Informing teaching and learning practices in higher education: Reflections from engaging in home-schooling

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Abstract

Using a collaborative autoethnographic approach, this paper draws on the experiences of four multi-disciplinary Australian academics who engaged in home-schooling during the 2020 and 2021 COVID-19 lockdowns to answer the research question, 'how might our experiences of engaging in home learning inform our practice in higher education?' The reflections encompassed our experiences in engaging with unfamiliar technology, equity issues, pedagogical aspects of online delivery, teacher presence, communication, well-being and our own cognitive and emotional responses. We considered the implications of this rich learning experience for our own learning and teaching practice as university academics. Our key findings are the need for a consistent, scaffolded, and supported approach to delivery of technology, consideration of its affordances, a flexible approach to student engagement that considers equity and contextual issues, and a focus on well-being and support. Limitations of this study include the single institution focus and the limited generalisability of auto-ethnographical research.

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Introduction

Using a collaborative autoethnographic approach, this paper applies the reflections of four Australian academics who engaged in home-schooling during the 2020 and 2021 COVID-19 lockdowns to the practice of teaching in the higher education sector. At the time of conducting the research, all four researchers were living near and working at three different campuses of a regionally based university in NSW Australia. Each of the researchers came to this project from a different disciplinary background (education, accounting, management, and social work). The participants had varied experience in teaching and research within higher education, ranging from ten to thirty years. Each of us had at least a decade of experience in the delivery of online education. Between us we have eleven children ranging in age from infancy to adulthood with diverse learning abilities. The common factor that drew this team together was that each of the participants facilitated home learning for their own children, whilst working from home in their continuing roles as academics during the lockdown periods. As educators experienced in online delivery, we acknowledge that we may not have been as significantly affected by the complete move to online learning as some of our colleagues in institutions where face-to-face teaching is standard operating procedure. What we did experience in conjunction with many of our colleagues was the need for our involvement in the home learning of our children. We argue that the challenges we faced in engaging alongside our children as "participators" in the process of home-schooling provided us with a unique and altered insight into our own teaching practice as educators and it is from this experience that we draw implications for the higher education environment. Our overarching research question guiding our reflection and discussion was "how might our experiences of engaging in home-schooling inform our practice as educators in higher education?"

Our paper commences with a review of the literature focused specifically on the higher education environment as this is the domain in which we operate and apply our learnings. We include in this, a review of literature related to student belonging, engagement and success since this focus provides a useful lens through which to examine the experience of learner engagement in an educational context and particularly in an online or remote learning environment. An overview of our methodological approach to this research is provided next. The discussion and findings incorporate our critical reflections on implications for teaching practice, educational design, and delivery. We conclude with recommendations for educators and suggestions for further investigation.

Literature

The COVID-19 lockdowns, the subsequent campus closures, and the impact of the sudden move to remote learning in higher education is well documented in the extant literature. The focus of these studies cover three broad areas i.e. 1) studies examining adaptive and innovative approaches to pedagogical practices as programs moved online (see for example Osburn et al., 2021; Sahi et al., 2020), 2) studies examining the impact on student engagement, belonging and success (Bartolic et al., 2022; James et al., 2022; Stevens et al., 2021 among others) and 3) studies that evaluated the adverse effect on academic workloads, productivity, work-life balance, loneliness, and job satisfaction particularly for those balancing family responsibilities (Afrianty et

al., 2022; Iwu et al., 2022). While the impact of home-schooling is noted in the literature, often as an additional burden on academic staff or mature students, we found no studies that specifically considered how the experience of engaging in home-schooling could be reflectively evaluated to inform pedagogical practices within the university environment. It is within this gap that we situate our paper. Below we evaluate the literature that examined pedagogical adaptations and issues central to student engagement, success, and belonging at university.

Academic responses to foster belonging and connection

Belonging and engagement have long been associated with persistence and retention at university (Crawford et al., 2023; Stone & O'Shea, 2019). With the onset of the lockdown periods, students who moved from face-to-face delivery into the online environment initially felt a loss of connection with teachers and peers (Attree, 2021; Martin, 2020). This separation from peers, its subsequent isolation, and the additional familial responsibilities some students faced adversely impacted student confidence, energy and persistence (Bartolic et al., 2022; Martin, 2020; Stevens et al., 2021), Various studies outline effective strategies employed by academics to enhance student-to-student interaction including using breakout rooms for peer discussion (Stevens et al., 2021), small group reflection (van der Merwe & Levigne-Lang, 2023) and encouraging students to set up virtual networks for connection outside of the online classroom (Attree, 2021). Other literature that emerged during this period detailed strategies to facilitate teacher-student connection and foster interactive, interpersonal, and inclusive online engagement included encouraging direct chat with the lecturer (James et al., 2022), having cameras and microphones enabled, well-being check-ins, students sharing study strategies, and allowing time before and after class for informal discussion (Attree, 2021; Martin, 2020; Stevens et al., 2021). Teachers showing empathy and concern for students and flexibility with assessment submission were highly valued by students, enhancing feelings of belonging and connectedness (Attree, 2021; James et al., 2022; Karalis & Raikou, 2020). In the case of higher degree students, supervisors working together with individual students to develop work plans and processes aligned with their personal circumstances was effective in maintaining their engagement and progression (Stevens et al., 2021). Clear communication regarding changes to delivery, expectations, operational issues, and other relevant matters was highly valued (Guppy et al., 2022; Osburn et al., 2021) and regular communication in terms of weekly up-dates were found to be effective in engaging students (Attree, 2021). Timely responses to individual student emails were highly appreciated (Stevens et al., 2021) as were consistently structured and accessible course content (van der Merwe & Levigne-Lang, 2023).

Equity concerns

Equity issues arising from the lockdown periods were highlighted by several studies. For example, O'Shea et al. (2021), argue that equity differences in higher education have potentially worsened and caution that the ramifications will be felt for decades. They point out that disrupted schooling had a greater impact on learners from disadvantaged backgrounds who have less access to technology and were learning in noisy or disrupted study environments. Similarly, multi-country studies conducted separately by Bartolic et al. (2022) and Guppy et al. (2022) found lack of a quiet place to study was a significant factor impacting academic self-confidence during online study. Students in the earlier stages of their degree, in science disciplines, or with lower living standards were also less confident in learning online (Aristovnik et al., 2020). Digital access,

affordability and reliable connections were significant issues in developing countries (Pokhrel & Chhetri, 2021) but also in remote areas in developed nations such as Australia (Attree, 2021). Conversely, some studies found moving online improved access to learning opportunities across equity groups. For example, Karalis and Raikou (2020), Martin (2020) and Sahi et al. (2020) found factors such as flexibility and early, repeated access to materials was beneficial to student learning.

Emotions, health, and well-being

Several studies reported the negative impact of lockdown periods on the mental health and well-being of students with stress, anxiety, disappointment, sadness, and loneliness being listed as significant emotions (Al-Kumaim et al., 2021; Karalis & Raikou, 2020; O'Shea et al., 2021). Other reported emotions experienced by students included depression, lack of motivation, fear, reluctance, trauma (Stevens et al., 2021) as well as physiological responses such as difficulty in sleeping, heart racing, and concentration problems (Wallengren Lynch et al., 2021). In addition to mental health, Martin (2020) notes that housing, finance, isolation, and job loss were aspects influencing well-being and success during this time. Students who were also parents found themselves with the added responsibility of home-schooling their children, limiting the availability of time for study as well as their energy and persistence (Stevens et al., 2021). Lecturers reported feeling overwhelmed, stressed, disconnected, empty, irritated, frustrated, and exhausted as they struggled to move learning online, working from communal living spaces whilst home-schooling children, with increased workloads, exacerbated by poor communication and limited support from institutions (James et al., 2022; Metcalfe, 2021; Moja, 2021; Wallengren Lynch et al., 2021). Interestingly, when online classes commenced, Karalis and Raikou (2020) noticed a marked decrease in students' negative emotions, potentially due to a reduction in uncertainty around the continuation of their studies. Martin (2020) also details some positive responses from students regarding online study such as improved time management and flexibility in assessment types and outcomes.

Technology, pedagogy, and delivery

One gap in the higher education literature appears to be discussion of consistent and institution wide approaches to delivery of online learning, the use of technologies or how operational practices and administrative rules were implemented or addressed. At the onset of the lockdowns, most universities relied heavily on their existing learning management systems (LMS) augmented with collaborative meeting technologies including Zoom to deliver their learning online (Martin, 2020). A lack of familiarity in using online tools impacted adversely on students' self-efficacy and confidence (Al-Kumaim et al., 2021; Bartolic et al., 2022). Students were frustrated with the need to listen to lectures synchronously rather than being offered the flexibility of watching them asynchronously at a convenient time and with instances of staff having difficulty using the required information technology competently (Martin, 2020). Adding to the frustration was that class times were in some instances re-scheduled and class duration and some assessment tasks altered (Martin, 2020).

Specific challenges for educators were the time required in setting up the material online (James et al., 2022; Walters et al., 2022), the need to learn new technologies, the need to offer IT support to students, and the lack of support and professional development in the use of these online

technologies offered by some institutions (Al-Kumaim et al., 2021). In delivery, academics were themselves often nervous and lacked confidence in their IT skills and abilities (James et al., 2022; Osburn et al., 2021), found themselves without the necessary equipment to work effectively remotely, and were less confident in their guidance to students (Stevens et al., 2021).

In many cases the lockdowns during the COVID era provided the opportunity for academics to re-think learning and teaching delivery using technology. Examples of innovative pedagogical approaches include moving pre-clinical medical training online (Sahi et al., 2020), using virtual reality and telehealth in nursing, drama rehearsal in Zoom (Moja, 2021), and collaborative editing using Zoom breakout rooms (Stevens et al., 2021). Overall, the literature focuses heavily on educators responding individually to the needs of their own cohort and discipline area, with individual instructors determining how they structured their teaching, delivered their resources, and communicated with students (Anderson & Berhtram, 2022). While there are a few examples in the literature of discipline groups collaboratively brainstorming approaches, for example; delivery of laboratory practicums or developing clinical skills in the online environment (Osburn et al., 2021; Sahi et al., 2020) there appears to be a dearth of papers addressing a cohesive, whole of institution approach to the delivery of online learning, the use of technologies, or how operational practices and administrative rules were implemented or addressed.

Methods

This research adopted a qualitative interpretivist approach, using collaborative autoethnography as the primary data collection method. Interpretivist research enables researchers to explore meaning based on the perspective of the individual participants (Hennink et al., 2020). Collaborative autoethnography is an approach where two or more researchers share personal stories or experiences and collaboratively interpret the pooled data for collective meaning (Chang et al., 2013). The authors thereby become both the subject of the research and the researchers (Lapadat, 2017). The advantage of collaborative autoethnography is that group analysis helps mitigate the subjectivity inherent in qualitative research and provides greater rigour (Chang et al., 2013; Creswell & Creswell, 2017).

Data Collection

Data was collected via eight fortnightly Zoom meetings over a three-month timeframe. These meetings were recorded, transcribed and the transcripts analysed thematically (see below). The focus of the meetings was informed by the research question, with the discussion unrestricted, and free ranging rather than bound by a single theoretical framework. This approach was analogous with our reflective practice and allowed us to reflect the multi-disciplinary nature of the team who each brought a different knowledge, focus and expertise to the discussion (for example; andragogy, constructive alignment, student success and engagement, universal design for learning etc). The primary focus of our autoethnographic reflections at these meetings was to examine our experience as parents of learners during home-schooling and to consider how our experiences of engaging in home learning might inform our teaching practice in higher education. These reflections encompassed our experiences in engaging with technology and the learning environment, pedagogical aspects, teacher presence, communication, well-being, and our cognitive and emotional responses. We also reflected on the implications for teaching and learning practices for future student cohorts.

In addition to the scheduled meetings, team members also recorded individual written reflections on our discussions and experiences following the meetings and/or at various stages during the research. Critical reflection is a qualitative research approach whereby participants are encouraged to examine their own subjective interpretations. It is defined by Fook (2011, p. 56), as "a way of learning from and re-working experience". Mezirow (2003, p. 199) explains that "critical reflection involves a critique of the presuppositions on which our beliefs have been built" while "learning may be defined as the process of making a new or revised interpretation of an experience". The process of critical reflection involves participants detailing their experience, then reflecting on this experience dialogically with colleagues with a focus on integrating theory and practice (Fook, 2011; Thompson & Pascal, 2012). The lockdown periods provided us with an opportunity to 'make new' our learning and teaching experiences and practices.

Data Analysis

The transcripts of the zoom meetings, alongside written reflections, formed the data to be analysed. Transcripts from the recorded meetings were 'cleaned' to correct any errors of transcription that occurred in the voice to text software and remove any general housekeeping or planning discussions. The cleaned transcripts and written reflections were then uploaded into NVivo software for analysis.

Data was analysed using thematic analysis. Thematic analysis is a method for identifying, analysing, organising, describing, and reporting themes within a data set and is commonly applied to qualitative data (Braun & Clarke, 2006, 2019; Yin, 2016). Coding followed an iterative process. Initially, all four researchers collectively coded one reflection to ensure a consistent approach to themes. Two team members then coded the remaining data using a mix of collaborative and individual coding and included an inter-rater reliability check in accordance with recommendations by Bandara et al. (2015). Coding was then triangulated with the wider team, differences discussed, and adjustments made accordingly. As a final confirmatory mechanism, coding nodes were exported, shared among the group and findings discussed collaboratively.

Ethical Issues

The main ethical concern in relation to autoethnographic research is that of relational ethics (Ellis, 2007). As mentioned, at the time of conducting the research, all four researchers lived near, and worked at, a regionally based university in NSW Australia. Our children, family members and connections also live and work in these communities. To protect the anonymity of our children and any other 'relational' individuals we agreed to 1) not to link any child, gender, age, or stage of schooling with an individual researcher, 2) not to name any individual, school, community or group nor refer to location, and 3) not to link the name of any one researcher with a quote. Instead, we provide the following generic information. Between the four researchers we have eleven children ranging in age from infant to adulthood, with some of our children having learning difficulties. Each researcher volunteered to participate in the research, giving their consent both verbally and via a written statement. Collectively we agreed to support each other throughout the research process and agreed that any researcher could withdraw their consent at any time. This approach is in line with more rigorous and iterative approaches to consent in qualitative research (Lapadat, 2017). Ethics approval was obtained via the university human research ethics committee.

Results

The five thematic areas emerging from our reflections were belonging and connectedness, emotions and well-being, equity factors, technology and pedagogy, and communication and consistency. We discuss each of these below.

Belonging and Connectedness

Parallel to the experience of students in higher education, with the initial move to home-schooling we noticed the immediate loss of teacher presence and peer connection for our children. In some instances, workbooks were sent home with completed work to be turned in at the end of each week, reminding us of the old asynchronous "distance learning" approaches of mailing out university subject packages or providing material online in PDF form. This absence of a teacher in the learning process provided challenges, for example: "even though my children were able at times to be autonomous and self-directed learners, there were times where this wasn't possible". Instead, we found ourselves providing familial support for the learning of our children, taking the place of the teacher in the learning delivery, noting that the best learning often occurred when we were able to provide support and guidance with the task. In reflecting on this for the higher education environment, we discussed how students from equity cohorts may not be able to draw on familial support for learning and guidance, a factor that would likely impact persistence and retention.

For our children, virtual meetings were not guaranteed and, when they occurred, they were often "one-directional, information out, with the occasional "anyone having any problems" question to which the answer was always "no" or silence". As educators with experience in online learning we were surprised and frustrated. Nevertheless, we acknowledged that these teachers were new to online delivery, often unfamiliar with, and untrained in, the use of the technology, and struggling to adapt to the rapid change and upheaval that the situation wrought. We thought about the ongoing implications of this for new academics within higher education environments, and the need for training in effective pedagogical practice to enhance student engagement. We noticed how the initial 'information out' delivery approach to our children meant that "there was absolutely no development of learning communities, no class engagement" with limited opportunities to connect with others and engage in peer-to-peer interaction. We considered the impact of this in the context of new students in the higher education environment and how isolating this experience could be. Drawing parallels from the home school experience to our own higher education students we wondered, what happened to students from rural communities who were studying online, or students who were stay at home parents? What opportunities did they have to engage and connect with their peers and academics, and could this interaction be better facilitated in the learning environment?

As lockdowns continued into the second year, we found that primary and high school teachers began to adapt. Teacher presence and connection to the learning was more prevalent with teachers working actively to design rich interactive learning experiences with learners as active participants, for example:

> The English teacher was teaching them Dorothea Mackellar, the sunburnt country. And what she did to engage them was to get them to find objects within their vicinity that represented things that were elements of the poem. So, something Australian, some part of the bush, ...

something that represented drought or rains or whatever. It was like a treasure hunt. They had to run away and come back and show to the camera what they had. It wasn't necessarily interaction between the students, but the students saw what each other had found, and it facilitated that connection amongst the class, which I thought was a really innovative approach.

In other examples, engagement was facilitated by thoughtful pedagogy and easy to access, interactive tools that consumed low bandwidth "such as Kahoots and Poll Everywhere". We reflected that a "one directional lecture delivered to students is boring, tedious, and disengaging, regardless of whether it is experienced in the classroom or the online environment". For our children, engaging classes were "those where the style of delivery was more like a workshop than a lecture, involving practical content and interactive learning". Applying these learnings to our teaching practice, we discussed how "incorporating more flexibility in delivery; allowing longer times in breakout rooms to complete the activities and touch base with each other; and letting students choose their own breakout rooms (especially for 2ⁿᵈ and 3ʳᵈ year students)" were small strategies that could potentially foster greater connection.

Emotions and Well-being

During lockdown, all members of the research team experienced some degree of stress and anxiety. Balancing our academic workloads and facilitating home-schooling for our children often meant that "we were working until 10 or 11 o'clock at night". We began to understand and appreciate the many contextual factors that were at play for our university students within online learning environments. For example, the learning space was more than just a space for learning, it was often a shared space. One group member notes that, "I was trying to do it all, everything in the same space at the same time". The lack of demarcation between spaces of learning and spaces of living/ parenting helped us develop a greater appreciation of how learning occurs for many of our students in online higher education at any time, especially those with caring responsibilities or for students living in shared or multigenerational households. This highlighted for us the importance of flexible asynchronous learning opportunities that enabled students to adapt learning around household limitations and schedules.

We reflected that well-being can be positively impacted by fostering a sense of belonging. Noting the limited opportunities to foster well-being provided to our children in their classes, we discussed how belonging could be fostered for university students by enhancing teacher presence and communicating with students using various methods, for example; email, phone calls and one-on-one chat with the lecturer in a breakout room. Reflecting on our own experiences allowed us to form a greater sense of empathy towards our university students and appreciate the ongoing need for empathy and consideration of personal circumstances. "All people or situations are not created equal. It's our role as educators to try to keep it as even a playing field as possible so everyone has the opportunity to participate in the manner that suits them". We acknowledged that empathetic approaches could be time consuming and often required a conscious effort. Throughout our reflections we discussed the importance of building rapport, for the development and maintenance of strong and secure teacher-learner relationships, knowing that "if we feel well supported, understood and appreciated, then we're probably in a better space to start to take on knowledge, to ask questions and deepen learning".

Equity Factors

Equity was a major theme in our reflections. Our children who benefit from having tertiary and technologically educated parents found new ways to learn, engage, and were acculturated into the online learning experience. We expected this would be similar for higher education students who had familial or other sources of support. For others, such as low socio-economic and regional and remote students, the lack of access to computers, internet connection and support suggest that the equity gap was likely widened during this period. Consistent with O'Shea et al. (2021), we reflected that, for future cohorts of school aged matriculants "there's going to be a big difference between those who maybe come from families with cultural capital who are able to guide the learning to those that didn't".

We felt that the challenge for universities will be how to support the increasing diversity of learners particularly in the online environment as more students opt for, or are pushed into, hybrid modes. Aligned with concern over equity, showing empathy around the diversity of the student experience and their varied background situation and circumstances emerged as a theme for future practice in our reflections. For example, the pandemic changed our views towards whether university students should turn their cameras on in online classes. Seeing our children set up their laptops in overcrowded areas, or beside cluttered coffee tables made us wonder what school-teachers would think of our home environment? It is likely our own university students find themselves in similar situations and hesitant to turn their cameras on. Engagement, we reflected, isn't about just visually showing up, there are many ways that students may engage synchronously and asynchronously. We needed to be empathetic and consider "if somebody doesn't turn their camera on, maybe they can't". If they weren't attending class then "it may be that the kids are sick, or they're in a different time zone or that they pay by the month for Internet, and this month, they've actually used it all and can't afford to pay again".

Technology and Pedagogy

Given our prior experience of online delivery, technology frustrations were a surprising but significant source of anxiety, overwhelming us during the home-schooling experience. The initial logistics of getting children online and engaged in the learning environment was fraught. Once online, the diversity of technology software applications used across different subjects posed a real challenge to us despite our own roles as online educators, "some teachers held meetings on Zoom while others held them on MS Teams. Some teachers used very user friendly, device friendly, easy access, low bandwidth/download size technologies such as Google forms, whereas others used more cumbersome software". Bandwidth in regional areas was an issue. Access to some software applications was impacted by slow and unreliable connections.

We noted that we expect university students to watch videos, download or read PDFs on screen, and that large high-resolution images are often embedded within the LMS. All of these require a reliable internet connection, which some of our higher education students may not have. This experience provided us with a new lens with which to view the experience of university students moving into the online environment for the first time. We empathised with the frustrations and challenges they must experience. It raised our awareness of the need to consider the number and type of technologies and software applications used within a university subject and across a university course, for example:

This resonated with me in terms of what we expect our own students to learn particularly in their first session – The learning management system, Zoom, EASTS, library databases, MS Office (Excel, PowerPoint, Word) etc … add to that industry specific software for different groups of students.

We concluded that, in the same way academic skills, discipline knowledge and assessments are carefully introduced, developed, and assured across the curriculum (Tice et al., 2021), technology should also be carefully planned and scaffolded across the learning journey. Introducing a multiplicity of technologies early can lead to 'overwhelm' as learners must engage with not only discipline content but a host of new technologies as well.

Strong curriculum design and constructive alignment with the learning objectives of the subject were also areas of reflection. As busy parents supervising our children's learning we wanted to ensure that the learning had pedagogical value, the learning tasks were clearly connected to the desired learning outcomes for the subject, and that they built our children's knowledge, skills, and capabilities effectively, for example:

As educators, we know the importance of things like constructive alignment. And we think about the way we deliver. When the department released all of these modules of schoolwork for my child, I was thinking in the back of my mind, is this even aligned with what they're supposed to be doing in the curriculum? Or is this just busy work?

This experience reinforced the need to ensure that content and assessment in higher education were constructively aligned to knowledge, skill and capability development and didn't just involve busy work. Further, a consistent point arising during our reflections was the importance of adjusting pedagogical approaches for individual student contexts. We discussed how inclusive pedagogies are critically important to cater for the diversity of student backgrounds, online access and living conditions. Reflecting on our own children's preference for different styles of learning we asked ourselves whether we should offer higher education students' "multiple ways of being able to access materials and engage in the learning?" For example, could "the same content be covered via text, video, and synchronous delivery?" This would allow us to cater students' varying learning preferences and simultaneously their internet access or personal situations.

Communication and Consistency

Communication and consistency, or the lack thereof, emerged throughout our reflections, stirring negative emotions. We were frustrated with what appeared to be no cohesive overarching approach taken by schools in the process of home-school delivery. Inconsistencies arose both within and across subjects, including the technologies adopted and communication strategies utilised. For example, it appeared that teachers had the flexibility to decide their own schedule and approaches to learning delivery resulting in some classes not having any virtual synchronous engagement, while others arbitrarily changed scheduled delivery times. We reflected that whilst on-campus classes at universities are carefully timetabled to avoid clashes, this was not generally the case for online delivery where academics had more flexibility in deciding on synchronous delivery times. We wondered whether there was a need for a more cohesive and systematised approach to scheduling online classes?

Organisation of material in the online environment was another area where inconsistencies occurred. Although schools often had a preferred platform for management of classroom documents (i.e., uploading information on lessons, announcements about learning activities, and for students to turn in their work), significant variation occurred amongst teachers as to where they posted information and what they posted. Some put up notices and others sent emails. We, as parents, and our children struggled to know where to find materials. Children unfamiliar with the use of email didn't think to check their emails for information and instructions. One teacher 'helpfully' organised information into folders with the result that:

> The teacher rang me and said X hasn't submitted their assignment. Apparently, it was in a different folder to the other work, and X just hadn't seen it. … And so, I thought, we can learn from these little things, like using different systems, doing things consistently so that when our students can log on to our [LMS] … it'll be the same in all their subjects. And they'll know instinctively where to go, who to contact, what to do…

Relating these frustrations to the higher education environment, the home-schooling experience highlighted the importance of 'whole of institution', systemised approaches to organising subject and course content on LMS sites. Our own frustrations with trying to find information drew our attention to the challenges university students in some institutions might experience with knowing where to look for material and information. Consistency across LMS sites and systems we reflected, would "increase the students' learning time and minimise the amount of time students spend finding resources". We reflected that, whilst most institutions have policies and practice documents outlining online design principles, at times these principles were not translated into practice. Alongside this, streamlining the online experience and "minimising the number of click throughs or systems students are required to login to" we felt would also simplify the experience, allowing students to focus on the content and their learning.

Our experience during home-schooling also emphasised the value of regular and clear communication providing guidance and instructions to facilitate the learning, for example; information on weekly tasks, upcoming assessments, where to find resources, and details of scheduled meetings. As more university students choose to study a hybrid mix of online and on-campus, instructions on how to communicate in a Zoom room, how to use tools such as emoticons and chat box, classroom etiquette, and expectations regarding class preparation and participation becomes increasingly important. University subject sites can be structured and organised differently according to individual academic preference. In the experience of the authors, there is often no consistent approach to the way information is communicated to students.

Discussion

We came together as four multi-disciplinary academics with a shared goal to reflect on our experience as participants alongside our children in the delivery of remote/online education and to draw implications from this experience for our practice as university teachers. We acknowledge that our experience may differ from that of other authors reporting on the pandemic period, in that we were already engaged in online education delivery and thus did not experience the radical change to our practice that other academics faced. Hence, the challenges and frustrations we experienced working alongside our children was surprising to us but also provided us with a more nuanced "insider" perspective into the student experience of engaging in online/remote

learning. Our research confirms many of the findings in the pre and post pandemic literature regarding student engagement and connection. For example, consistent with findings made by Bartolic et al. (2022) and Martin (2020) we noticed a significant impact on our children's motivation for learning when their familiar connected learning environment disappeared. Similar to arguments put forward by Naidu (2023), the most engaging learning experiences for our children were those that provided ample opportunities for a range of interactions, student-to-student, student-to-teacher, and student-to-learning content. Instances where this occurred reinforced that a sense of belonging and connection is an important social facilitator for learning, regardless of the mode of delivery.

Our own negative emotions and feelings of stress and anxiety that arose as we endeavoured to assist our children move online, learn new systems and new technologies, while balancing work and other pressures highlighted the potential stressors faced by higher education students. In this way our emotional and physiological experiences were similar to those documented by students in studies by Stevens et al. (2021) and Wallengren Lynch et al. (2021). To address this, Kift (2009) has long suggested including mental well-being support within the curriculum at crucial points. Anderson and Berhtram (2022), suggest that post COVID-19 lockdowns, institutions may need to enhance the support and well-being programs offered to their students such as expanding the hours and ensuring availability of services to remote students. Additionally other researchers have reported on the benefits to student engagement and wellbeing of a "pedagogy of care" which recognises the "whole, unique student" (James et al., 2022, p. 4) and fosters activities to promote connection, build relationships, trust and belonging alongside pedagogical delivery. Our reflection that small actions taken by academic staff such as check-ins, emails or phone calls can contribute to a sense of belonging and well-being is supported by the findings of others (for example, Crawford et al., 2022). Lastly, staff actions that promote and encourage student-to-student connection are important for adjustment, well-being and belonging in higher education (Crawford et al., 2023).

Consistent with O'Shea et al. (2021), we reflected that the uneven impact of interrupted schooling that occurred during the lockdown periods (adversely affecting equity groups) will impact upon future university cohorts. A challenge for universities will be how to support the increasing diversity of learners in the online environment as more students opt for, or are pushed into, hybrid modes. Stone and O'Shea (2019) note that mature-age, first-in-family, low socio-economic, regional, remote, First Nations and students with a disability are more strongly represented in online studies than face-to-face. These students often require a more supported transition to university study. Thus, for these groups to flourish and succeed either on-campus or online, it is important that higher education institutions implement support measures and design teaching and learning activities that scaffold, develop, and enable student learning, promote student agency, and cater for diversity (Anderson & Berhtram, 2022; O'Shea et al., 2021) noting that such measures are beneficial for all students (Crawford et al., 2023). Given the proposed increase in student participation from Indigenous and other equity groups outlined in the Australian Universities Accord Final Report strategies to support student transition into and through universities will become increasingly important (Department of Education, 2024).

We agree strongly with Anderson and Berhtram (2022) on the need for institutions to invest in professional development and support both for the academic delivering learning via technology

and the student engaging in the learning via the technology. We argued that, in the same manner that universities employ academic skills support staff and library support staff, there is a need for institutions to invest in more IT support and training both for academic staff and students. This model is evident at some institutions. For example, Anderson and Berhtram (2022) describe how, in addition to offering professional development on use of online tools and platforms during the lockdowns, Stanford University employed a team of students as "digital ambassadors" who were embedded in subjects and tasked to "take care of a small group of professors and [their] classes" (p. 35). The success of this model led Stanford to expand the support into new roles termed Course Development Assistant Plus (CDA+) which offered "pedagogical, technological, and logistical support" (p. 36) in subjects.

Supporting our children with their learning during the lockdowns revealed the difference between individual teachers' capacity to use online tools to engage learners and to deliver effective learning experiences. We understood that teachers had not necessarily been provided with appropriate training and support in online delivery, because the move online was swift, often without adequate training, or underpinning pedagogy for staff. In terms of implications for higher education, we all agreed strongly on the need for institutions to invest in professional development and support both for the academic delivering the learning via the technology and the learner engaging in the learning via the technology. The literature reveals instances of academic staff facing difficulty in 'obtaining technical support when needed' and requiring more "professional development to use online platforms" (James et al., 2022, pp. 9-10).

Table 1 below provides a summary of our collaborative reflections aligned to our research question 'how might our experiences of engaging in home learning inform our practice in higher education'. For each of our key reflections we provide an associated implication for practice.

Table 1

Summary of Reflections and Implications

	Reflection	Implications for practice
Belonging and connectedness	Peer to peer engagement and connection are important. Need for creation of learning communities. Teacher presence matters One directional presentation doesn't work.	Build in online activities that foster student involvement and interaction. Facilitate development of learning communities outside of classroom. Replace one directional lectures with interactive workshop style delivery.
Emotions and well-being	Stress and anxiety can impact learning. Students are juggling work, families and other responsibilities. Learning spaces are often shared. Belonging and connection can positively impact well-being.	Check-in with students via phone/email/breakout rooms where possible Be empathetic to students' individual circumstances. Offer flexible options where possible for learning, participation and deadlines. Easy access to information on support services.

Equity factors	The equity gap has widened. Access and flexibility. Learning diversity.	Design curriculum and scaffold learning for a diverse cohort of students. Offer both synchronous and asynchronous learning opportunities. Be empathetic towards the diversity of experiences and contexts of learners. Allow alternative ways for students to demonstrate engagement and participation beyond simply "cameras on".
Technology and pedagogy	It can be overwhelming to learn multiple technologies simultaneously. High bandwidth software or apps can be problematic for some students. Teachers are not IT support staff. There is a need for more IT support for both learners and teachers during delivery. Learning activities should have pedagogical value, not just be "busy" work for students. Learning activities should cater to the variety of students learning preferences, styles, skills, and experience.	Carefully plan and scaffold the introduction of technologies across the curriculum so that students are not required to learn multiple new technologies simultaneously. Consider digital affordances and accessibility when introducing new technology. Deliver synchronous and asynchronous IT support for students in online cohorts particularly when new technologies are being introduced and utilised. Utilise inclusive, and flexible design practices that are accommodating of differing learner preferences.
Communication and consistency	Lack of consistency in delivery platforms, teacher engagement and resource and information management. Poor and irregular communication.	Online subject design should follow a consistent format across subjects. Establish and communicate minimum standard for teacher engagement and delivery. Ensure regular, clear, open, and consistent communication occurs. Develop a consistent institution wide approach

Conclusion

This research drew on our experiences in home-schooling during the COVID-19 lockdowns for our practice as educators. Our experience of participation alongside our children in their learning during home-schooling illustrated how institutional factors such as technology, pedagogy, engagement practices, and delivery impact significantly on belonging, well-being, emotions and ultimately student success.

Students face many differing individual contextual factors that impact their ability to perform in the academic environment. While our own middle-class children benefited from having tertiary educated parents who are experienced academics, the lockdown periods may have exacerbated disadvantage amongst equity groups. The challenge for higher education institutions is how to support an increasingly diverse community of learners. We suggest scaffolded learning experiences and flexible learning design are important to address diverse learning needs. Further, empathic policy and practices that accommodate individual student circumstances are more likely to foster well-being and belonging in the academic environment. We reflected on our own negative experiences using the technology associated with home-schooling and contend that institutions can positively impact student experiences by focusing on institutional contextual factors including

thoughtful and scaffolded introduction of technology; careful assessment of pedagogical value of technological affordances; better support and training for academic staff in use of technologies; training, and support for students in the use of technologies so academics don't bear the IT helpdesk burden; adoption of a cohesive approach to LMS site design and organisation and, clear, consistent, and regular communication.

This study has some limitations that need to be acknowledged. Firstly, collective autoethnography as a research method has limited generalisability. The findings reflect the experiences of a small number of academics from (at the time) a single institution. Secondly, that the experiences reported in the findings are personal and may be subjectively interpreted. All four researchers were from a similar socio-economic background, all working in a regional institution and all experienced in online delivery. Areas for further research include exploring these findings on a wider scale, utilising different methodologies and/or allowing the expansion of understanding for each of the major themes emerging from the data.

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