of Learning, Teaching and Educational Research*, 21, 97-113. <https://doi.org/10.26803/ijlter.21.4.6>
- Adedoyin, O. B., & Soykan, E. (2023). Covid-19 pandemic and online learning: the challenges and opportunities. *Interactive Learning Environments*, 31(2), 863-875. <https://doi.org/10.1080/10494820.2020.1813180>
- Adhya, D., & Panda, S. K. (2022). Teacher educators' attitude towards technology-enabled learning and its incorporation into teaching-learning during and post-pandemic. *Educational Media International*, 59, 131-149. <https://doi.org/10.1080/09523987.2022.2101204>
- Adipat, S. (2021). Why Web-Conferencing Matters: Rescuing Education in the Time of COVID-19 Pandemic Crisis. *Frontiers in Education*, 6. <https://doi.org/10.3389/feduc.2021.752522>
- Agopian, T. (2022). Online Instruction during the Covid-19 Pandemic: Creating a 21st Century Community of Learners through Social Constructivism. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 95(2), 85-89. DOI: 10.1080/00098655.2021.2014774.
- Alderfer, C. P. (1969). An empirical test of a new theory of human needs. *Organizational Behavior & Human Performance*, 4(2), 142–175. [https://doi.org/10.1016/0030-5073\(69\)90004-X](https://doi.org/10.1016/0030-5073(69)90004-X)
- Allen, K. A., Gray, D. L., Baumeister, R. F., et al. (2022). The Need to Belong: A Deep Dive into the Origins, Implications, and Future of a Foundational Construct. *Educational Psychology Review*, 34, 1133–1156. <https://doi.org/10.1007/s10648-021-09633-6>
- Allen, K. A., Kern, M. L., Rozek, C. S., McInerney, D., & Slavich, G. M. (2021). Belonging: A Review of Conceptual Issues, an Integrative Framework, and Directions for Future Research. *Australian journal of psychology*, 73(1), 87–102. <https://doi.org/10.1080/00049530.2021.1883409>
- Al-Oraibi, A., Fothergill, L., Yildirim, M., Knight, H., Carlisle, S., O'Connor, M., Briggs, L., Morling, J. R., Corner, J., Ball, J. K., Denning, C., Vedhara, K., & Blake, H. (2022). Exploring the Psychological Impacts of COVID-19 Social Restrictions on International University Students: A Qualitative Study. *International Journal of Environmental Research and Public Health*, 19(13), 7631. <https://doi.org/10.3390/ijerph19137631>
- Almahasees, Z., Mohsen, K., & Mohammed, O. (2021). Faculty's and Students' Perceptions of Online Learning During COVID-19. *Frontiers in Education*, 6. 10.3389/feduc.2021.638470.
- Analysis and Policy Observatory. (2021, October). Fact Check: Josh Frydenberg says Melbourne is the world's most locked down city. Is that correct? <https://apo.org.au/node/314722>
- Antwi, C. O., Belle, M. A., Ntim, S. Y., Yuanchun, W., Affum-Osei, E., Aboagye, M. O., et al. (2022). COVID-19 pandemic and international students' mental health in China: age, gender, chronic health condition and having infected relative as risk factors. *International Journal of Environmental Research and Public Health*, 19, 7916. <https://doi.org/10.3390/ijerph19137916>
- Antwi, C. O., Belle, M. A., Ntim, S. Y., Yuanchun, W., Affum-Osei, E., Aboagye, M. O., et al. (2022). COVID-19 pandemic and international students' mental health in China: age, gender, chronic health condition and having infected relative as risk factors. *Int. J. Environ. Res. Public Health*, 19(13), 7916. doi: 10.3390/ijerph19137916
- Arkoudis, S., Dollinger, M., Baik, C., & Patience, A. (2019). International students' experience in Australian higher education: Can we do better? *Higher Education*, 77, 799-813. <https://doi.org/10.1007/s10734-018-0302-x>.

- Ashton-Hay, S., & Williams, D. (2023). What Student Voice is and is Not: Connecting Dialogue to Evidence-Based Practice and Inclusive Mindsets. *Journal of University Teaching & Learning Practice*, 20(6). <https://doi.org/10.53761/1.20.6.1>
- Arsilan, G., & Allen, K. A. (2021). School Victimization, School Belongingness, Psychological Well-Being, and Emotional Problems in Adolescents. *Child Indicators Research*, 14(5), 1501–1517. <https://doi.org/10.1007/s12187-021-09813-4>
- Australian Parliament House. (2023). COVID-19: a chronology of state and territory government announcements (up until 30 June 2020). https://www.aph.gov.au/About_Parliament/Parliamentary_departments/Parliamentary_Library/pubs/rp/rp2021/Chronologies/COVID-19StateTerritoryGovernmentAnnouncements
- Bączek, M., Zagańczyk-Bączek, M., Szpringer, M., Jaroszyński, A., & Woźakowska-Kapłon, B. (2021). Students' perception of online learning during the COVID-19 pandemic: A survey study of Polish medical students. *Medicine*, 100 (7), e24821. <https://doi.org/10.1097/MD.00000000000024821>
- Bailenson, J. N. (2021). Nonverbal overload: A theoretical argument for the causes of Zoom fatigue. *Technology, Mind, and Behavior*, 2(1). <https://doi.org/10.1037/tmb0000030>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W H Freeman/Times Books/ Henry Holt & Co
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44(9), 1175–1184. <https://doi.org/10.1037/0003-066X.44.9.1175>
- Barkas, L. A., Armstrong, P. A., & Bishop, G. (2022). Is inclusion still an illusion in higher education? Exploring the curriculum through the student voice. *International Journal of Inclusive Education*, 26(11), 1125–1140. <https://doi.org/10.1080/13603116.2020.1776777>
- Barut Tugtekin, E., & Dursun, O. O. (2022). Effect of animated and interactive video variations on learners' motivation in distance Education. *Education and Information Technologies*, 27(3), 3247–3276. <https://doi.org/10.1007/s10639-021-10735-5>
- Baumeister, R. F., and Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychol. Bull.* 117, 497–529. doi: 10.1037/0033-2909.117.3.497
- Bekker, C. I., Rothmann, S., & Klopers, M. M. (2023). The happy learner: Effects of academic boredom, burnout, and engagement. *Frontiers in psychology*, 13, 974486. <https://doi.org/10.3389/fpsyg.2022.974486>
- Ben Salah, A., DeAngelis, B. N., & al' Absi, M. (2023). Uncertainty and psychological distress during COVID-19: What about protective factors? *Current Psychology*, 42, 21470–21477. <https://doi.org/10.1007/s12144-022-03244-2>
- Benedikt, M. (1991). Cyberspace: Some proposals. In M. Benedikt (Ed.), *Cyberspace: First Steps* (pp. 119–224). Cambridge, MA: MIT Press.
- Billett, P., Turner, K., & Li, X. (2023). Australian teacher stress, well-being, self-efficacy, and safety during the COVID-19 pandemic. *Psychology in the Schools*, 60, 1394–1414. <https://doi.org/10.1002/pits.22713>
- Blonder, R., Feldman-Maggor, Y., & Rap, S. (2022). What can be learned from lecturers' knowledge and self-efficacy for online teaching during the Covid-19 pandemic to promote online teaching in higher education. *PLoS ONE*, 17(10), e0275459. <https://doi.org/10.1371/journal.pone.0275459>
- Bravo-Moreno (PhD), A. (2022). Demystifying the academy: Resistance, ethics and abuse of power. *Power and Education*, 14(2), 140–156. <https://doi.org/10.1177/175774382110682>
- Brindley, J. E. (2014). Learner support in online distance education: Essential and evolving. In O. Zawacki-Richter & A. Terry (Eds.), *Online distance education. Towards a research agenda* (pp. 287–310). AU Press.
- Brouwer, N., Joling, E., & Kaper, W. (2022). Effect of a person-centred, tailor-made, teaching practice-oriented training programme on continuous professional development of STEM lecturers. *Teaching and Teacher Education*, 119, 1–17. <https://doi.org/10.1016/j.tate.2022.103848>
- Buckner, E., Denenberg, J., Gelashvili, M., Kontelli, M., Rodrigues, A. M., Wang, L., et al. (2022). The internationalization of higher education in the wake of COVID-19: A rigorous review of the literature on short-term impacts. *Center for International Higher Education*. Boston. <https://www.bc.edu/content/dam/bc1/schools/isoe/sites/cihe/Perspectives%2020%20for%20website.pdf>
- Carnegie, G. D., Guthrie, J. P., & Martin-Sardesai, A. (2022). Public universities and impacts of COVID-19 in Australia: risk disclosures and organizational change. *Accounting, Auditing & Accountability Journal*, 35(1), 61–73. <https://doi.org/10.1108/AAAJ-09-2020-4906>
- Carwile, J. (2007). A Constructivist Approach to Online Teaching and Learning. *Inquiry*, 12(1), 68–73. <https://eric.ed.gov/?id=EJ833907>

- Castelli, F., & Sarvary, M. (2021). Why students do not turn on their video cameras during online classes and an equitable and inclusive plan to encourage them to do so. *Ecology and Evolution*.
<https://doi.org/10.1002/ece3.7123>
- Cena, E., Burns, S., & Wilson, P. (2021). Sense of Belonging and the Intercultural and Academic Experiences among International Students at a University in Northern Ireland. *Journal of International Students*, 11(4), 812-831. <https://eric.ed.gov/?id=EJ1324559>
- Chakraborty, M., & Nafukho, F.M. (2014). Strengthening student engagement: what do students want in online courses? *European Journal of Training and Development*, 38(9), 782-802. <https://doi.org/10.1108/EJTD-11-2013-0123>
- Chan, K., Wan, K., & King, V. (2021). Performance Over Enjoyment? Effect of Game-Based Learning on Learning Outcome and Flow Experience. *Frontiers in Education*, 6.
<https://doi.org/10.3389/educ.2021.660376>.
- Chen, L. H. (2023). Moving Forward: International Students' Perspectives of Online Learning Experience During the Pandemic. *International Journal of Educational Research Open*, 5.
<https://doi.org/10.1016/j.ijedro.2023.100276>
- Chen, J., & Zhou, G. (2019). Chinese international students' sense of belonging in North American postsecondary institutions: A critical literature review. *Brock Education: A Journal of Educational Research and Practice*, 28(2), 48–63. <https://scholar.uwindsor.ca/major-papers/17/>
- Cheng, S. Y., Wang, C. J., Shen, A. C., & Chang, S. C. (2020). How to Safely Reopen Colleges and Universities During COVID-19: Experiences From Taiwan. *Annals of Internal Medicine*, 173(8), 638–641.
<https://doi.org/10.7326/M20-2927>
- Chiu, T. K. F. (2022). Applying the self-determination theory (SDT) to explain student engagement in online learning during the COVID-19 pandemic. *Journal of Research on Technology in Education*, 54(sup1), S14-S30. <https://doi.org/10.1080/15391523.2021.1891998>
- Christopoulos, A., & Sprangers, P. (2021). Integration of educational technology during the Covid-19 pandemic: An analysis of teacher and student receptions. *Cogent Education*, 8(1). DOI: 10.1080/2331186X.2021.1964690
- Clark, R. C., & Mayer, R. E. (2016). *eLearning and the Science of Instruction*. John Wiley & Sons
- Coffey, J., Cook, J., Farrugia, D., Threadgold, S., & Burke, P. (2021). Intersecting marginalities: International students' struggles for 'survival' in COVID-19. *Gender Work and Organization*, 28, 1337-1351.
<https://doi.org/10.1111/gwao.12610>
- Cope, B., & Kalantzis, M. (Eds.). (2017). *e-Learning Ecologies: Principles for New Learning and Assessment* (1st ed.). Routledge.
- Coman, C., Țiru, L. G., Meseșan-Schmitz, L., Stanciu, C., & Bularca, M. C. (2020). Online teaching and learning in higher education during the coronavirus pandemic: students' perspective. *Sustainability*, 12(24), 10367. <https://doi.org/10.3390/su122410367>
- Cortis, N., and Blaxland, M. (2020). *Australia's community sector and COVID-19 supporting communities through the crisis*. Australian Council of Social Service. https://www.acoss.org.au/wp-content/uploads/2020/09/Australias-community-sector-and-Covid-19_FINAL.pdf
- Cullinan, J., Flannery, D., Harold, J., Lyons, S., & Palcic, D. (2021). The disconnected: COVID-19 and disparities in access to quality broadband for higher education students. *International Journal of Educational Technology in Higher Education*, 18(1), 26. <https://doi.org/10.1186/s41239-021-00262-1>
- de Heyde, V. V., & Siebrits, A. (2019). The ecosystem of e-learning model for higher education. *South African Journal of Science*, 115, 78-83. <https://doi.org/10.17159/sajs.2019/5808>
- Department of Education. (2022). Education export income, Calendar Year 2022. Australian Government Department of Education. <https://www.education.gov.au/international-education-data-and-research/education-export-income-2021-calendar-year#:~:text=International%20education%20is%20worth%20%2426.6,Australia%20due%20to%20travel%20restrictions>.
- Department of Education. (2023). International student numbers by country, by state and territory. <https://www.education.gov.au/international-education-data-and-research/international-student-numbers-country-state-and-territory>
- Department of Home Affairs. (2023). Check visa details and conditions. <https://immi.homeaffairs.gov.au/visas/already-have-a-visa/check-visa-details-and-conditions/see-your-visa-conditions>
- Deuchar, A. (2022). The problem with international students' 'experiences' and the promise of their practices: Reanimating research about international students in higher education. *British Educational Research Journal*, 48, 504–518. <https://doi.org/10.1002/berj.3779>
- Dingle, G., Han, R., & Carlyle, M. (2022). Loneliness, Belonging, and Mental Health in Australian University Students Pre- and Post-COVID-19. *Behaviour Change*, 39(3), 146-156. doi:10.1017/bec.2022.6

- Dinh, L.P & Nguyen, T.T (2020) Pandemic, social distancing, and social work education: students' satisfaction with online education in Vietnam. *Social Work Education*, 39(8), 1074-1083.
<https://doi.org/10.1080/02615479.2020.1823365>
- Dodd, R. H., Dadaczynski, K., Okan, O., McCaffery, K. J., & Pickles, K. (2021). Psychological Wellbeing and Academic Experience of University Students in Australia during COVID-19. *International Journal of Environmental Research and Public Health*, 18(3), 866. MDPI AG. Retrieved from
<http://dx.doi.org/10.3390/ijerph18030866>
- Duan, Y., Berger, E., Kandakatla, R., Deboer, J., Stites, N., & Rhoads, J. F. (2018). The Relationship Between Demographic Characteristics and Engagement in an Undergraduate Engineering Online Forum. 2018 *IEEE Frontiers in Education Conference (FIE)*. <https://doi.org/10.1109/fie.2018.8658651>
- du Plooy, D. R., Lyons, A., & Kashima, E. S. (2019). Predictors of flourishing and psychological distress among migrants to Australia: A dual continuum approach. *Journal of Happiness Studies*, 20(2), 561–578.
<https://doi.org/10.1007/s10902-018-9961-7>
- Duncan, Heather, & Young, Suzanne. (2009). Online Pedagogy and Practice: Challenges and Strategies. *The Researcher*, 22, 17-32.
https://www.researchgate.net/publication/282662578_Online_Pedagogy_and_Practice_Challenges_and_Strategies
- Elmer, T., Mepham, K., & Stadtfeld, C. (2020). Students under lockdown: Comparisons of students' social networks and mental health before and during the COVID-19 crisis in Switzerland. *PloS One*, 15(7), e0236337. <https://doi.org/10.1371/journal.pone.0236337>
- Emerson, A., Cloude, E., Azevedo, R., & Lester, J. (2020). Multimodal learning analytics for game-based learning. *British Journal of Educational Technology*, 51. <https://doi.org/10.1111/bjet.12992>
- English, A. S., Yang, Y., Marshall, R. C., & Nam, B. N. (2022). Social support for international students who faced emotional challenges midst Wuhan's 76-day lockdown during early stage of the COVID-19 pandemic. *International Journal of Intercultural Relations*, 87, 1-12.
<https://doi.org/10.1016/j.ijintrel.2022.01.003>
- Esteve, F., Llopis, M. Á., & Adell, J. (2020). Digital Teaching Competence of University Teachers: A Systematic Review of the Literature. *Revista Iberoamericana de Tecnologías del Aprendizaje*, 15, 399-406.
<https://doi.org/10.1109/RITA.2020.3033225>
- Evans, S., Mikocka-Walus, A., Klas, A., Olive, L., Sciberras, E., Karantzas, G., & Westrupp, E. M. (2020). From "It Has Stopped Our Lives" to "Spending More Time Together Has Strengthened Bonds": The Varied Experiences of Australian Families During COVID-19. *Frontiers in Psychology*, 11, 588667.
<https://doi.org/10.3389/fpsyg.2020.588667>
- Fang, J., Pechenkina, E., & Rayner, G. M. (2023). Undergraduate business students' learning experiences during the COVID-19 pandemic: Insights for remediation of future disruption. *The International Journal of Management Education*, 21(1), 100763. <https://doi.org/10.1016/j.ijme.2023.100763>
- Farbenblum, B & Berg, L. (2020). We might not be citizens but we are still people: Australia's disregard for the human rights of international students during COVID-19. *Australian Journal of Human Rights*, 26 (3), 486-506, DOI: [10.1080/1323238X.2021.1901645](https://doi.org/10.1080/1323238X.2021.1901645)
- Fronek, P., Briggs, L., Liang, J., Gallagher, H., Doherty, A., Charles, B., & McDonald, S. (2021). Australian Social Work Academics Respond to International Students in Crisis During COVID-19. *Frontiers in Education*, 6(51). <https://doi.org/10.3389/feduc.2021.637583>
- Fronek, P., Briggs, L., Liang, J., Gallagher, H., Doherty, A., Charles, B., & McDonald, S. (2021). Australian Social Work Academics Respond to International Students in Crisis During COVID-19. *Frontiers in Education*, 6(51). <https://doi.org/10.3389/feduc.2021.637583>
- Frutiger, M., & Whillier, S. (2022). Effects of a sudden change in curriculum delivery mode in postgraduate clinical studies, following the COVID-19 pandemic. *J Chiropr Educ*, 36(2), 132–141.
<https://doi.org/10.7899/JCE-21-31>
- Gallagher, H. L., Doherty, A. Z., & Obonyo, M. (2020). International student experiences in Queensland during COVID-19. *International Social Work*, 63(6), 815-819.
- Gamage, K. A. A., Pradeep, R. G. G. R., Najdanovic-Visak, V., & Gunawardhana, N. (2020). Academic Standards and Quality Assurance: The Impact of COVID-19 on University Degree Programs. *Sustainability*, 12(23), 10032. <https://doi.org/10.3390/su122310032>
- Gao, Q., & Li, S. (2022). Impact of Online Courses on University Student Visual Attention During the COVID-19 Pandemic. *Frontiers in Psychiatry*, 13, 848844. <https://doi.org/10.3389/fpsyg.2022.848844>
- Garcia, R., Falkner, K., & Vivian, R. (2018). Systematic literature review: Self-Regulated Learning strategies using e-learning tools for Computer Science. *Computers & Education*, 123, 150–163. <https://doi.org/10.1016/j.compedu.2018.05.006>

- Garnjost, P., & Lawter, L. (2019). Undergraduates' satisfaction and perceptions of learning outcomes across teacher-and learner-focused pedagogies. *The International Journal of Management Education*, 17(2), 267-275. Doi: 10.1016/j.ijme.2019.03.004
- Gomes, C. (2022). Shock temporality: international students coping with disrupted lives and suspended futures. *Asia Pacific Education Review*, 23, 527–538. <https://doi.org/10.1007/s12564-022-09793-2>
- Gomes, C., Hendry, N. A., De Souza, R., Hjorth, L., Richardson, I., Harris, D., & Coombs, G. (2021). Higher Degree Students (HDR) during COVID-19: Disrupted routines, uncertain futures, and active strategies of resilience and belonging. *Journal of International Students*, 11(S2), 19–37. <https://doi.org/10.32674/jis.v11iS2.3552>
- Gunasekara, A., Turner, K. ., Fung, C. Y., & Stough, C. . (2022). Impact of lecturers' emotional intelligence on students' learning and engagement in remote learning spaces: A cross-cultural study. *Australasian Journal of Educational Technology*, 38(4), 112–126. <https://doi.org/10.14742/ajet.7848>
- Gunter, G., & Baumbach, D. (2004). Curriculum integration. In A. Kovalchick & K. Dawson (Eds.), *Education and technology: An encyclopedia*. Santa Barbara, CA: ABC-CLIO, Inc.
- Hako, A. N., Tobias, E. I., & Erastus, K. (2021). Exploring the e-Teaching and Learning Experiences of Lecturers amidst COVID-19 at One of the University of Namibia Satellite Campuses. *European Journal of Educational Sciences*, 8(4), 92-110. <https://files.eric.ed.gov/fulltext/EJ1331357.pdf>
- Han, J., Geng, X., & Wang, Q. (2021). Sustainable development of university EFL learners' engagement, satisfaction, and self-efficacy in online learning environments: Chinese experiences. *Sustainability*, 13, 11655. <https://doi.org/10.3390/su132111655>.
- Han, Y., & Wang, Y. (2021). Investigating the correlation among Chinese EFL teachers' self-efficacy, work engagement, and reflection. *Frontiers in Psychology*, 12, 763234. <https://doi.org/10.3389/fpsyg.2021.763234>.
- Hannafin, M. J., & Land, S. M. (1997). The foundations and assumptions of technology-enhanced student-centered learning environments. *Instructional Science*, 25(3), 167-202. <https://www.jstor.org/stable/23371252>
- Hastings, C., Ramia, G., Wilson, S., Mitchell, E., & Morris, A. (2023). Precarity Before and During the Pandemic: International Student Employment and Personal Finances in Australia. *Journal of Studies in International Education*, 27(1), 39-63. <https://doi.org/10.1177/10283153211065136>
- Humphrey, A., & Forbes-Mewett, H. (2021). Social Value Systems and the Mental Health of International Students During the COVID-19 Pandemic. *Journal of International Students*, 11(S2), 58–76. <https://doi.org/10.32674/jis.v11iS2.3577>
- Hurley, P. (2020). *Coronavirus and international students*. Mitchell Institute: Victoria University. Melbourne. <https://www.vu.edu.au/mitchell-institute/tertiary-education/coronavirus-and-international-students>
- International Education. (2016). *International Student Survey 2016 Results*. Australian Government Department of Education and Training. https://internationaleducation.gov.au/research/research-papers/Documents/ED17-0018%20International%20Student%20Survey%20HEADLINE%20FINDINGS%20Infographic_ACC.pdf
- International Education. (2018). *International Student Survey 2018 Results*. Australian Government Department of Education and Training. https://internationaleducation.gov.au/research/research-papers/Documents/ED19-0047%20International%20Student%20Survey%20HIGHER%20EDUCATION%20Infographic_ACC-03.pdf
- Islam, M. A., Rahim, A. A., Tan, C. L., & Momtaz, H. (2011). Effect of demographic factors on e-learning effectiveness in a higher learning institution in Malaysia. *International Education Studies*, 4(1). <https://doi.org/10.5539/ies.v4n1p112>
- Islam, Sk & Mca, Shivam. (2020). Infusion of Techno-Pedagogy during Covid-19: Teachers' perspective. *SSRN Electronic Journal*. 8 (11). 3660-3670.
- Işman, A., & Çelikli, G. E. (2009). How does student ability and self-efficacy affect the usage of computer technology? *Turkish Online Journal of Educational Technology*, 8, 33–38. <http://www.tojet.net/articles/v8i1/814.pdf>
- Jaipal-Jamani, K., & Figg, C. (2015). A Case Study of a TPACK-Based Approach to Teacher Professional Development: Teaching Science with Blogs. *Contemporary Issues in Technology and Teacher Education (CITE Journal)*, 15(2), 161–200.
- Jiang, B., Li, X., Liu, S., Hao, C., Zhang, G., & Lin, Q. (2022). Experience of Online Learning from COVID-19: Preparing for the Future of Digital Transformation in Education. *International Journal of Environmental Research and Public Health*, 19(24), 16787. <https://doi.org/10.3390/ijerph192416787>
- Jimoyiannis, A. (2010). Designing and implementing an integrated technological pedagogical science knowledge framework for science teachers' professional development. *Computers & Education*, 55, 1259–1269. <https://doi.org/10.1016/j.compedu.2010.05.022>.

- Jung, I. (2013). Improving Online Collaborative Learning: Strategies to Mitigate Stress. *Procedia - Social and Behavioral Sciences*, 93, 322-325. <https://doi.org/10.1016/j.sbspro.2013.09.197>.
- Junus, K., Santoso, H. B., Putra, P. O. H., Gandhi, A., & Siswantining, T. (2021). Lecturer Readiness for Online Classes during the Pandemic: A Survey Research. *Education Sciences*, 11(3), 139. MDPI AG. Retrieved from <http://dx.doi.org/10.3390/educsci11030139>
- Kang, M., Hahn, J., & Chung, W. (2015). Validating a Technology Enhanced Student-Centered Learning Model. *Journal of Interactive Learning Research*, 26(3), 253–269. <https://www.learntechlib.org/primary/p/39341/>.
- Karahan, E., & Roehrig, G. (2015). Constructing Media Artifacts in a Social Constructivist Environment to Enhance Students' Environmental Awareness and Activism. *Journal of Science Education and Technology*, 24, 103–118. <https://doi.org/10.1007/s10956-014-9525-5>
- Kaspar, K., Burtiniak, K., & R  th, M. (2023). Online learning during the Covid-19 pandemic: How university students' perceptions, engagement, and performance are related to their personal characteristics. *Current psychology (New Brunswick, N.J.)*, 1–20. Advance online publication. <https://doi.org/10.1007/s12144-023-04403-9>
- Katz, V. S., Jordan, A. B., & Ognyanova, K. (2021). Digital inequality, faculty communication, and remote learning experiences during the COVID-19 pandemic: A survey of U.S. undergraduates. *PLoS ONE*, 16(2), e0246641. <https://doi.org/10.1371/journal.pone.0246641>
- Kaqinari, Tomas, Makarova, Elena, Audran, Jacques, D  ring, Anna, G  bel, Kerstin, & Kern, Dominique. (2021). The switch to online teaching during the first COVID-19 lockdown: A comparative study at four European universities. *Journal of University Teaching and Learning Practice*, 18(5). <https://doi.org/10.53761/1.18.5.10>
- Khamparia, A., & Pandey, B. (2018). Impact of Interactive Multimedia in E-Learning Technologies. In D. S. Deshpande, N. Bhosale, & R. J. Londhe (Eds.), *Enhancing Academic Research With Knowledge Management Principles* (pp. 171–199). IGA Global Publishing. <https://doi.org/10.4018/978-1-5225-2489-2.ch007>
- Kim, H., Rackoff, G. N., Fitzsimmons-Craft, E. E., Shin, K. E., Zainal, N. H., Schwob, J. T., et al. (2022). College mental health before and during the COVID-19 pandemic: results from a Nationwide survey. *Cognitive Therapy and Research*, 46, 1–10. <https://doi.org/10.1007/s10608-021-10241-5>
- King, A. (1993). From Sage on the Stage to Guide on the Side. *College Teaching*, 41(1), 30-35. <https://doi.org/10.1080/87567555.1993.9926781>.
- Kivel  , L., Mouthaan, J., van der Does, W., & Antypa, N. (2022). Student mental health during the COVID-19 pandemic: are international students more affected? *Journal of American College Health*, 8, 1–9. <https://doi.org/10.1080/07448481.2022.2037616>
- Koivisto, J., & Hamari, J. (2019). The rise of motivational information systems: A review of gamification research. *International Journal of Information Management*, 45(C), 191-210. <https://doi.org/10.1016/j.ijinfomgt.2018.10.013>
- Krassadaki, E., Tsafarakis, S., Kapenis, V., & Matsatsinis, N. (2022). The use of ICT during lockdown in higher education and the effects on university instructors. *Heliyon*, 8(11), e11214. <https://doi.org/10.1016/j.heliyon.2022.e11214>
- Lowe, D. (2015). Australia's Colombo Plans, old and new: international students as foreign relations. *International Journal of Cultural Policy*, 21(4), 448-462. <https://doi.org/10.1080/10286632.2015.1042468>
- Krivokapic, M. (2018). Imitative Learning: The Teacher as a Role Model. *Education and Self-Development*, 13(4). <https://doi.org/10.26907/esd13.4.02>
- Kondonijakos, B. K. (2021). A Social Constructivist Approach to Understanding Belonging in the Workplace. ProQuest Dissertations Publishing. <https://www.proquest.com/docview/2626000311?pq-origsite=gscholar&fromopenview=true>
- Kristiana, I. F., Karyanta, N. A., Simanjuntak, E., Prihatsanti, U., Ingarianti, T. M., & Shohib, M. (2022). Social Support and Acculturative Stress of International Students. *International Journal of Environmental Research and Public Health*, 19(11), 6568. <https://doi.org/10.3390/ijerph19116568>
- Kulikowski, K., Przytu  a, S., Su  kowski,   . (2022). E-learning? Never again! On the unintended consequences of COVID-19 forced e-learning on academic teacher motivational job characteristics. *Higher Education Quarterly*, 76, 174–189. <https://doi.org/10.1111/hequ.12314>
- Lawson, C. (June 2012). *Student voices: Enhancing the experience of international students in Australia*. Australian Education International. <https://internationaleducation.gov.au/research/Publications/Documents/Student%20voices%20-%20FINAL.pdf>
- Lexman, R. R., & Baral, R. (2023). Video-conferencing applications for educational continuity: an inquiry towards building institutional resilience. *Development and Learning in Organizations*, 37(2), 18-22. <https://doi.org/10.1108/DLO-01-2022-0030>

- Lin, Y., & Nguyen, H. (2021). International Students' Perspectives on e-Learning During COVID-19 in Higher Education in Australia: A Study of an Asian Student. *Electronic Journal of e-Learning*, 19(4), 241-251. <https://doi.org/10.34190/ejel.19.4.2349>.
- Littleton, 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/report/an-avoidable-catastrophe/>
- Liu, L., Chen, L., & Pugh, K. (2021). Online Teaching and Learning under COVID-19: Challenges and Opportunities. *Computers in the Schools*, 38(4), 249-255. <https://doi.org/10.1080/07380569.2021.1989244>
- Lorenza, L., & Carter, D. (2021). Emergency online teaching during COVID-19: A case study of Australian tertiary students in teacher education and creative arts. *International Journal of Educational Research Open*, 2. <https://doi.org/10.1016/j.ijedro.2021.100057>
- Lowe, D. (2015). Australia's Colombo Plans, old and new: international students as foreign relations. *International Journal of Cultural Policy*, 21(4), 448-462. <https://doi.org/10.1080/10286632.2015.1042468>
- Lucas, A. (2023, August 31). The Economic Role of International Students in Australia's Higher Education System. *Australian Institute of International Affairs*. <https://www.internationalaffairs.org.au/australianoutlook/the-economic-role-of-international-students-in-australias-higher-education-system/>
- Ma, K., Chutiyami, M., Zhang, Y. *et al.* Online teaching self-efficacy during COVID-19: Changes, its associated factors and moderators. *Educ Inf Technol* 26, 6675–6697 (2021). <https://doi.org/10.1007/s10639-021-10486-3>
- Maatuk, A. M., Elberkawi, E. K., Aljawarneh, S., *et al.* (2022). The COVID-19 pandemic and E-learning: challenges and opportunities from the perspective of students and instructors. *Journal of Computer Assisted Learning*, 34, 21-38. <https://doi.org/10.1007/s12528-021-09274-2>
- MacIver, R. M., & Page, C. H. (1949). *Society: An Introductory Analysis*. New York: Holt, Rinehart & Winston. (Reissued 1961).
- Makumane, M. A. (2021). Students' perceptions on the use of LMS at a Lesotho university amidst the COVID-19 pandemic. *African Identities*. <https://doi.org/10.1080/14725843.2021.1898930>
- Manea, V. I., Macavei, T., & Pribeanu, C. (2020). Stress, frustration, boredom, and fatigue in online engineering education during the pandemic. *International Journal of User-System Interaction*, 13(4), 199-214.
- Mayer, R. E. (2014). Cognitive theory of multimedia learning. In R. E. Mayer (Ed.), *The Cambridge handbook of multimedia learning* (pp. 43–71). Cambridge University Press. <https://doi.org/10.1017/CBO9781139547369.005>
- Mbous, Y. P. V., Mohamed, R., & Rudisill, T. M. (2022). International students' challenges during the COVID-19 pandemic in a university in the United States: A focus group study. *Current Psychology*. <https://doi.org/10.1007/s12144-022-02776-x>
- 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>
- Mohtar, M., & Md Yunus, M. (2022). A Systematic Review of Online Learning during COVID-19: Students' Motivation, Task Engagement, and Acceptance. *Arab World English Journal*, 2nd Special Issue January. <http://dx.doi.org/10.2139/ssrn.4036738>
- Mok, M. M. C., & Moore, P. J. (2019). Teachers and self-efficacy. *Educational Psychology*, 39(1-3). <https://doi.org/10.1080/01443410.2019.1567070>.
- Moluayonge, G. E. (2020). Use of Modern Educational Technologies in Remote Learning in Higher Education During a Pandemic: the Case of COVID-19 in Cameroon. *Journal of Learning for Development*.
- Mouza, C., Karchmer-Klein, R., Nandakumar, R., Ozden, S., & Hu, L. (2014). Investigating the impact of an integrated approach to the development of preservice teachers' Technological Pedagogical Content Knowledge (TPACK). *Computers & Education*, 71, 206–221. <https://doi.org/10.1016/j.compedu.2013.09.020>.
- Mulyono, H., Suryoputro, G., & Ramadhanya, S. (2021). The application of WhatsApp to support online learning during the COVID-19 pandemic in Indonesia. *Heliyon*, 7(8). <https://doi.org/10.1016/j.heliyon.2021.e07853>
- Myry, L., Kallunki, V., Katajavuori, N., Rep, S., Tuononen, T., Anttila, H., Kinnunen, P., Haarala-Muhonen, A., & Pyörälä, A. (2022). COVID-19 Accelerating Academic Teachers' Digital Competence in Distance Teaching. *Frontiers in Education*, 7. <https://doi.org/10.3389/feduc.2022.770094>
- Nguyen, O., & Balakrishnan, V. (2020). International students in Australia – during and after COVID-19. *Higher Education Research & Development*, 39. <https://doi.org/10.1080/07294360.2020.1825346>

- Nieto-Escamez, F. A., & Roldán-Tapia, M. D. (2021). Gamification as Online Teaching Strategy During COVID-19: A Mini-Review. *Frontiers in Psychology*, 12.
<https://www.frontiersin.org/articles/10.3389/fpsyg.2021.648552>
- Nicholson, P. (2007). A History of E-Learning. In B. Fernández-Manjón, J.M. Sánchez-Pérez, J.A. Gómez-Pulido, M.A. Vega-Rodríguez, & J. Bravo-Rodríguez (Eds.), *Computers and Education*. Springer.
https://doi.org/10.1007/978-1-4020-4914-9_1
- Norziha, M., Azmi, M. N., Yusoff, R., Shariff, S., & Hassan, W. A. (2020). Enhancing Classroom Engagement Through Padlet as a Learning Tool: A Case Study. *International Journal of Innovative Computing*, 10.11113/ijic.v10n1.250.
- Nouri, J. (2016). The flipped classroom: for active, effective and increased learning – especially for low achievers. *International Journal of Educational Technology in Higher Education*, 13, 33.
<https://doi.org/10.1186/s41239-016-0032-z>.
- Owolabi, J. O., & Bekele, A. (2021). Implementation of Innovative Educational Technologies in Teaching of Anatomy and Basic Medical Sciences During the COVID-19 Pandemic in a Developing Country: The COVID-19 Silver Lining? *Advances in Medical Education and Practice*, 12, 619-625.
- Özerk, G. (2020). Academic Boredom: An Underestimated Challenge in Schools. *International Electronic Journal of Elementary Education*, 13(1), 117–125.
<https://www.iejee.com/index.php/IEJEE/article/view/1339>
- Özmete, E., & Pak, M. (2020). The relationship between anxiety levels and perceived social support during the pandemic of COVID-19 in Turkey. *Social Work in Public Health*, 35(7), 603 616. <https://doi.org/10.1080/19371918.2020.1808144>
- Park, J., Kim, S., Kim, A., Yi, M. Y. (2019). Learning to be better at the game: Performance vs. completion contingent reward for game-based learning. *Computers & Education*, 139, 1-15.
<https://doi.org/10.1016/j.compedu.2019.04.016>
- Pather, N., Blyth, P., Chapman, J. A., Dayal, M. R., Flack, N. A. M. S., Fogg, Q. A., Green, R. A., Hulme, A. K., Johnson, I. P., Meyer, A. J., Morley, J. W., Shortland, P. J., Štrkalj, G., Štrkalj, M., Valter, K., Webb, A. L., Woodley, S. J., & Lazarus, M. D. (2020). Forced Disruption of Anatomy Education in Australia and New Zealand: An Acute Response to the Covid-19 Pandemic. *Anatomical Sciences Education*, 13(3), 284–300.
<https://doi.org/10.1002/ase.1968>
- Pawlak, M., Derakhshan, A., Mehdizadeh, M., & Kruk, M. (2022). Boredom in online English language classes: Mediating variables and coping strategies. *Language Teaching Research*, 0(0).
<https://doi.org/10.1177/13621688211064944>
- Penman, J., Malik, G., Chu, M. Y. E., Kett, G., Hampton, K., Thomacos, N., Zanjani, M. E., Zhong, Y., & McKenzie, W. (2021). Empowering International Students to Succeed: An Innovative and Beneficial Initiative for Health Professions. *Journal of International Students*, 11(4), 832-852.
<https://doi.org/10.32674/jis.v11i4.2226>
- Permatasari, N., Rahmatillah Ashari, F., & Ismail, N. (2021). Contribution of Perceived Social Support (Peer, Family, and Teacher) to Academic Resilience during COVID-19. *Golden Ratio of Social Science and Education*, 1(1), 01-12. <https://doi.org/10.52970/grsse.v1i1.94>
- Pham, L. L. N., Nguyen, H. T., & Le, V. T. K. (2021). Triggering Students' Learning Autonomy Using the Combination of M-Learning and Gamification: A Case Study at Nguyen Tat Thanh University. *Teaching English with Technology*, 21(2), 66-91.
- Pollini, G. (2000). Social Belonging. In E. F. Borgatta & R. J. V. Montgomery (Eds.), *Encyclopedia of Sociology* (pp. 2630-2637). Macmillan.
- Pollini, G. (2005). Elements of a Theory of Place Attachment and Socio-Territorial Belonging. *International Review of Sociology: Revue Internationale de Sociologie*, 15(3), 497-515.
<https://doi.org/10.1080/03906700500272483>
- Powell, Z., Davis, C., Yadav, R., & Gates, T. G. (2022). Using Zoom in teaching human behavior during the COVID-19 pandemic: Experiences of Australian students. *Journal of Human Behavior in the Social Environment*, 32(8), 1101-1110. <https://doi.org/10.1080/10911359.2021.2002752>
- Pujiani, T., Harsiwi, W., & Almustaflikhah, N. (2022). The Use of Animation Video as Online Learning Media to Teach English for Young Learners. *Journal of Teaching and Education*, 4(1). DOI: <https://doi.org/10.30650/ajte.v4i1.3220>
- Qi, J., & Ma, C. (2021). Australia's Crisis Responses During COVID-19: The Case of International Students. *Journal of International Students*, 11(S2), 94–111. <https://doi.org/10.32674/jis.v11iS2.3578>
- Quitadamo, I. J., & Abbie, B. (2001). Effective Teaching Styles and Instructional Design for Online Learning Environments. *ERIC Clearinghouse*. [URL: <https://eric.ed.gov/?id=ED462942>]
- Radhakrishnan, N., & Muniyandi, A. P. (2022). Dependable and Provable Secure Two-Factor Mutual Authentication Scheme Using ECC for IoT-Based Telecare Medical Information System. *Journal of Healthcare Engineering*, 2022, 9273662. <https://doi.org/10.1155/2022/9273662>

- Rahmadi, I. F., Lavicza, Z., Arkün Kocadere, S., Houghton, T., & Hohenwarter, M. (2022). The strengths and weaknesses of user-generated microgames for assisting learning. *Education and information technologies*, 27(1), 979–995. <https://doi.org/10.1007/s10639-021-10635-8>
- Rajab, M. H., & Soheib, M. (2021). Privacy Concerns Over the Use of Webcams in Online Medical Education During the COVID-19 Pandemic. *Cureus*, 13(2), e13536. <https://doi.org/10.7759/cureus.13536>
- Rand, K.L., Shanahan, M.L., Fischer, I.C., & Fortney, S. (2020). Hope and optimism as predictors of academic performance and subjective well-being in college students. *Learning and Individual Differences*, Vol.81, <https://doi.org/10.1016/j.lindif.2020.101906>
- Razzaque, A. (2020). M-Learning Improves Knowledge Sharing Over e-Learning Platforms to Build Higher Education Students' Social Capital. *SAGE Open*, 10(2). <https://doi.org/10.1177/2158244020926575>
- Rekenyi, V., Garbóczy, S., Szemán-Nagy, A., Al-Tammemi, A. B., Sayed-Ahmad, M., & Kolozsvári, L. R. (2023). The Effects and Differences of Social Support, Depression, and Vital Exhaustion during the COVID-19 Pandemic among International and Domestic University Students. *International Journal of Environmental Research and Public Health*, 20(2), 1502. <http://dx.doi.org/10.3390/ijerph20021502>
- Riaz, A., Ahmed, A., & Khan, S. A. (2022). Impact Of Covid-19 Lockdown on International Students in Melbourne Australia. *Pakistan Journal of Social Research*, 4(1), 765-777.
- Riegel, D. G. (2023). Your Students Aren't Giving You Useful Feedback. *Harvard Business Publishing*. Available at <https://hbsp.harvard.edu/inspiring-minds/your-students-arent-giving-you-useful-feedback-heres-why>
- Rincon-Flores, E. G., & Santos-Guevara, B. N. (2021). Gamification during Covid-19: Promoting active learning and motivation in higher education. *Australasian Journal of Educational Technology*, 37(5), 43–60. <https://doi.org/10.14742/ajet.7157>
- Ritter, E. (2021). Your Voice Gave You Away: The Privacy Risks of Voice-Inferred Information. *Duke Law Journal*, 71(3), 735-771.
- Rodríguez-Moreno, J., Ortiz-Colón, A. M., Cordón-Pozo, E., & Agreda-Montoro, M. (2021). The Influence of Digital Tools and Social Networks on the Digital Competence of University Students during COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*, 18(6), 2835. MDPI AG. <http://dx.doi.org/10.3390/ijerph18062835>
- Rotar, O. (2022). Online student support: A framework for embedding support interventions into the online learning cycle. *Research and Practice in Technology Enhanced Learning*, 17(2). <https://doi.org/10.1186/s41039-021-00178-4>
- Ross, J. (2020, May). Australian international education 'a cheap fix'. Times Higher Education. <https://www.timeshighereducation.com/news/australian-international-education-cheap-fix>
- Roy, S., & Brown, S. (2022). Higher Education in India in the Time of Pandemic, Sans a Learning Management System. *American Educational Research Association*, 8(1). <https://doi.org/10.1177/23328584211069>
- Sadler, D. (2022). Australia slips down digital readiness rankings: Beaten comprehensively by New Zealand. *Australian Computer Society*. <https://ia.acs.org.au/article/2022/australia-slips-down-digital-readiness-rankings.html>
- Sahranc, U., Çelik, E., & Turan, M. E. (2018). Mediating and Moderating Effects of Social Support in the Relationship Between Social Anxiety and Hope Levels in Children. *Journal of Happiness Studies*, 19. <https://link.springer.com/article/10.1007/s10902-017-9855-0>
- Saleem, A., Kausar, H., & Deebe, F. (2021). Social Constructivism: A New Paradigm in Teaching and Learning Environment. *Perennial Journal of History*, 2, 403-421. <https://doi.org/10.52700/pjh.v2i2.86>
- Sandrone, S., Carlson, C. (2021). Gamification and game-based education in neurology and neuroscience: Applications, challenges, and opportunities. *Brain Disorders*, 1, 100008. <https://doi.org/10.1016/j.dscb.2021.100008>
- Schartner, A. (2023). The Experiences of International Students Studying in the UK during the COVID-19 Pandemic. *IntechOpen*. doi: 10.5772/intechopen.109290
- Schlentz, M. A., Wöstmann, B., Krämer, N., et al. (2023). Update of students' and lecturers' perspectives on online learning in dental education after a five-semester experience due to the SARS-CoV-2 (COVID-19) pandemic: insights for future curriculum reform. *BMC Medical Education*, 23, 556. <https://doi.org/10.1186/s12909-023-04544-2>
- Shils, E. (1976). *Center and Periphery: Essays in Macrosociology* (pp. vi, 516). Chicago and London: University of Chicago Press. <https://doi.org/10.1017/S0008423900043961>
- Serhan, D. (2020). Transitioning from Face-to-Face to Remote Learning: Students' Attitudes and Perceptions of using Zoom during COVID-19 Pandemic. *International Journal of Technology in Education and Science*, 4, 335-342. <https://files.eric.ed.gov/fulltext/EJ1271211.pdf>
- Setua, C. (2022). Effectiveness of Techno-Pedagogical Skills of Secondary School Teachers on Online Teaching During Covid-19 Pandemic. *MIER Journal of Educational Studies Trends and Practices*, 12(1), 171–183. <https://doi.org/10.52634/mier/2022/v12/i1/1842>

- Svensson, C. F. (2022). Beyond authoritarianism: Migration, uncertainty, and a sense of belonging among public intellectuals. In M. Kmak & H. Björklund (Eds.), *Refugees and Knowledge Production: Europe's Past and Present* (pp. 146-162). Routledge.
- Shea, P. (2020). Introduction to online learning. *Online Learning Journal*, 24(2).
<https://doi.org/10.24059/olj.v24i2.2299>
- Silva, R., Rodrigues, R., & Leal, C. (2019). Play it again: how game-based learning improves flow in Accounting and Marketing education. *Accounting Education*, 28(5), 484-507.
<https://doi.org/10.1080/09639284.2019.1647859>
- Simok, A. A., Mat Pa, M., Fuad, A., & Mohammad, J. (2021). Challenges of e-Mentoring Medical Students During the COVID-19 Pandemic. *Education in Medicine Journal*, 13, 107-111.
<https://doi.org/10.21315/eimj2021.13.4.9>
- Skok, K. (2022). The Analysis of Selected Motivational Mechanisms in Gamification of Higher Education. *Central European Journal of Social Sciences and Humanities*, 4(138), 186-201.
- Slaten, C. D., Elison, Z. M., Lee, J.-Y., Yough, M., & Scalise, D. (2016). Belonging on campus: A qualitative inquiry of Asian international students. *The Counseling Psychologist*, 44(3), 383-410.
<https://doi.org/10.1177/0011000016633506>
- Smith, C., Zhou, G., Potter, M., & Ammar, F. (2021). Engaging Diverse International Students: Promising Online Teaching Practices. *Research Symposium*. Ontario, Canada. <https://doi.org/10.20533/LICE.2021.0002>
- Smith, E., & Kaya, E. (2021). Online University Teaching at the time of COVID-19 (2020): An Australian Perspective. *IAFOR Journal of Education*, 9, 183-200. <https://doi.org/10.22492/ije.9.2.11>
- Stavredes, T., & Herder, T. (2013). *A Guide to Online Course Design: Strategies for Student Success*. John Wiley & Sons.
- Stecula, K., & Wolniak, R. (2022). Influence of COVID-19 Pandemic on Dissemination of Innovative E-Learning Tools in Higher Education in Poland. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(2). <https://doi.org/10.3390/joitmc8020089>
- Stephen, J. S., & Rockinson-Szapkiw, A. J. (2021). A high-impact practice for online students: The use of a first-semester seminar course to promote self-regulation, self-direction, and online learning self-efficacy. *Smart Learning Environments*, 8(6). <https://doi.org/10.1186/s40561-021-00151-0>
- Stenson, M. C., Fleming, J. K., Johnson, S. L., Caputo, J. L., Spillios, K. E., & Mel, A. E. (2022). Impact of COVID-19 on access to laboratories and human participants: exercise science faculty perspectives. *Advances in Physiology Education*, 46(2), 211-218. <https://doi.org/10.1152/advan.00146.2021>
- Sung, H.-Y., & Hwang, G.-J. (2018). Facilitating effective digital game-based learning behaviors and learning performances of students based on a collaborative knowledge construction strategy. *Interactive Learning Environments*, 26(1), 118-134. <https://doi.org/10.1080/10494820.2017.1283334>
- Tan, C., Casanova, D., Huet, I., & Alhammad, M. (2022). Online Collaborative Learning Using Microsoft Teams in Higher Education Amid COVID-19. *International Journal of Mobile and Blended Learning*, 14(18). <https://doi.org/10.4018/IJMBL.297976>
- Tertiary Education Quality and Standards Agency. (2023). National Register. <https://www.teqsa.gov.au/national-register>
- The Tertiary Education Quality and Standards Agency. (2022). Education services for overseas students: ESOS National Code – return to compliance. *Tertiary Education Quality and Standards Agency*.
<https://www.teqsa.gov.au/about-us/news-and-events/latest-news/education-services-overseas-students-esos-national-code-return-compliance>
- Thacker, J., Sturman, D., & Auton, J. (2021). Predictors of social distancing compliance in an Australian sample. *Health Education Research*, 36(6), 601-614. <https://doi.org/10.1093/her/cyab035>
- Thatcher, A., Zhang, M., Todoroski, H., Chau, A., Wang, J., Liang, G. (2020). Predicting the Impact of COVID-19 on Australian Universities. *Journal of Risk Financial Management*, 13, 188.
<https://doi.org/10.3390/jrfm13090188>
- Townsend, P., & Poh, H. (2008). An Exploratory Study of International Students Studying and Living in a Regional Area. *Journal of Marketing for Higher Education*, 18, 240-263.
<https://doi.org/10.1080/08841240802487411>
- Tracy, S. J. (2013). *Qualitative Research Methods: Collecting Evidence, Crafting Analysis, Communicating Impact*. John Wiley & Sons.
- Tseu, A., Ganesh, K., & Wirtz, D. (2023). Adjusting in a pandemic: Experiences of incoming international students. *Frontiers in Education*, 8, 1003051. <https://doi.org/10.3389/feduc.2023.1003051>
- Turnbull, D., Chugh, R. & Luck, J. Transitioning to E-Learning during the COVID-19 pandemic: How have Higher Education Institutions responded to the challenge?. *Educ Inf Technol* 26, 6401-6419 (2021).
<https://doi.org/10.1007/s10639-021-10633-w>

- van Gijn-Grosvenor, E. L., & Huisman, P. (2020). A sense of belonging among Australian university students. *Higher Education Research & Development*, 39(2), 376-389. <https://doi.org/10.1080/07294360.2019.1666256>
- Ullah, K., Syed, T., Ali, M., & Khan, A. (2019). Development and Validation of a Technology-Enhanced Learning Framework Driven by Flipped Methodology Learning Environment. *Mehran University Research Journal of Engineering and Technology*, 38. <https://doi.org/10.22581/muet1982.1903.12>
- Varga-Atkins, T., Bennet, S., Sharpe, R., Alexander, S., & Littlejohn, A. (2021). The Choices that Connect Uncertainty and Sustainability: Student-centered Agile Decision-making Approaches Used by Universities in Australia and the UK during the COVID-19 Pandemic. *Journal of Interactive Media in Education*, 1(16), 1-16. <https://doi.org/10.5334/jime.649>
- Vygotsky, L. S. (1978). *Mind in Society: The development of higher psychological processes*. Massachusetts: Harvard University Press.
- Werfhorst, Herman, Kessenich, Emma, & Geven, Sara. (2022). The Digital Divide in Online Education. Inequality in Digital Preparedness of Students and Schools before the Start of the COVID-19 Pandemic. *Computers and Education Open*, Vol 3. <https://doi.org/10.31235/osf.io/58d6p>.
- Whitton, N. (2012). Games-Based Learning. In: Seel, N.M. (eds) *Encyclopedia of the Sciences of Learning*. Springer. https://doi.org/10.1007/978-1-4419-1428-6_437
- Wilcox, P., & Winn, S. (2005). 'It was nothing to do with the university, it was just the people': The role of social support in the first-year experience of higher education. *Studies in Higher Education*, 30(6), 707-722. <https://doi.org/10.1080/03075070500340036>
- Williams, A., Bangun, C. S., & Shino, Y. (2022). The Urgency of Digital Literacy in Indonesia on COVID-19 pandemic. *Startupreneur Bisnis Digital (SABDA Journal)*, 1(2), 183-190. <https://doi.org/10.34306/sabda.v1i2.143>
- Wilson, C. (2014). Semi-structured Interviews. In Kaufman, M., *Interview Techniques for UX Practitioners*, pp. 23-41. <https://doi.org/10.1016/B978-0-12-410393-1.00002-8>
- Wu R. (2023). The relationship between online learning self-efficacy, informal digital learning of English, and student engagement in online classes: the mediating role of social presence. *Frontiers in psychology*, 14, 1266009. <https://doi.org/10.3389/fpsyg.2023.1266009>
- Xhelili, P., Ibrahim, E., Rruci, E., & Sheme, K. (2021). Adaptation and perception of online learning during COVID-19 pandemic by Albanian university students. *International Journal on Studies in Education (IJonSE)*, 3(2), 103-111. <https://doi.org/10.46328/ijonse.49>
- Yan, L., Whitelock-Wainwright, A., Guan, Q., Wen, G., Gašević, D., & Chen, G. (2021). Students' experience of online learning during the COVID-19 pandemic: A province-wide survey study. *British Journal of Educational Technology: Journal of the Council for Educational Technology*, 52(5), 2038-2057. <https://doi.org/10.1111/bjet.13102>
- Yu, X., Wang, X., Zheng, H., Zhen, X., Shao, M., Wang, H., & Zhou, X. (2023). Academic achievement is more closely associated with student-peer relationships than with student-parent relationships or student-teacher relationships. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1012701>
- Yusra, A., Neviyarni, S., & Erianjoni, E. (2022). A Review of Behaviorist Learning Theory and its Impact on the Learning Process in Schools. *International Journal of Educational Dynamics*, 5(1), 81-91. <https://doi.org/10.24036/ijeds.v5i1.373>
- Zainal, Munawaroh, Abdinagoro, Sri Bramantoro, Dwidienawati, Diena, Tjahjana, David, & Gandasari, D. (2020). Forced Shifting to e-learning during COVID-19 Outbreak - Information Quality, System Quality, Service Quality, and Goal Orientation influence to Satisfaction and Performance. *International Journal of Advanced Trends in Computer Science and Engineering*, 9, 1518-1525. <https://doi.org/10.30534/ijatcse/2020/93922020>
- Zainuddin, Z., Farida, R., Keumala, C. M., Kurniawan, R., & Iskandar, H. (2022). Synchronous online flip learning with formative gamification quiz: instruction during COVID-19. *Interactive Technology and Smart Education*, 19(2), 236-259. <https://doi.org/10.1108/ITSE-01-2021-0002>
- Zhang, Y., Wang, D., Zhao, J., Chen, X. Y., Chen, H., Ma, Z., Yu, Q., Wang, T., Chen, Z., Jiang, J., Zhu, Z., Huang, S., Fan, F., & Liu, X. (2021). Insomnia and other sleep-related problems during the remission period of the COVID-19 pandemic: A large-scale survey among college students in China. *Psychiatry Research*, 304, 114153. <https://doi.org/10.1016/j.psychres.2021.114153>
- Zhang, Z., Dobinson, T., & Wang, W. (2022). Australian universities engaging international students during the COVID-19 pandemic. In Tan, S., & K. L. E.M (Eds.), *Discourses, Modes, Media and Meaning in an Era of Pandemic* (pp.117-140). Routledge. <https://doi.org/10.4324/9781003168195-10>