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Digital poverty, trauma, and education: Reflections from the crisis pivot to online learning

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The COVID-19 pandemic necessitated a sudden shift to online teaching and learning in higher education institutions. This abrupt transition had a significant impact on both students and staff. In this article, the author discusses how three academics identified students who were experiencing digital poverty and implemented trauma-responsive strategies as emergency mitigation measures. Through post qualitative inquiry, the author explores the collective narrative of these academics and uncovers unfinished conversations related to digital poverty and trauma in blended learning as 'hidden' needs often not considered in the discourse around the ways we develop accessibility technologies. Findings from research, include the recognition of hidden needs related to divergent identities of staff and students, as well as the importance of prioritising safety and efficacy in remote learning spaces. The article argues that trauma-informed teaching practices in blended learning have had a positive impact on teaching and learning in contexts where digital poverty is prevalent; providing student access otherwise denied an education. The findings of this study provide a contextualized understanding of digital poverty and blended learning, which are essential to developing inclusive and safe online classrooms.

Keywords*: higher education, digital poverty, teaching and learning, blended learning, trauma-informed teaching*

Introduction

Education is more than just providing access to learning environments; it also involves addressing the hidden needs of learners, including trauma that often goes unaddressed. Emerging technologies have provided opportunities to enhance access, progress and inclusion, but it is important to consider how they can also address the impact of trauma on learners. The past research on digital poverty and blended learning has set the foundation, but there is a need to further explore the role of emerging technologies in addressing the hidden needs of learners with trauma and digital poverty. This paper aims to shed light on the reflections on the role of the academic during the crisis pivot to online learning from 2020-2022 and how they can design technology-facilitated educational environments that are equitable and accessible for all learners. Through reflection on the role of academics during the crisis pivot to online learning, this paper provides valuable lessons on how emerging technologies can address the hidden needs of learners experiencing digital poverty and trauma and ultimately create more equitable and accessible educational environments for these 'hidden' needs.

Focusing on the benefits of humans in the classroom is important for learning designers, educational researchers and policymakers because it reinstates that inclusion and creating equity and accessibility-driven technology-facilitated educational environments, can only service specific needs in the classroom. While emerging technologies offer new opportunities for learning access and enhancing progress for learners with special needs, it is crucial to also consider the role of human educators in creating a supportive and inclusive learning environment for those experiencing digital poverty and trauma who may be excluded as a result. With educational design research described as an iterative development of solutions to both practical and complex educational problems, this paper posits that one such solution is the pedagogy of care provided by a human teacher. To unpack and reveal this

positioning, the paper reports on educator engagement with trauma-informed practice when working with students faced with digital poverty because of the COVID-19 pandemic. And how their approach to teaching through a trauma-informed lens, provided accessibility supports required.

Digital poverty became a stark reality for both staff and students as they transitioned to a digital world due to COVID-19. With online learning, ubiquitous and unavoidable, the challenges to navigate, even for those with the necessary physical resources and digital skills required for online learning (Digital Poverty Alliance, 2022) became part of an academics 'best practice.' Considering the complex social, technological, cultural, and emotional processes involved in teaching students experiencing digital poverty during emergency remote learning, this paper delves into the experiences of three higher education academics who were forced to pivot to online and remote teaching and learning due to the COVID-19 pandemic. This paper aims to capture these academics' perspectives and gain insights into how emergency remote teaching can address the growing issue of digital poverty, described here as the lack of access to information and communication technologies, as well as socio-economic obstacles to education (Ferris et al., 2020). This paper adds to the existing body of work presented by Cain, Campbell, and Coleman (2022) and Ebenfield et al. (2022) by linking to trauma-informed practices (Carello & Butler, 2015). These approaches were found to be deeply connected to the academics' beliefs and values (Naylor & Nyanjom, 2020), which in turn supported the emergence of students' diverse identities in response to the collective trauma of moving online (El-Soussi, 2022) and the experience of the COVID-19 pandemic.

During the unprecedented shift to emergency online teaching, educators were put to the test. Forced into having to rapidly adapt their teaching practices to accommodate students facing the collective trauma of the COVID-19 pandemic (Henshaw 2022), it was despite these challenges, that some academics began tailoring their approach to deliver a more personalized and effective learning experience for their students. However, this was not without its hurdles, as the pivot to online learning exposed a stark reality of digital poverty and exclusion. This was not limited to issues with connectivity, device access, and internet costs, as highlighted by Adams (2021), but was also compounded by pre-existing socio-economic, educational, racial, linguistic, and gender disparities,

as emphasized by the Digital Poverty Alliance (2022). As educators navigated these complexities, it became clear that positive interactions to motivate and energize students through blended learning approaches (combining face-to-face and online experiences) were not solely dependent on technological factors such as device and connectivity, but also on their capacity to negotiate socio-economic and circumstantial determinants. As noted by Naylor and Nyanjom (2020), successful implementation of blended learning requires a holistic approach that addresses the multiple factors at play.

The sudden shift to online learning due to the COVID-19 pandemic revealed a new reality for staff and students alike - one where they were confined to their homes and had to navigate the challenges of online learning. However, this shift also exposed the harsh reality of digital poverty, where individuals are unable to fully interact with the online world due to various barriers such as limited access, capability, and motivation. As we reflect on this experience, it is crucial to consider how we can improve our approaches to blended learning beyond the emergency mitigation strategies implemented during the pandemic to continuously improve.

This paper presents the transformative experiences of three academics who aligned their teaching practices with trauma-informed approaches (Carello & Butler 2014, 2015) to address the lived experiences of students facing digital poverty. By considering how digital poverty affects a person's ability to survive and thrive in the online world, this paper provides valuable insights into how we can better support these individuals in the context of blended learning. The author argues that the academics' experiences and approaches provide the essential detail, to inform a broader discussion on the relationship between digital poverty, trauma-informed teaching, and blended learning. Their lived experiences allow us to ultimately lead our practice online to become more equitable and inclusive in education practices. This paper highlights the importance of how academics approach blended learning and the complex nature of digital poverty, which can easily be misconstrued as simply referring to limited access to the technology itself. It provides insights into digital poverty through the lived experiences of three higher education academics, specifically with the advent of online learning during the pandemic.

In this article, I share insights from the collective experiences of these academics who reflect on their understandings during the crisis-response migration at an Australian University from March 2020 to August 2022. Through their collective narrative, we gain a nuanced understanding of how digital poverty can hinder the effectiveness of blended learning; and how we can improve our practice through trauma-informed practice. What follows is an exploration that the role academics played in emergency forms of blended learning, and the importance of trauma-informed practice in addressing digital poverty.

Background

The past decade has seen a significant global shift towards digital transformation in higher education, and blended learning has emerged as a leading approach. By combining online and in-class teaching, blended learning has opened new possibilities for learning analytics, adaptive learning, and automated decision-making. Researchers such as Naylor and Nyanjom (2020) have noted that academics demonstrated a range of responses to online learning, including ambivalence, caution, and constructive approaches rooted in constructivism. Similarly, Kim and Asbury (2020) highlight the importance of relationships, changes in teacher identity, and high levels of caring among educators during this period of change. These advances have allowed educators to focus on human attributes such as caring, kindness, and support, while also addressing challenges posed by limited access to technology and innovation. At the heart of these efforts lies the concept of trauma-informed practice. Trauma-informed practice readily complements advances in digital technologies. As we reflect on how academics responded to the sudden shift to online learning, we gain invaluable insights into the attitudes and behaviours needed to enact blended learning effectively. As we consider these experiences, it becomes clear that stress, anxiety, and trauma were common experiences during this period of rapid change. Yet, amidst the uncertainty and upheaval, a pedagogy of care and kindness also emerged. A pedagogy of care is essential in addressing the challenges posed by digital poverty in blended learning environments.

Digital poverty refers to the lack of access to digital devices, the internet, and technology, which can limit a person's ability to participate fully in the digital world. This can have negative effects on education,

employment, and social connections, among other areas. Trauma-informed practice, on the other hand, is an approach to care that recognizes and responds to the impact of trauma on an individual's mental, physical, and emotional well-being. It emphasizes safety, trust, collaboration, and empowerment. Trauma-informed approaches in the context of education and digital poverty are contextual issues. Cheng and Lam (2021) in their discussion about the psychological impact of COVID-19 on teachers, argue that educators were faced with difficult decisions about how to best support students impacted by digital poverty because of geopolitical conditions and socio-economics. Tobin and Kieker (2021) discuss blended learning in refugee camps during school closures, highlighting that programs that combine traditional face-to-face learning, with virtual instruction and online resources were very effective in supporting students experiencing trauma. Ebenfield et al. (2022) reporting on reflections of six academics, revealed that the academics were operationalising new forms of trauma-informed pedagogy (TITL) and that few published resources are applying TITL in blended-learning environments. As Ebenfield et al. (2022) describe, a sense of psychological and academic safety was deemed essential in blended learning environments, coupled with a more intentional effort to build trust, by articulating clear expectations and consistency in practice.

Digital poverty can itself be a form of trauma, as it can lead to social isolation, educational disadvantages, and economic hardships, among other difficulties. Adams (2021) argues that the trauma of digital poverty experienced due to COVID-19 has the potential to lose a generation of university students, despite loaning out computers and licences for essential software during COVID-19. Trauma-responsiveness adapted to online and remote teaching environments, has been shown to ameliorate trauma symptomology (Gross, 2020), with research into blended learning, digital poverty and trauma constantly emerging. As such, the role of an academic that draws on trauma-informed practice can help to address the effects of digital poverty by creating a safe and supportive environment for individuals who may be struggling with this issue. Digital poverty refers to the lack of access to technology and the Internet, which can prevent students from fully engaging in online learning activities. It is a relatively new phenomenon and has been described by Barrantes (2007: 30) as “a lack of ICT and might

be a feature of any population segment, whether or not economically poor." Ferris et al (2020: 34) defines digital poverty as "the absence of equipment, infrastructure, education and training, incorporating socio-economic challenges within the rural urban divide." This lack of access can exacerbate existing inequalities, leading to further marginalization and disengagement from the learning process. However, digital poverty should not be only considered as access to technology because it encompasses more than just the ability to use devices and access the internet.

While access to technology is an important aspect of digital poverty, it is not the only factor that contributes to it. Digital poverty can also refer to the lack of digital literacy or skills needed to use technology effectively. Even if someone has access to a device and internet, they may not be able to take full advantage of it if they do not have the necessary skills to navigate and use digital tools. More recently, the Digital Poverty Alliance (2022) has highlighted three broad determinants for Digital Poverty: (1) Socio-economics, (2) Technological Determinants that include Device and connectivity, Access, Capability, Motivation and Support; and (3) Circumstances. The determinants make clear, that our digitally poor students (and staff) may have full internet access but not benefit from the online space due to a lack of education, capacity to engage due to circumstance or be digitally excluded (Colreavy-Donnelly et al., 2022). Digital exclusion and digital poverty are chimeric in being both the cause and result of hardship. Although digital exclusion is a well-established problem of poverty (Digital Poverty Alliance, 2022), its coupling with social precarity and discourse around blended learning has yet to be sufficiently addressed. Rather persistent fallacies, around the determinants of staff and student engagement with blended learning, have plagued the progression around digital transformation for years. Digital inclusion does not only mean access to Wi-Fi and ICTs. By taking an active role in addressing digital poverty, academics can help to ensure that all students have an equal opportunity to succeed in their studies, regardless of their circumstances.

Theoretical positioning

This topic is explored through a socio-cultural paradigm, which recognizes that learning and teaching occur in social and cultural contexts (Vygotsky, 1978). Both academics and students bring their

individual experiences, beliefs, and values to the educational setting. This lens emphasizes the importance of understanding the socio-cultural factors that shape learning (Rogoff, 1990), and how these factors interact with technology and digital resources. In the case of digital poverty, socio-cultural factors such as socio-economic status, race, gender, and language can significantly impact students' access to digital resources and their ability to learn effectively in online environments. The socio-cultural lens also highlights the importance of considering the emotional and psychological dimensions of learning (Wertsch, 1998), which can be particularly relevant in the context of trauma-informed teaching. By adopting a socio-cultural perspective, the paper provides a more comprehensive understanding of the complex social, cultural, and technological factors that shape digital poverty and its impact on blended learning, so that we may develop more effective strategies for supporting learners experiencing digital poverty.

Methodology

The study involved the participation of three academics who were recruited through advertising on internal bulletins and notices at an Australian university. The participants were selected based on their experience and expertise in their respective fields, and engagement with online learning with students identified as facing digital poverty. The data for this study was collected through semi structured interviews conducted with the participants. Each interview lasted for approximately 45 minutes and was recorded using audio recording equipment on Zoom. Consent was obtained through written form before the interview, and verbally during the interview. The interviews were later transcribed using Otter.AI to ensure the accuracy of the data.

Post-qualitative inquiry (St. Pierre, 2014) was used to analyse the transcribed data. This involved an iterative process of reading and re-reading the data to identify key themes and patterns associated with various theories and philosophies to make meaning in the data. One limitation of this study is the small sample size, acknowledging that generalizability was not the objective of the study. Additionally, the study was conducted at a single institution, which limits the transferability of the results to other settings. However, the use of post-qualitative inquiry allowed for a deep exploration of the data and provided rich insights into the experiences and perspectives

of the participants, to reach the goal of providing a contextualized understanding of digital poverty and blended learning, which are essential to developing inclusive and safe online classrooms. Post qualitative inquiry does not privilege or centre the human subject one over the other. The findings report on the collective narrative that was developed.

What follows is the findings discussion, which mobilises theory to complicate the inquiry of how academics reflect on the crisis mitigation responses in terms of digital poverty and their use of trauma-informed pedagogy. The discussion reports on two findings. The first finding refers to the importance of being present and having the power to engage online, to associate performance online to digital poverty. The author uses Derrida's idea of presence representing order and permanence to illustrate this point. The second finding is about prioritising student and teacher safety in online teaching and learning. The author references the work of Halberstam and Spivak, to encourage the reader to consider how power differentials are produced online in relation to stereotypes, and its relationship to digital poverty and gendered trauma. The discussion then considers the findings, by reflecting on the human practice of being and belonging in education to "unmake" the machinery of blended learning. The author cites Freire's ideas about digital poverty and trauma-informed practice as unfinished business requiring further work and research.

Findings and Discussion

The study highlighted the intersection between digital poverty and divergent identities, which created disparities in educational opportunities and outcomes, particularly in the context of blended learning during the pandemic. The shift to online learning provided an opportunity for academics to continue to work and students to continue to learn, but it also presented a risk associated with digital poverty. The blurred boundaries of the online and offline and the challenges of divergent identities resulted in traumas and identity loss among many students. Moving forward, identifying students at risk of digital poverty and providing appropriate support is crucial. There is a need for pedagogical practices to recognise digital poverty risks and build resilience without removing rigour, to help students build the skills to succeed. These ideas are unpacked and explored through two

findings. First 'Blended learning and digital poverty: exploring divergent identities in the context of COVID-19', followed by 'exploring safety and efficacy of remote learning spaces.'

Finding 1: The divergent identities of staff and students present as 'hidden' needs that technology cannot (yet) meet

The findings are firmly situated in the understanding that digital poverty, digital devices and the way we engage as a cyborg was well established as part of the pedagogy. Academic 1 stated that *'Once upon a time, the university felt that we had to have computer labs… but that diminished because the whole move across to [Bring Your Own Device] BYOD'*. Staff and students were already a *'multi-dimensional creature'* (Academic 1) that could enhance and support learning online. As such, we begin by understanding that the academics and students had divergent identities.

Divergent identities refer to differences in identity or characteristics among individuals or groups. Differences in socio-economic status, access to technology and resources, levels of engagement or motivation, and academic abilities, among other factors however evolved differently, because of the trauma experienced during COVID-19 lockdowns. These divergent identities created disparities in educational opportunities and outcomes, particularly in the context of digital learning where access to technology and resources, plus motivation and capacity to use technologies was crucial. Socio-cultural theory helps us explore divergent identities in the context of the findings on digital poverty and the impact of COVID-19 on students' learning experiences. As such, the first findings consider digital poverty that can be identified by thinking about the divergent identities that students bring to class. The academics considered how the students and themselves become the "haves and have nots," the "engaged and disengaged," and the "can and can nots." These divergent identities provide a window into how blended learning and digital poverty collide and continue to collide in classrooms on a global scale. Through a lens of socio-cultural theory, it helps us to identify the students at risk of digital poverty and provide appropriate support to help them succeed in their academic endeavours.

Further academics talked about divergent identities that were evident in the global response to COVID-19 and have been represented in

research. Some academics were using synchronous learning, and others asynchronous learning (Fernandez et al., 2022). Many universities provided access to Wi-Fi and devices to address determinants for digital poverty around device and connectivity, access, capability, motivation and support. Further financial support and counselling support were also evident in Australia (TESQA, 2021). Pedagogical practices shifted to recognise digital poverty risks, which emphasised techniques to build resilience, without removing rigour, to help students build the skills to succeed (Carello, 2020) and teaching to ameliorate trauma symptomology in the context of online learning, formed part of academics' day to day lived experience. The intersection of digital poverty and divergent identities was found to have a significant impact on students who were experiencing the challenges of the pandemic. Academic 1, stated:

> *'We are this sort of, you know, we are not just the human being or alone on an island sort of thing. We are a multi-dimensional creature because we've got this technology around us just like we've got our glasses to enhance. So we have this tool that enhances but then you know, where does our body finishes, you know, just the edge of my body here. Where is the edge here? Where's the edge of my technology? Within or out or anything?'*

Alluding to the blurred boundaries of the online and offline (Matthews, 2021), Academic 1 positions the pivot online as something more of an extension of what was already happening in society. Blended learning and undoubtedly, the pivot to online provide an opportunity for academics to continue to work, and students to continue to learn. However, it also presents a risk associated with digital poverty. Academic 3, stated, "So the cohorts that were that, clearly if you're poor if you were less connected, if you didn't have a safe spot to go to that all those sorts of things made the difference." As we move forward into blended learning as a form of the 'new normal', we need to be able to identify students at risk of digital poverty and provide appropriate support. Academic 3, reflecting on this situation noting that financial and economic pressures are just a reflection of the digital poverty they experience in class, highlighted the ongoing challenges and traumas students were faced with, stating:

> *"Everybody is zooming in from work or on the train or you know*

> *they're using Zoom to manage online study to manage their very busy lives and maintain their income without setting aside time for study now."*

If we consider this comment, alongside Flax (1993: 93) who talks about a 'heterogeneous and incomplete process' we can see that the online space for working and learning went from 'what felt solid and real [to] subsequently [be] separate and reform.' Where the logic of being present represents order and permanence (Derrida, 1974), the overlap between being online/offline, cameras on/off, and talking through Zoom/writing in the chat produced a divergent identity for many. Horton, Bayer and Jacobs (2014) suggest that change can result in "identity jolts" (i.e., sudden challenges to the existing identity) and Maitlis (2009) talks about a strong and overwhelming sense of identity loss, which Academic 3 related to, stating:

> *"...over those two years, you'd be dead end up sitting on a crate outside the back of Woolworths or whatever, because they're packing shelves and yeah, and then they try to be a part of the class and those sorts of things..."*

The construction of the work and learning spaces in reflection were held together by notions considered by Derrida (1974), around identity and presence. These divergent identities provide a window into how blended learning and digital poverty collide. The power of presence, consciousness and rationality split between the online spaces in classes and the physical spaces of work can be further considered alongside, Derrida who critiqued these structures through a process of deconstruction. Academic 3, continued "It's like just a reflection in action I suppose. Like we can't [identify the students' situation] in Zoom because everybody's cameras are off."

It is identifying digital poverty beyond technological determinants that helped Academic 3 to inform a perception of the challenges their students faced. Just as Chen, Tan and Lei (2022) suggest, this perception of poverty plays an important role in learner identity in blended learning. Describing how having 'cameras off' was not working as a pedagogical tool in the classroom, Academic 1 stated, 'I don't know if pedagogically the impact is as powerful...it actually was.... not quite working because the technology wasn't working.' By considering

perceptions of poverty rather than the more pragmatic technological determinants of digital poverty blended learning design may consider the “identity jolts” that arguably invoke a strong and overwhelming sense of identity loss through the forfeiture of face to face classes and seeing someone on Zoom.

The findings unpacked the need for academics to be trauma-informed to cater to the needs and vulnerabilities of students experiencing chaos in their lives. It is found, that not only do we need to consider the ways emergent technologies can support students’ needs in terms of protected attributes, but it is also important to consider the hidden needs of students because they can greatly impact their ability to learn effectively, as highlighted by the findings of this study on the safety of remote learning spaces. Factors such as trauma, digital poverty, and gender intersect with power and privilege, creating unique challenges for students and educators alike. Acknowledging and addressing these hidden needs through a trauma-informed and socio-cultural approach to teaching and learning can create a more conducive and stable environment for all learners, ultimately leading to more successful educational outcomes.

Findings 2: Safety and efficacy of remote learning spaces must be prioritised, over innovation.

The second finding explores the safety of remote learning spaces and how academics can be trauma-informed to cater to the needs and vulnerabilities of students experiencing "chaos" in their lives. The academics discussed the intersectionality of power and privilege for some and the intersectionality of oppression for others in the context of gender and digital poverty that they experienced. They also highlighted how the pandemic and resulting lockdowns have led to trauma for many of their female identifying students (and one male), with a "triple burden" of caring for their families, working from home, and teaching their children. This finding points towards trauma-responsiveness as a critical approach to teaching and learning in blended environments moving forward.

The academics were asked to ponder on the safety and efficacy of the virtual classroom, reflecting on the challenges posed by remote learning. Academic 3 acknowledged the limitations of monitoring multiple

group conversations and the inability to read nonverbal cues to gauge comprehension levels. They highlighted the complex dynamics of power, privilege, and oppression that intersect in the online teaching space. Academic 2 echoed this sentiment, describing the chaotic nature of virtual work and learning environments, where interruptions and distractions are commonplace. They emphasized the need to create a conducive and stable space for effective teaching and learning. Academic 3 stated:

> *we can't monitor the conversations happening in six different groups at once. You know, you just can't keep your ear open and wonder about and sort of keep your ear on what's going on. And you can't talk to the people that are making critical faces to… to check in and see the level of understanding so you can't remember what that's called.*

Alluding to the intersectionality of power and privilege for some and the intersectionality of oppression for others, Academic 3 in reflection on teaching online, stated, 'How many people…could create a …sane and easy place to do their classes?' Academic 2, supported this and expanded on this thinking, describing the work and learning environments they had experienced:

> *Inevitably there'd be chaos going…. and they [would say] "Look, I've got to do something" or "I've got to deal with this" or "just wait while I … bring the dog in" [or] "my husband wants to start a meeting… so I'll have to stop.*

As we discussed the impact of digital poverty on education, I realized that it can prevent certain individuals from enjoying the same freedoms as others and that trauma-informed teaching methods can help address this issue. Considering Halberstam's (2019) concept of the heterosexual matrix and the power dynamic it creates, we also recognized how binary gender systems at home can reinforce or challenge this matrix. Together, we explored the intersection of gender and digital poverty, and some of us have started to modify our teaching approaches accordingly. Academic 1 spoke about the discrimination enacted because of having cameras on:

> *There was one lady who didn't turn the camera. Then I sort of quietly said, can you tell me why not? … And she said, "Look,*

> *please excuse me, I'm breastfeeding at the moment." And so that's that makes me think, well, she would not have come to uni. Or she might have had difficulty coming to uni, but she felt that she could take part in the class. It…made the class seem more like the village you know, the global village that we hopefully, allegedly learn from… it helps them bring up children.*

The academics continued to discuss how the COVID-19 pandemic affected women's engagement with actuality, particularly in the context of online learning. Academic 1 detailed how one woman was able to feed her child while participating in class thanks to the online format. On reflection, they identified that this blurred the lines between personal and professional lives, although encouraged the ways the students were able to continue learning despite such challenges. Arguably a form of trauma-responsive practice, Academic 1 emphasized the importance of care and respect over performance and presence in online learning. The gender differences associated with digital poverty and trauma-informed practice could be considered in light of Dogra and Kaushal's (2022) findings on the "triple burden" placed on women and care givers during the pandemic. Female educators and all caregivers faced significant mental and psychological health challenges due to caregiving responsibilities such as home schooling whilst maintaining work. Academic 2, referring to a female staff member, described how the impacts on mental and psychological health are associated with learning and working from home:

> *'… I was witnessing…the pressures within people's homes. Furthermore, again, this was because of lockdown because everyone was there. So whether that is when that is not the environment, whether that will continue to be a concern or not [I am not sure].'*

Dogra and Kaushal (2022: 228) argue that many women have experienced "drastic and irreversible consequences to their… economic, psychological, and social [wellbeing] due to lockdown[s] imposed as safety measures during the pandemic." Making sense of how to move forward, a socio-cultural lens may suggest that we need human wellbeing, not economic growth, to be at the centre of policy development in higher education. Academic 2, stated that 'we've become quite theoretical', where the students 'don't get the same benefits. I

feel like they have technical information. I feel like they're focused on facts and knowledge now, but not on the application.' Perhaps missing the human relationships that are modulated and moderated through a screen for two years need to be unmade through blended learning experiences. Academic 1, reflecting on the embodied self in a virtual classroom stated:

> *And if we have been ignoring the tool, which is this machine, it disappears… the human interaction of what we're doing, because it gets in the way now and then. But as it went on for two years, it became very much a natural thing to do. And you only really noticed that again, when you started meeting face to face, embodied…and that whole spatial world, which we would have thought was so important, had faded as an issue when we were virtual. It was only when it came back again that you noticed that it was there again.*

This is reflected in the actions of Academic 2 who demonstrated how they placed human wellbeing, the physical and kinaesthetic as a priority by creating a space to learn at the centre of their pedagogy. By creating opportunities for dialogue around physical artefacts, instances of connecting the students' divergent identities in a more blended format circumnavigated the rapid pivot online. Utilising breakout rooms, online polls and physical artefacts, Academic 2 described how they created the opportunity to engage without a device. Academic 2 stated:

> *[We had] … live classes, live Zoom classes, [which] supported us to continue the storytelling, [but] a lot of our course is also very hands on its very active, its uses our body a lot. So, we had to learn very quickly how to translate that to an online space. And we have done a pretty good job. We have, for example, sent posted materials to students' houses to have them be able to zoom live with us and manipulate materials. We have sent you know please collect these materials and bring them to your… zoom [class]… because of zoom because it's live we have been able to bring some of those things that we think are essential to the online space.*

While access to a device and data is critical, the safe place to study created by posting artefacts for use, arguably softened the exacerbation

of the digital poverty position experienced with online and remote learning.

The findings of a study depicted how the safety of remote learning spaces may be best seen, as a need for academics to be trauma-informed to cater to the needs and vulnerabilities of students experiencing chaos in their lives. The study highlighted the intersectionality of power and privilege for some and the intersectionality of oppression for others in the context of gender and digital poverty. The academics acknowledged the limitations of monitoring multiple group conversations and the inability to read nonverbal cues to gauge comprehension levels in the virtual classroom; and emphasized the need to create a conducive and stable space for effective teaching and learning. The findings also identified that caregivers (females identifying in this study predominantly) faced significant mental and psychological health challenges due to caregiving responsibilities, such as home schooling while maintaining work. The findings through this socio-cultural lens, suggest that trauma-responsiveness is a critical approach to teaching and learning in blended environments moving forward and that there is a need to shift focus towards human wellbeing as an outcome.

The COVID-19 pandemic has brought about significant changes to the educational process, leading to a shift towards blended learning environments. However, as reflected by various academics, this shift has had both positive and negative impacts. While the technical information has been more readily available, the application and human relationships have been missing, leading to a need for greater reflection and improvement in blended learning. This has resulted in educators adopting specific strategies for online and remote teaching to help students engage and overcome the anxieties associated with change due to COVID-19. However, the challenge remains to address the issue of digital poverty and trauma-informed practice, which will always be an unfinished agenda. As educators and students scavenge the ruins to survive and navigate this new environment, there is a need to unmake the machine and focus on human wellbeing as a measure of success. Thus, the COVID-19 crisis has brought to light the importance of cautious design and planning of instruction to ensure effective online education in the future.

The human practice of being and belonging in the educational process

has shifted and needs greater reflection to further improve blended learning environments. Gross (2020) suggests that academics can consider what is on the screen itself, and how artefacts both online and offline (in the background of Zoom) can effectively help students engage but also send powerful messages about digital poverty. During COVID-19, students were being told that they could not attend class because it is too risky, yet as Academic 3 highlighted, and were still working in a face-to-face environment at the local supermarket because their job is deemed essential. Academic 2, posted information to create connection, and Academic 1 created safe spaces through care and dialogue. These specific strategies for online and remote teaching demonstrate how academics have ameliorated the effects of a heightened autonomic nervous system due to anxieties associated with change associated with COVID-19. Whether that be divergent identities evoked either through the pivot to online learning or through the challenges enacted trying to gain quality, reliable connectivity via their device, we are now caught in a state of what Freire calls, unfinishedness.

The space where they do and do not exist on one plane, attempting to be both present and absent, exposed to concurrent opportunity and risk. Paulo Freire (2000) describes why we need to consider digital poverty and trauma-informed as an unfinished agenda, "I like to be human because of my unfinishedness." Creating and curating opportunities whilst negotiating and dodging risks, perhaps we were all wandering back and forth between the memories of what had been and what was happening at the moment (Sipe, 2008). One truth is that if you did not have Wi-Fi, you could not wander online. You could not work or be educated online and experience this disembodiment and re-embodiment. Thinking with Spivak (1974: ix xv) who asks, 'How [do we] dismantle these structures?' the challenge for academics reflecting on this time is that there is 'always a gap' (Academic 1) – the agenda around digital poverty and trauma-informed practice will always be unfinished.

Although effective online education may be considered a 'mixed bag' of online teaching and learning, it is in fact, a 'by product of cautious design and planning of instruction with the application of an organised model for designing and development of instruction' (Adedoyin & Soykan, 2020: 2). Such design takes time, and understanding of individual complexities that the COVID-19 crisis did not afford. The absence of cautious design due to the quick pivot online is seen to align

with the academics' capacity to provide effective online education as a form of emergency remote teaching; and it is these experiences and reflections that need more collective input, to further 'unmake' the machine and focus on human wellbeing as a measure of success.

The COVID-19 pandemic has forced educators to adapt to new modes of teaching and learning, but it has also highlighted the importance of human interaction and trauma-informed practice in education. While technology has its benefits, it cannot replace the human connection that is essential for effective teaching and learning. Educators must continue to reflect on their practices and adopt strategies to address digital poverty and hidden trauma in blended learning environments. It is through cautious design and planning of instruction, with a focus on human wellbeing as a measure of success, that we can ensure effective online education in the future. Ultimately, the COVID-19 crisis has reminded us of the importance of prioritising human relationships and wellbeing in education.

Concluding remarks.

While the COVID-19 pandemic was a catalyst for the sudden shift to online teaching and learning, it is not the only crisis that academics and students may face in the future. The author argues for the development of trauma-informed pedagogies to support those experiencing digital poverty, which is crucial in the context of blended learning. The notion of unfinishedness aligns with the current sector-wide response to the crisis, and there is a clear need for further research, fieldwork, and writing through a post-qualitative form of inquiry into how trauma-informed practice can evolve to address digital poverty. The positive impact of trauma-informed teaching practices in blended learning has been evidenced in this study, providing a contextualized understanding of digital poverty and blended learning that is essential for developing inclusive and safe online classrooms. As online learning is likely to be sustained, there is a need for ongoing support for those experiencing digital poverty through trauma-informed practice, and this paper serves as a call to action for further discourse and action on this important issue.

In conclusion, while emerging technologies have the potential to revolutionize education and support students, it is important to

recognise the limitations of these tools when it comes to addressing complex issues such as trauma. Instead, a focus on the human factor, such as trained educators and support staff, can provide the necessary empathy, understanding, and personalized attention needed to help students who have experienced trauma. By prioritising human-centered approaches, we can create a safe and supportive learning environment that truly meets the needs of all students.

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