Contemporary Educational Technology, 2023, **15**(3), ep446
ISSN: 1309-517X (Online)

OPEN ACCESS

Research Article

Designing the 'new normal': Key insights from the pandemic for transforming online learning going forward

Paula Charbonneau-Gowdy [1*]
0000-0003-3912-4687

Dánisa Salinas [1]
0000-0002-5209-6433

Juan Carlos Oyanedel [1]
0000-0003-4023-6926

Héctor Magaña [1]
0000-0002-4427-6151

[1] Faculty of Education and Social Sciences, Universidad Andres Bello, Santiago, CHILE
[*] Corresponding author: paula.charbonneau@unab.cl

Citation: Charbonneau-Gowdy, P., Salinas, D., Oyanedel, J. C., & Magaña, H. (2023). Designing the 'new normal': Key insights from the pandemic for transforming online learning going forward. *Contemporary Educational Technology, 15*(3), ep446. https://doi.org/10.30935/cedtech/13389

ARTICLE INFO

Received: 20 Jan 2023

Accepted: 15 May 2023

ABSTRACT

The deep disruption to education caused by the move to online learning during COVID-19 was unprecedented. While most educational stakeholders adapt to the transition back to a "new normal", it seems an obvious time for constructivist reflection on the lessons learned. The aim of this longitudinal inquiry was to examine the experiences of higher education learners in Chile during the pandemic for potential insights to be gained. The focus was on students in multi-disciplinarian fields and the changes to their perspectives, practices, and identities. Working within the qualitative paradigm, data was gathered using interviews (*n=22*), surveys (*n=1,054*, n=1,137, n=205) and field notes. Learners' experiences were mapped against contemporary e-learning theory and 21st century learner identity goals. Through this lens, pedagogical practices, course designs, and uses of technology reflected in online spaces were found to influence learners and their learning in complex ways. Two key themes emerged in the analysis: (1) exposure to conventional pedagogy, information transfer and assessment-driven designs and technology challenges online, left students discouraged with their learning progress and disparaging of their future workplace preparedness and (2) students who experienced learner-centered practices online, supported by contemporary learning theory and community-building course designs and technologies, underwent transformative changes to their learning and identities and feeling confidently qualified for their post study careers. In view of the increasing role e-learning will play in this century, we believe further empirical research of this kind into a myriad of global, digital learning contexts, could help transform online learning and learners in our new post pandemic reality.

Keywords: online learning, COVID-19 online experiences, contemporary online learning theories and goals, instructional design, learner identity, transforming learning online

INTRODUCTION

Our hesitation to write about the study we conducted during the last two years–in the period of the pandemic from 2020 to 2022 could be considered understandable. After all, given the outpouring of literature that has already been written (see reviews in Cheung et al., 2023; Zhang et al., 2022), why do we need yet another account of the struggles and problems in education during this dark time in our global collective lives? What interest might there be in another report of the challenges faced–about the many cases of futile attempts at normalizing these circumstances? Why would we care to look back, especially now as many of us

are trying to move beyond this period and to return to "normal", both in learning spaces and in our investigation of these spaces. Yet, reviewing more closely the abundant scholarship that has come from all corners of the globe–stories that document the experiences of individuals with the pivot to remote instruction, in a wide range of educational systems and from multitude of perspectives, we are aware of the potential for insight that is being offered to us. In our view, looking more deeply at what occurred in online spaces during this historical time–the social, technical, pedagogical, organizational challenges (Kibuku et al., 2020; UNESCO, 2020), as well as the gains, will lead to a unique opportunity for understanding on how to move forward. As Harvard professor Michael D. Smith has pointed out, the post pandemic period is an "incredibly generative time for us if we grab this opportunity" to improve the classroom experience (Rosenberg, 2022), and we would add, regardless of the context or level.

Everything has changed. Yet, our strengths in moving ahead to improve education, which is presumably at the core of our collective goals, will lie in the combined efforts of all stakeholders to closely examine the changes that occurred in educational contexts, like the one in the present study, during 2020-2022. And importantly, they will lie also in asking ourselves what we can learn from this analysis that can shed light on the new realities post pandemic, which we are witnessing at all levels of our educational systems. Such was the goal of our inquiry–to examine in depth and over time the experiences of learners in online spaces during the pandemic and, with the understandings gained, open a dialogue on ways to move forward in the post pandemic era.

Nothing is the same in this new reality. Researchers in e-learning for decades have claimed that the key to improving education and moving it away from 20th century paradigms and more equitable access to quality learning would be through embracing technology (Anderson, 2011; Anderson & Dron, 2011; Castro & Tunibay, 2019; Tate & Warschauer, 2023). Many of these scholars are perhaps now questioning that rosy stance with stories of the personal and academic tolls from online learning experiences filling both media and scholarship. Others, especially educators, who have held firmly for so long to those 20th century principles in their classrooms, dubious of the effectiveness of technology-based learning (Singh & Hardaker, 2014), and who applied the same principles to their teaching in virtual spaces when 'forced' to move online (Charbonneau-Gowdy et al., 2021), are undoubtedly now recognizing more clearly the impact of their ways on learners' engagement and learning (Essel et al., 2021). Clearly, they could not have overlooked the closed cameras and the visible lack of learner interest in their online lectures (Rosenberg, 2022; Stevanović et al., 2021), the inequities in access to technology infrastructure (Noben et al., 2020; Tate & Warschauer, 2023), nor the propensity of compromised testing results when using classical approaches to their assessment (Guangul et al., 2020).

Still others, especially at the macro level of institutions, who believed, prior to 2020, that following the dictates of administrators and policy makers was the sole option for improving their educational structures, are perhaps now recognizing the limitations of that stance. Indeed, many institutional leaders have been forced in these past three years to confront the need for collaborative dialogue across all levels of the institution–*macro*, *meso*, and *micro* (Charbonneau-Gowdy et al., 2019b; West et al., 2020). After months of hand wringing in the early days of 2020 and feeling at a loss of how to proceed, these same leaders have had to face the stark realization that cross-institutional dialogue is a crucial means for gaining the deeper understanding of the contexts of learning and the vital knowledge needed for affecting sustained change in their institutions. A case in point, Srikant M. Datar, the new dean of Harvard Business School, prior to setting out his agenda for change in this post pandemic period in his institution, recognized that he too had much to learn from the educational community. For that reason, he reportedly talked to 1,000 individuals at all levels to capture themes of both attitudes and ideas (Rosenberg, 2022). It is this kind of grounded evidence from stakeholders, in our case from students, that can provide an opening for change–the kind of changes we are needing to make as we emerge from the pandemic.

Many of us in education have been left humbled by the pandemic. We are deeply questioning and likely more open, as we move ahead in our respective educational realities. In other words, this historical period of 2020-2022 has presented us with an ideal time for dialogue, a unique opportunity really, a moment to pause in our collective highly charged worlds to listen and rethink how we move ahead. Our inquiry into the unique changes that occurred during this period in our own higher education (HE) institution in Chile from the perspectives of students, is one attempt in that reflective dialogic process.

With these drivers in mind, the aim of this report is to spark and add to a different conversation, one that diverges distinctly from those that were taking place in learning spaces and educational research for many years before the pandemic struck and changed everything. While much research has been written about the pandemic, especially about the challenges, there is a *dearth* of scholarship that focuses specifically on the applicability of the lessons learned during this time (see Burkholder & Krauskopf, 2022; Di Pietro et al., 2020; Vlachopoulos, 2022 for exceptions). This report is meant to fill that gap. We believe that more than ever before in recent history, we have the opportunity with inquiries such as this and the theoretically based evidence it provides, to gain deep understanding of learning and learners in digital spaces. And with this understanding, hopefully we can gain a window into moving globally towards connecting effective learning theories *to practice,* whatever the context, level, discipline, and reality. In other words, the time is here to recognize *the 'real' barriers* that have stood in the way of quality education for so long, barriers highlighted online so clearly during the pandemic, and with the knowledge gained to recognize *practical avenues* to finally address them.

With these reflections and goals in mind, the following research questions guided our inquiry:

1. What kinds of learning experiences did a cross disciplinarian group of HE Chilean students have online over the period of the two years of the pandemic?
2. How did these experiences impact their learning and their identities as learners in this period?
3. What do these experiences tell us about the kinds of teaching and learning approaches being practiced in their online spaces?
4. What understandings can be drawn from these stories for ways to move forward in our approach to teaching and learning in digital spaces?

In the following sections, we provide an overview of the theory and literature that acted as a backdrop and framework for the study. Following is a description of the methodological approach, relevant details about the context of the study, the tools used to collect evidence over the two years from students' perspectives, as well as an analysis of that data. At the end of the paper, we apply our findings in responding to the research questions and discuss the implications, limitations, and our recommendations for further study.

THEORETICAL FRAMEWORK AND LITERATURE UNDERPINNINGS

We begin this section with a discussion of the historical, unresolved and divergent perspectives of learning, that were being debated in scholarship and visible in formal learning contexts in the decades prior to the pandemic. Arguably, the unsettled nature of these paradigmatic wars led to the challenges that surfaced in 2020-2022 in online sites. We consider this discussion essential to understanding the tensions that were occurring in digital spaces in the pandemic period.

An important part of this discussion is an overview of the literature that describes the efforts of increasing numbers of scholars and educational stakeholders to connect contemporary e-learning theories and 21st century aims to actual online practices through the application of e-learning models. These models, along with their potential impact in practice on learning and on learners' identities in virtual spaces, add to the framework of the inquiry and serve in the analysis of the presence or absence of quality opportunities for learning online during the pandemic in the setting of our inquiry. Extrapolating this theoretical framework and tying it to the findings of the study lie at the basis of the lessons to be learned for future direction.

Tensions in Field Pre-Pandemic

As alluded to above, many of the challenges faced online at the height of COVID-19, can be linked directly to the tensions that have existed in the last 3 decades between opposing views of learning and learners. These tensions were at the core of conversations prior to the pandemic and were evident not only in learning spaces, but also in scholarship. The most obvious of the underlying discord between opposing paradigms were grounded in divergent epistemological and ontological perspectives–in simple terms, whether learning should be seen as a knowledge delivery process or a social constructivist one. They could also be sourced in opposing views of learners as passive recipients of knowledge or multi-experienced individuals whose agency is vital to the learning process (Dudek & Heuser, 2017).

In pre-pandemic times, these views were being actively played out in both traditional face-to-face classrooms and online. Educators, and the administrators who supported them, who continued to hold tightly to educational practices like lecturing, standardized testing and the promotion of autonomous, i.e., silo-based learning, could be said to represent one view, one side of the tension. These perspectives were not confined to in-person learning. Even in online spaces with the appearance of massive open online courses, or MOOCs, just after the turn of the century, much of what was transpiring online fell back to the same information-processing, pre-set content, and individual-driven, autonomous learning practices–and this despite the democratizing mandates of many of its founding agendas and their aspirations for promoting connectivism principles (Margaryan et al., 2015; Siemens, 2004). Questionable success of this online mode of learning, no matter how it was being framed, continued to leave most learners disengaged from others and retention rates disturbingly low (Rosenberg, 2022; Tait & Gore, 2015).

On the other side of the pre-pandemic paradigmatic tensions were those adopting a socio-constructivist stance. These increasingly powerful voices expressed views of learning as a socially mediated process (Pange & Pange, 2011). From this perspective, learners are considered and promoted to be active, self-directed agents of their learning, involved in building new knowledge through interactive practices with others. Assessment is viewed as a formative process and a direct reflection of this model (Bailey et al., 2015). In the pre-pandemic period, proponents of these views looked to evolving digital technologies and their social interactive affordances as vehicles not only to support this model but as a third space (Charbonneau-Gowdy et al., 2019; Garrison et al., 2004; Lefebvre, 1991) in which to convert education to their human-centered views of learning.

The allure of this model, a model closely aligned with 21st century learning goals, was broadening among progressive educators and a growing body of e-learning scholars (Hill et al., 2009). Yet, based on scholarship in the last two decades, the 'real' uptake in actual learning spaces, i.e., the practical applications of this model, in most parts of the world was only just beginning to be demonstrated prior to the pandemic.

Fingers were being pointed by some scholars that the root of these problems could be traced to

(a) weaknesses in teacher education and the preparation of teachers for online learning (Borthwick et al., 2017; Gudmundsdotti & Hatlevik, 2017) and

(b) resistant seasoned educators (Bakir, 2016).

Meanwhile, while the socio-constructivist theories were becoming increasingly convincing and voiced, the disconnect between these theories and the 'actual' practices in learning spaces were still very much evident in the years prior to 2020 (Medina, 2018). And this, despite growing evidence of the powerful role instructional design and institutional support play in effective online programs (Castro & Tunibay, 2019).

Pre-Pandemic Challenges Connecting Theory to Practice

In the pre-pandemic period, many e-learning scholars seeking solutions to the theory-practice disconnect in online learning turned to instructional designs as an inroad for affecting change. By developing instructional designs and models based on socio-constructivist theories tailored for online learning, they argued that educational practitioners would be offered a pragmatic way forward to change. Picciano (2017) for example proposed a multimodal learning design model (see **Figure 1**) that incorporates and builds on the components of several other theoretical models.

According to Picciano's (2017) model, the seven intersecting components comprise the essential opportunities for learning available in a quality online program–that is through *media content*, *reflection*, *collaboration*, *assessment*, *dialogue, self-directed learning*, and *social/emotional support*. These opportunities underscore the key focus in the present investigation, which was to examine learners' experiences during online learning in 2020-2022 for features such these in the efforts being made in their programs:

(a) to build community across macro/meso/micro levels of the institution,

(b) to influence the social/emotional makeup of student profiles, i.e., their identities,

(c) to promote the collaborative development of 21st century skills.

Scholarship focusing on such goals, i.e., to use instructional design as a means to affect changes online, have been relatively neglected. As Adinda and Mohib (2020) have shown and the move to online learning

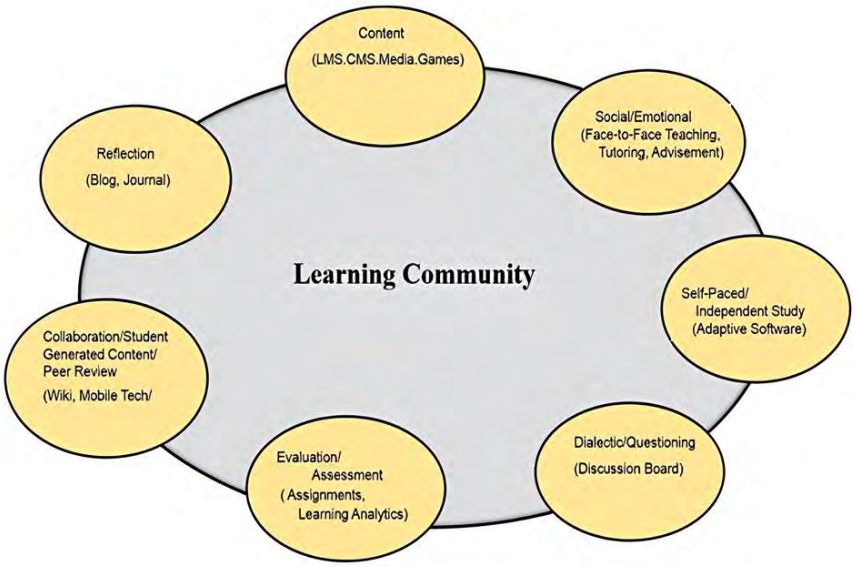

Figure 1. Multimodal model for online education (Picciano, 2017)

during the pandemic has starkly demonstrated, the benefits of the various and expanding affordances offered by technology in theory, are not automatic. Their benefits are rather dependent on the essential epistemological conformity that exists in establishing and connecting *designs*, *teaching approaches*, and *practices* (Bosch, 2017; Charbonneau-Gowdy et al., 2022) in online spaces. In our analysis of the data collected in the present study, the epistemological conformity of these three areas acted as a partial litmus test of the quality of learning taking place in the online programs and the kind of impact it was having on learners.

An Overview of COVID-19-Based Literature

As discussed above, for the most part pre-pandemic wars over the nature of effective learning practices were being waged at the theoretical level in scholarship. Yet, quite clearly based on the abundant literature that was being produced during the pandemic, the tensions around this debate suddenly became alarmingly reflected in actual online classrooms in 2020. Judging from anecdotal evidence, media reports and the global outpouring of scholarship when the pivot from in-class to online spaces first occurred, the deep shortcomings of many previously existing teaching/learning practices, whether in-person or online, were revealed.

Disengaged, absentee students (Usher et al., 2021), serious levels of attrition (World Bank, 2020), frustrated and unprepared teachers (Charbonneau-Gowdy et al., 2021; Moralista & Oducado, 2020), macro and meso level administrators scrambling and often at a loss to find answers (Morales et al., 2022) compromised assessments and results (Guangul et al., 2020), technical infrastructural issues (Chisadza et al., 2021) are just some of the most notable problems reported. A World Bank report (see **Figure 2**), issued in the

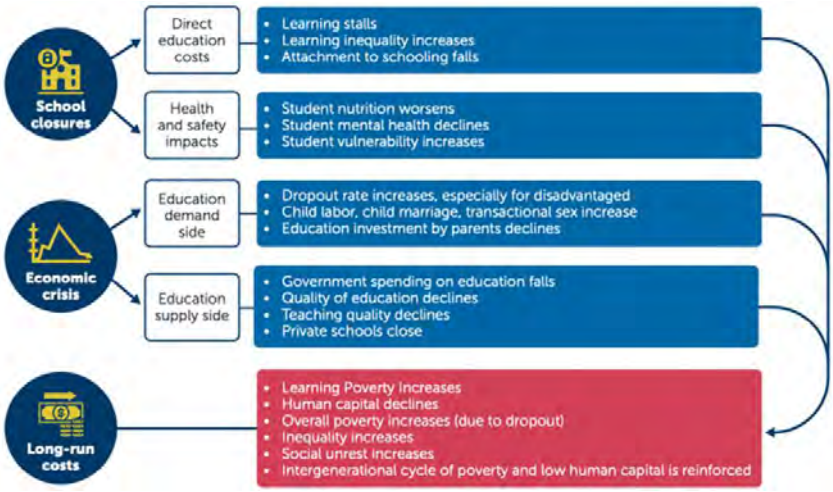

Figure 2. World Bank report (World Bank, 2020)

early stages of the pandemic, revealed the far-reaching costs of the unpreparedness of systems to move online–especially the costs to individual societies as a whole, in terms of human capital and equality.

Unsurprisingly, most of the problems being reported in the pandemic literature were similar to those uncovered in the early data emanating from the Chilean site. Yet, unlike other pandemic reports our data collection continued to trace the trajectory of these problems over a two-year period and focused particularly on the pedagogical experiences of learners over time. Indeed, our preoccupation, unlike those of many other pandemic reports, was not simply aimed at describing the issues faced in a pandemic-driven distance learning HE context. Instead, through this in-depth longitudinal inquiry, we sought to examine *changes, if any,* that occurred over the two-year period, and importantly to link those changes to subtle differences in pedagogical practices that took place in those spaces.

As Yan et al. (2021) have pointed out:

> Such information [information about evolving changes, if any, over the course of distance learning during the pandemic] could assist educational authorities and institutions to better comprehend students' difficulties and potentially improve their online learning experience" (p. 3).

Yan et al. (2021) are referring to what was changing, i.e., what was being learned, in terms of effective educational practices in teaching/learning in "real" spaces and in "real" time in the pandemic years. As noted above, a review of the literature that was generated during the pandemic, while clearly adding to our understanding of the myriad contextually specific challenges faced worldwide, falls short of shedding light on the implications of these issues. In the present study, we were driven to override this tendency in the literature. In so doing, we claim that it is precisely this kind of information that will inform and support us in education as we seek to make deep advances in the post pandemic era. Indeed, in a recent World Bank Report, we are reminded that: "… the planning for a better future has to start right now" (World Bank, 2020).

Implications of Online Learning Contexts on Learner Identities

Examining a human activity such as learning with all its complexities is never a straightforward process. Separating the myriad tensions that many learners, and indeed educators, reportedly experienced in online learning in 2020-2021, and linking them either to the learning practices in those spaces or to all the other extenuating factors individuals were facing in the pandemic period, could be considered a futile effort. Yet, we are reminded from our reading of contemporary learning theories that it is precisely a deep understanding of a context with its multi-layered influences–social, political, educational, geographical, technological, for example, that cannot be separated from the learning itself.

From this perspective, gaining a deep understanding of the complex contextual factors in a learning setting can lead to valuable insights into the kinds of 'real' learning, or lack of it, that is taking place. Decades of previous scholarship clearly shows that the nature of these multiple contextual factors are linked closely to the kinds of identities learners mediate in these spaces and to their learning. As Thorne et al. (2015) have posited: "notions of "learning" and "identity" are dialectically bound to one another and are emergent of, as well as contribute to, the ongoing formation and organization of social conditions" (p. 217).

By identity, we reference a learner's sense of self, not only in response to what is happening around them, but also in their aspirations for the future (Norton & Toohey, 2011). Adopting a socio-psychological stance, through the lens of the construct of identity, we understand that much of what happens in learning contexts influences whether learners adopt agentive, interactive, self-directed identities for example or rather disengaged, disempowered, and discouraged ones (Dudek & Heuser, 2017). And importantly, it is in this identity mediating process–a dynamic one, that the quality of learning is determined (Delahunty et al., 2014; Kwon et al., 2021).

Thus, reading accounts of various studies of online learning conducted during the pandemic from across the globe, we asked ourselves, what kinds of practical changes, if any, were being made in these demanding times and situations and where did they lead in terms of the types of learning practices and identities being mediated? What can these changes, if any tell us about ways to approach our teaching and learning practices, even when *learning* returns to conventional classroom spaces? And yet, based on the strong predictions in recent literature (Vlachopoulos et al., 2022) for the period after the pandemic, there will be a greater reliance

on online learning, especially blended or hybrid learning. What have we learned about effective approaches and practices in these sites?

These kinds of questions preoccupy us as we imagine the new post-pandemic generation of education. Our inquiry was our way of moving ahead in trying to respond to such reflections in our own HE institution in Chile. At the same time, our hope is to inspire others to do the same. It is these collective efforts we believe that will help draw the broad global educational community together in finding solutions to offering new quality educational opportunities to all learners, solutions that we have discussed in theory but that have been eluding us in practice for quite some time.

A recent study aimed at how experiences with distance learning during the pandemic provide lessons for beyond this period, helped to inform our own inquiry. Sa'di et al. (2022) conducted their study in the context of Saudi Arabia. The aim of their qualitative study was to understand the online practices of HE institutions worldwide during COVID-19, and with this knowledge, propose changes to e-learning practices in the post pandemic era. Their data sources were comprised of a review of global literature, along with national and institutional documents, reporting on experiences with distance learning in the past circa three years. Using a deductive approach to the data analysis, they scrutinized the literature and deduced recommendations of e-learning best practices in institutions as they emerged from the pandemic.

One of key findings of the Sa'di et al. (2022) study emerging from the data collected in their worldwide review of the literature that is relevant to our inquiry, indicated that most teachers in the shift to virtual spaces clung to the same traditional delivery mode they used in their face-to-face classes. In other words, they failed to recognize that as Agnoletto and Queiroz (2020) point out e-education is much more complex than simply delivering face-to-face material digitally (p. 1). The shortcomings in teachers' practices uncovered in their review are combined with others related to learners such as inappropriate or inaccessible materials (Adnan & Anwar, 2020), inequitable technology access and digital literacy issues (Azzahra, 2020), psycho-sociological issues (Schindler et al., 2021), ineffective assessment (Sharadgah & Sa'di, 2020), student dropout (Noman et al., 2021), lack of engagement in learning as well as community building, at the classroom and institutional level. The proposals the authors make to institutions in reaction to these shortcomings and that are relevant to the present study include

(a) building community,

(b) helping students change their learning style from passive to engaged,

(c) addressing student dropout issues, and

(d) rethinking the process of assessment.

While the study helps to frame the understandings that we were uncovering in the context in the present inquiry, we suspect that the realities of the Saudi Arabian system of education are far different from those existing in Chile. Also, the fact that the messages the authors make in terms of lessons learned are not *explicitly* tied to contemporary e-learning theory nor to students' learner identities is an indication to us that the study falls short in providing grounded evidence for pathways to 'real' and sustained change.

METHODOLOGY

Our study was conducted between March 2020 and January 2022, which constitutes four full semesters, two academic years in the southern hemisphere. We situate the inquiry within the qualitative paradigm. The "growing maturity and global influence of qualitative research in the human disciplines" (Denzin & Lincoln, 2017, p. 9), along with its suitability for uncovering knowledge deeply embedded in complex human experiences and insights, added to our methodological choice.

This decision also allowed us to locate our work within a critical, interpretive framework that serves our constructivist, epistemological and ontological perspectives. From these perspectives, we hold strongly to the dialogic value of knowledge construction and giving voice to key stakeholders (Howe, 2004, p. 49)–in this case, learners themselves, as those that have the most at stake by what goes on in digital learning spaces. Our aim was to gain a deep understanding of how learners in the institution, from their own perspectives, experienced teaching and learning online over the two academic years. Importantly, we also sought to unpack these

experiences in terms of their impact on their identities as learners and views of learning and to apply that understanding to the expected insights to be gained.

The wide variety of tools available to us working within the qualitative paradigm and the rich data these tools can access, matched the kinds of information we were seeking to uncover with our research questions. We argue that in these times of global uncertainty about where education is going and how we can be prepared, accessing these rich stories is critical to reversing, as Bassey (2006) expresses, "the slavish repetition in education" that has existed for decades prior to the pandemic. Adopting a case study methodology meant that we could explore the two-year phenomenon of learning online within the specific context of an institution from a variety of lenses. Case studies are considered ideal for an in-depth study of a contemporary complex social phenomenon that occur in real-life contexts and conditions and relationships of those events and conditions (Yin, 2003). We were confident that adopting this methodology and opportunity for developing a heuristic it provides would allow multiple facets of participants' experiences to be revealed and understood (Baxter et al., 2008).

In the next sections, we provide contextual details about the site of the study, the participants, and research design. We also outline the analysis process adopted and the ethical standards we maintained, pointing out the ways we sought to ensure validity and reliability of the results that we report.

Context and Participants

The study took place at a HE institution in Chile. Chile is considered an economically stable country, one of only two Organization for Economic Cooperation and Development (OECD) members in South America. Despite its stability, for over a decade the deep socio-economic divide in the country has led to annual violent student protests seeking greater access to quality and affordable education. Social unrest resulted in a historical move to create a new constitution for the country. The new constitution was expected to replace the controversial one installed during the dictatorship of Augusto Pinochet between 1973 and 1990.

Under the existing constitution, a large sector of the country's services–health care, pensions, roads, utilities, and importantly a segment of the education system are privately owned leaving a large sector of the population struggling financially and with limited opportunities to quality education and social advancement. The move to create grand policy changes through a new constitution has been accompanied by hope among many Chileans for dramatic educational and other social changes. Spurred on by this hope, in 2021 the country elected a far-left coalition government–a dramatic about-turn after years of predominantly right-leaning ruling parties whose interests had been closely aligned with upper class society, powerful religious bodies and business interests.

Students in the study attend one of the seven campuses of a privately-owned Chilean university, founded in 1988, thus a relatively young institution. Until recently, the university was in the hands of a profit-driven foreign commercial entity. In 2019, the institution was bought by a group of board members and is now considered private-not-for-profit. The university prides itself as an inclusive institution and welcomes a cross-section of students from all levels of society, many supported by institutional and government bursaries. Perhaps for these reasons, it has the largest enrolment in the country. It also has a rapidly growing research reputation, third in the country competing with top public institutions who typically attract the highest performing students on national entrance examinations, the majority of whom represent elite private school graduates.

While the emphasis at the institution has been on research for over a decade and its institutional policies aim clearly at idealistic goals for quality education, it can be said that despite these efforts, in terms of teaching, the institution has struggled to adopt 21st century goals and current learning practices across the board in its classrooms and to incorporate technology as an integral part of its programming (Morales et al., 2022).

The student body generally represents a cross-section of society–a small cohort from higher socio-economic levels whose background and grades have barred their entrance into public universities, while the majority are from middle and lower socio-economic levels, many representing first family members to attend HE institutions. The latter group would have received their earlier education in either public or subsidized schools, both reputedly inferior to the kinds of opportunities offered in private institutions.

Most students enrolled in the university depend heavily on government grants, the considerable financial sacrifice of family and/or part or full-time employment income for tuition plus living expenses to support their studies. Programs vary in length from four to five years for most undergraduate studies, to an additional two to three years for graduate work. Students in the study represent a cross-section of disciplines and fields of study as well as campus locations, and from both undergraduate and graduate levels. As they attend a university located in the southern hemisphere, first semester runs from March to July and the second from August to December/January depending on the program.

Research Tools

Over the two-year length of the inquiry, data was collected using two primary collection tools:

(a) interviews, both focus-group and individual

(b) a Likert-scale survey.

A further advantage of working within a qualitative paradigm, besides those noted above, is that it has no distinct set of methods or interpretive practices that are entirely its own. Instead, adopting this methodological perspective offers the opportunity to employ a wide variety of tools, not privileging one method or practice over another (Dimitriados, 2016, p. 12). As Denzin and Lincoln (2017) point out:

> There is no one way to do critical, interpretive qualitative inquiry. We are all interpretive *bricoleurs* stuck in the present, working against the past as we move into a politically charged and challenging future (p. xv).

Further, while surveys are generally associated with quantitative research as a primary source of information, applying this tool in the present study provided an auxiliary source of data, an exploratory tool, to compliment the deep understandings being unpacked in the qualitative interviews.

Our data collection initially began with the distribution of a survey. We employed the first survey at the end of the first semester (*n=1,054*) in June-July 2020 and then again at the end of the second semester (*n=1,137*) in December 2020-January 2021. A third follow-up survey (*n=205*) was distributed at the end of the second year, January 2022. In each case, surveys served to gain broad information about feelings and insights from the larger student body regarding their online experiences. The survey tool consisted of 25 items organized under six sections: technology, course content, interaction with peers, teaching, evaluation, and general.

The information and themes that emerged from the survey results served as a basis for pursuing topics in the interviews. Using open-ended unstructured questioning and a conversation style approach to interviews, our focus was on uncovering rich, detailed and in-depth understandings from a self-selected small group of students (*n=22*). The qualitative interviews consisted of 40-50-minute conversations with students from a cross-section of disciplines, campuses, and levels of study in the institution.

Researchers met with students using Zoom technology at the beginning of 2021 to discuss their experiences learning online over the first year of the pandemic, i.e., from March 2020 to January 2021. These audio-video, digitally recorded conversations were an opportunity to give voice to learners, and as discussed above, to follow-up in more detail and depth on the general and emerging themes from ongoing analysis of the two surveys conducted in 2020. Discussions were framed by the topics raised in the survey and included the participants' perspectives on the technical aspects of the new learning context, course content, opportunities for engagement and social interaction, views of teaching practices, evaluation processes and general impressions of learning online.

Ongoing analysis of the combined data from the interviews and earlier survey results along with the unexpected decision by the institution to continue with fully online learning in 2021 led to the third follow-up survey conducted at the end of the second year in January 2022 (*n=205*). The responses to this third iteration of the survey provided a further means of triangulating the data collected in the first year of the pandemic and importantly provided a basis for deeper insight into changes, if any, taking place.

Research Design

The inquiry consisted of the following four phases as illustrated in **Figure 3**.

Phases of the study	Data Tools	Description of data
Phase 1 Semester 1, March – June 2020 Gaining access	Field notes	E-mails from administrators and administrative staff, faculty meetings, institutional documents
Phase 2 June - July 2020	Likert-scale survey	Feedback from students on experiences in online courses for the period March to June 2020 (*n= 1,054*)
Phase 3 December 2020 – January 2021	Likert-scale survey	Feedback from students on experiences in online courses for the period March 2020 to January 2021 - 1 academic year, (*n= 1,137*)
	Interviews (Focus group & individual)	Transcripts from 13, 40-50, minute individual and focus group interviews between researchers and students *(n=22)*
Phase 4 March 2021- Jan. 2022	Final Likert-scale survey	Feedback from students on experiences in online courses for the period March 2020 to January 2022 - 2 academic years, (*n=205*)

Figure 3. Research design (Source: Authors)

In the first phase (see **Figure 3**), permission to conduct the university-wide study was sought from institutional authorities. Access to student opinions required a multi-faceted, time-consuming, a somewhat political and bureaucratic process that required several layers of approval–a sign perhaps of the inattention in the institution to the concept of whole community efforts to build improvements to learning that presumably would be uncovered by the research project.

In the second phase, the first survey (*n=1,054*) was distributed to students across the university. Originally the survey was intended to be sent out in the first couple of weeks of the move to online programs, but due to the complications in gaining institutional approval, student responses were gathered near the end of the first semester. At that point, it was clear that the university, as elsewhere, would continue classes in the online modality into the second semester.

In the third phase of the study, marking the end of the academic year and first year of online learning, a second survey (*n=1,137*) was distributed. This survey was essentially identical to the first in terms of items, sections and wording, but with a few changes made to reflect the time period that had passed since the first survey. For example, while the first survey items sought to uncover students' general anticipated views on a particular topic, in the second survey the same item would seek to know participants' perspectives after one year of online learning. This third phase also involved organizing and soliciting participants for the interviews. The participants were gathered from respondents of the survey who had indicated an interest to participate in the online interviews. Due to time constraints and since the interviews were held at the close of the semester, significantly fewer individuals than had volunteered were interviewed. In any case, the large numbers of students that indeed volunteered could be considered a strong indicator of high levels of interest in having their voices heard.

In the fourth and final phase, the general student body was again surveyed (*n=205*) for their perspectives. The survey was almost identical to the first and second iteration, with some of the wording altered simply to reflect the period of two years since the initial move to online learning. Once more the mailout of this survey was delayed by bureaucratic challenges, which meant that most students had left the university at the end of the academic year. These challenges could account for the rather disappointing response compared to the earlier surveys. Regardless, the results were considered useful in confirming emerging findings from the previous data collection. They also uncovered further general information about the presence of sustained changes in students' perspectives, their learning practices and changes to identities over the two-year period of the study.

Data Analysis

The qualitative data collected in the inquiry was analyzed using thematic analysis (Nowell et al., 2017). Recognized as a qualitative research method particularly apt for analyzing large data sets, thematic analysis

can be used for identifying, analyzing, organizing, describing, and reporting themes found within a data set. When rigorously applied, the analysis method can produce trustworthy and insightful findings (Braun & Clarke, 2006) which is in keeping with one of the main goals of our inquiry. In the present study, the process included a grounded qualitative coding method involving a combined inductive-deductive process (Miles et al., 2014).

After establishing a conceptual framework, a series of iterative steps were taken in the analysis process that included:

(a) inspecting the data sets for data that could inform the research questions,

(b) multiple readings and considerations of the data sets,

(c) condensing and coding the data for key concepts and ideas that related to the theoretical framework and literature review,

(d) identifying and refining salient or common themes from coded data (Vaismoradi et al. 2016),

(e) forming a conceptual framework that could be corroborated by the findings.

Descriptive statistics were employed to analyze the data tabulated from the three surveys conducted in the data collection process. The descriptive results are based on the relative frequencies of participants' chosen response options, presented both in the analysis text and illustrations. This analysis provided an overall view of students' experiences

(a) in the early stages of their move to online learning,

(b) at the end of the first year,

(c) after two years.

Huber and Helm (2020) employed a school barometer as a fast survey to test the impact of COVID-19 on education in Europe. Huber and Helm (2020) point out:

> The use of quantitative data for exploratory purposes and analyses is justified by the fact that there is little extant research on digital teaching and learning due to COVID-19.

The perceptions of the participants in our inquiry were uncovered from students' own perspectives and corroborated through triangulating the data from the various survey results as well as from interviews. The analysis of these statistics also offered insight into comparative changes to the participants' views over the period of the study. The importance of student voice (Jordan, 2014) that go far beyond satisfaction survey results, is critical we believe to drawing such implications. The study adhered to strict ethical guidelines set by the university where the research was conducted.

ANALYSIS AND FINDINGS

When media reports in Chile first announced the spread of the COVID-19 virus to countries beyond China, few understood the implications it would have for education in this country, including students in the institution, where the study took place. Data from the data sets indicated that many students believed initially that the interruption to regular classroom learning would be short lived. Despite their optimism in face of the uncertainty at the time, their reactions to the prospects of learning fully online were mixed. For example, Natalie, an accountant student remarked in a positive way, as did many others interviewed, that she immediately saw advantages:

> So the truth is that because of the date and the way the issue was for me, it was great because I have children (interview, January 2021).

For Natalie, the thought of being able to learn from home was a plus, and also a relief, especially since it meant she could be available for her children as well as continue her studies at the same time. The fact that for many Chilean students the commute to university can entail several hours of the day, the time saved for study and family was indeed significant.

Victor, a biology student added his own reasons for looking favorably at the new move to online classes– his awareness of the technical advantages:

> I could access the recorded classes. I could take screen shots of the slides. I could take notes, so it was more comfortable (interview, January 2021).

For Victor, the move to online learning provided him with all the supports to learning that were unavailable in conventional classrooms, thanks to the powerful affordances of technology.

Yet, students who shared Nicole and Victor's optimism vis-à-vis online learning, were certainly not in the majority. First survey results revealed that 71.3% of students did not feel confident that the experience online would be a positive one. As Caro, an English pedagogy student shared:

> I felt quite scared to be honest because we did not know what was going to be locked down, what was going to happen with the virus … and of course [with] the classes … we did not know if we were going to have to go to college or to stay home … and then there was this whole new world about how are we going to do this? I mean there is [are] also doubts: Is my computer going to work? Will my internet connection support me on this?

For Caro, the early period of moving to online learning provoked fears and feelings of insecurity. These feelings were partially precipitated by the worldwide spread of the virus and her country's response. Yet, in Caro's case as in others interviewed, the angst was compounded by doubts about the technical logistics of what the move to online learning entailed. According to significant data collected in the inquiry, the initial dichotomous reactions that Natalie and Victor, as opposed to Caro, had towards the move to online learning foreshadowed the kinds of experiences that other participants had over the period of 2020-2022. Two major interconnected themes were uncovered in our analysis:

(a) *negative experiences online in terms of technology, teaching and learning* and

(b) *positive experiences online in terms of technology, teaching and learning.*

In **Table 1** and **Table 2**, we provide a summary of our analysis of those experiences and the implications for identities. In the following, we discuss details of this analysis supported by representative excerpts from the data and connect these findings to relevant literature and our theoretical framework.

Through the lens of contemporary learning theories and practices that we summarized above, it is evident that the tensions that existed before the pandemic, especially those being discussed in educational scholarship, were being played out in the online spaces for these student participants. Some learners in the institution were being exposed to negative experiences online whereas others were enjoying more positive experiences during 2020-2022. In analyzing the large body of data collected, the contradictory experiences reported, both negative and positive, were found to be rooted in factors related to technology, teaching practices and opportunities for learning. In each case, there were implications of these conditions for the kinds of identities that students mediated during this period.

Negative Experiences Online

For some students, the technological affordances offered in their online courses, detailed in **Table 1**, led to numerous challenges–the limitations of the institutionally chosen platform and software compounded by their own unstable internet connections and bandwidth and even access to a computer. They were also burdened with large amounts of digital content and ineffective tools being used for testing. These technology-driven challenges combined with a host of issues based in their teachers' practices resulted in many learners indicating that their learning opportunities over the period of the two years online were severely compromised. In our analysis, most of the issues stemming from teaching indicated that teachers were unprepared, unsure, anxious and distant. Perhaps looking for ways to compensate for their shortcomings in the use of technology, instructors reportedly reverted to lecturing, frequent testing, burdening students with increased digital content and assignments. Students also revealed that many teachers remained disconnected and unavailable to students, showed signs of mistrust, were not forthcoming with constructive and timely feedback, adhered to delivering long lectures of theoretical information and basically seemed unsupportive and uncaring.

Table 1. Negative experiences online

Technology	Teaching	Learning	Impact on identity
- Burden of overabundance of digitalized content - Poor bandwidth/ connectivity issues - Instability and limitations of the platform -Personal computer challenges - Technical challenges during testing periods - Poorly performing software	- Traditional lecturing/handwriting teaching practices - Ineffective evaluation techniques – standardized testing methods - Outdated technologies to support teaching - Content-based, information driven teaching practices - Increased assignments and heavier demands - Distrust of students - Building community a non-priority - Poor or little feedback - Disorganized and lacking in expertise to teach and assess online - Boring and non-dynamic - Lack of congruence between assessment and course objectives and content - Unexplained absenteeism -Lack of follow-through with student requests - Closed camera while teaching - Lack of leadership in promoting effective teamwork - Disregard for students' mental health	- Excessive screen time fatigue - Lab work (practical) suffers or non-existent - Lack of peer-communication and social interaction - More distractions, difficulties in focussing and being "on" in classes - Loss of respect for testing processes and results - Most work done autonomously - Forums viewed of questionable use for learning: time-consuming and difficult to navigate - Difficulties balancing study and homelife - Problems with support from university and teachers to resolve issues - Large online classes make learning more challenging - Lack of know-how in group work lead to challenges - Little interest in actively attending and engaging online classes - Loss of opportunities for effective learning	- Feelings of being just a number, "a machine" - Feelings of being abandoned - Feelings of discouragement and boredom - Voices not heard (asking for support) - Lacking respect - Disengaged as a learner - Distrustful of the teaching practices and testing results - Unmotivated and lacking in incentive - Anxious learner - Feelings of unpreparedness for the 'real' world

While undoubtedly many of these instructors were living through their own personal as well as professional challenges during the same period (Abu Talib et al., 2021; Flores & Gago, 2020), the end results of their actions can be measured in the lack of quality in the learning experiences of students and the impact of these experiences on their students' identities. Students who were:

(a) deprived of the proper computer equipment and connections,

(b) who faced less than favorable home conditions,

(c) who were exposed to teaching practices that lacked dynamism,

(d) with little or no interactivity with other learners nor with the instructor,

(e) an absence of any practical application of what they were 'learning' to their future employment,

(f) excessive screen time, and

(g) ineffective standardized assessment practices, felt cheated of the benefits of their further education.

As Jemena shared:

> Most of us agree that we have not learned that much (interview, January 2021).

Other participants were even more explicit in their perspectives of the repercussions of a lack of quality learning during the two years online on their *identities*. They spoke of the marginalization and their disadvantaged positions once in the workplace due to their lack of preparedness. One such participant, Catalina, disparagingly remarked:

> Many of us have the fear that when we get to our interview, they will rule us out (interview, January 2021).

In speaking on behalf of other classmates, Catalina foresees the dismissive attitudes of employers when she applies for work and is deemed unprepared and lacking practical knowledge. In her lament, she echoes what many others in the group of participants who had negative experiences online voiced–that their time

Table 2. Positive experiences online

Technology	Teaching	Learning	Impact on identity
-Student-initiated group connections supported by social media tools - Powerful tools available and exploited for class time group work - Availability of recorded content for reviewing - Computer loans to students in need	- Relaxed pace - Flexibility of teachers - Evaluations adapted to online - Increased emphasis on team and group work - Close connection to students - Innovative assessment practices exploit technology affordances (collaborative testing) - Teachers motivated, active and collaborative - Experiential and engaging teaching practices lower anxiety – Games, variety, humour - Commitment and increased efforts to engage students - Exploit technology tools to support collaborative practices (case study) - Extra tutors provided to help with learning issues - Use of student-generated content - Prior experience teaching online and confident. - Sensitive to learners' screen fatigue - allow frequent breaks - Caring attitudes - Well prepared - Increased communication with students	- Fewer disruptions – able to focus - Move to more digitalized work rather than handwritten assignments - Teamwork more effective - Access to other learners for community building - Awareness of increased learning capabilities online - Change in learning space sparks deep reflection - More time available for reading course materials - New skills being learned in the use of technology	- Confident about learning - Self-directed in searching out collaborative technology tools for collaborating with peers - Openness to new ways of learning - More technical savvy - Self-directed beyond the demands of the instructor - Emerging appreciation for valuing learning over grades

online was a waste, that as learners they felt alone, powerless to change their situations and worst of all that their hopes for learning and improving their societal status through education had been thwarted.

Positive Experiences Online

The picture of what transpired online for other participants was rosier. Like Victor above, many in this group saw the advantages of having access to powerful technology tools and all their affordances. Between the lines of their testimonies, it was apparent that many in this group enjoyed the benefits of a socio-economic leg-up - access to the latest technologies, high speed connections and spaces conducive for study. Many explored and exploited social media tools for initiating connections to their peers and for mediating knowledge outside their online classrooms–the kinds of connections that lie at the root of community building and critical to learning (Lave & Wenger,1991; Wenger, 1998). A few luckier ones were loaned computers by the institution. The data revealed that most students with a positive perspective of their experiences online benefitted from instructors who (a) kept classes amusing and interactive, (b) relied heavily on group work and (c) student-generated materials and (d) put emphasis on building trusting relationships with students. Trust came not only through (e) being openly available but also by (f) working together towards fostering a community atmosphere in the classroom. In terms of assessment, the data revealed that many of these same instructors were (g) innovative in developing testing materials, (h) even initiating group or pair testing provided, and (i) provided opportunities for both instructor and peer feedback. Referring to these enhanced opportunities for learning in which instructors combined the benefits of technology with motivated, caring, sensitive and professional dispositions, participants spoke highly of the benefits to their development during this period online. Some revealed their *metacognitive awareness* of this development in their emerging abilities to reflect deeply, in their desire to read extensively beyond the work assigned, to use technology confidently, to work well in teams and to build learning communities with others. Most surprisingly, in a society like Chile, where the importance of grades is paramount and all-defining of an individual's worth, some participants even spoke of the increased value they placed on learning over grades. The *identities* these individuals

reflected in their words and actions as learners–confident, empowered, self-directed and open to new ways of doing and thinking, were testimony to the advantages they had gained. Victoria, a psychology mature student, summed up what others who shared similar positive experiences online voiced, in her remark:

> So all in all, I loved the online system … It was very helpful. I learned much more than what I learned in person [conventional classes] … It allowed me to be calmer, to apply the knowledge more, not to do it by heart, but with a learning process … And the professors … all of them a seven" (interview, January 2022).

From Victoria's perspective, the move to distant learning was a success for many of the reasons detailed in **Table 2**. She connects that success, as detailed in **Table 1**, to the affordances of technology and to the quality of the instructors–giving them top marks for skills and efforts.

There is much to be learned from the experiences and views of the participants in the inquiry, both negative and positive. Data analysis of the survey results support these views and at the same time sharpens our understanding of the larger picture in the move to online learning in the institution. To carry out the analysis, we gathered the questionnaire items under three interconnected categories aligned with those in the tables above: *experiences with technology*, *experiences with faculty* and *experiences with learning.* In **Table 3**, we present a summary of the analysis of the data results.

In summarizing the analysis of the data from the survey, we found several key take-aways. Much of the data from the survey mirrors that of the rich data that was collected in interviews in terms of overall teaching and learning experiences and experiences with technology. Of note are what the data indicates in relation to significant changes over the two-year distance learning period.

Table 3. Survey results

	July 2020	Dec. 2020	Dec. 2021
TECHNOLOGY			
This is the first time I am taking a university course completely online	84.2 agree	85.6 agree	68.7 agree
I feel comfortable with the use of technology generally	50.4	53.7	74.6
The technology being used for the classes is allowing me to easily enter the virtual class.	52.9	55.9	76.1
The platform seems easy to navigate	48.1	54.6	79
Any problems I have with the platform are being resolved quickly	20.5	40.8	48.3
CONTENT OF THE COURSE			
The materials for most of my courses were available at the beginning of the semester.	36.9	35.8	41.4
The materials for each course are about the same in quantity as we usually have for courses.	31.7	32.6	46.3
The interface of the platform allows me to find the materials for each class easily.	43	43.1	63.9
The assignments are similar to the ones that we normally have for courses.	35	28.3	42.4
Most of the assignments are group assignments done outside of class hours.	55	55.9	60
INTERACTION WITH OTHERS			
One of my concerns about classes online is that I am losing contact with my other classmates	49.4	46.9	41.4
As I expected, there is less contact with professors in the online course.	71	64.7	61
I am feeling more hesitant to speak up in the online class than in a regular face-to-face class.	49	47.4	49.2
I am finding that there is less opportunity for discussion in the online platform than in a regular face-to-face class.	69.7	64	57.2
The majority of my professors use group work in classes.	28.7	38.4	38
TEACHING			
My professors have seemed mostly comfortable with online teaching right from the start/ My professors seemed generally comfortable teaching online in the second semester.	20.5	27.3	75.6
I notice little difference in my professors' teaching styles online so far/ I noticed very little change in my professors' teaching styles online compared to the way they teach in face-to-face classes.	20.9	26.4	35.7
My professors generally seem to be trying to change their ways of teaching to adapt to their new virtual classrooms/ My professors generally seemed to try to change their ways of teaching to adapt to their new virtual classrooms.	57.7	58.1	60.5
I feel the professors call on students to interact more often in the online classroom than in traditional classes.	32.5	50.9	63.4
I feel I have a closer connection with my professors in this kind of virtual room/ I feel I have developed a closer connection with my professors in this kind of virtual room.	10.4	18.6	23.9

Table 3 (continued). Survey results

	July 2020	Dec. 2020	Dec. 2021
EVALUATION			
Overall, there are fewer tests in the online courses I am taking this semester.	12.7	17.6	15.1
I am comfortable with the fact that the testing process is changing due to the online classes/ I am comfortable with the fact that the testing process has changed due to the online classes.	26.2	29.8	45.4
I am worried that I will not be able to perform as well on major tests /I felt this year that I was not able to perform as well on major tests	85.3	54.1	40.5
I think that I will learn less in this course than in a face-to-face course/Generally, I think that I learned less in the online courses than in a face-to-face course	68	61.6	43.9
I expect that I will have to depend more on my own efforts in order to pass my online courses/ I felt that I had to depend more on my own efforts in order to pass my online courses.	79.6	68.7	60.9
GENERAL			
I can see that I have more time for studying since I am not travelling to the university/ I felt that I had to depend more on my own efforts in order to pass my online courses.	42.4	40.8	64.9
Overall, I feel confident that this online learning experience will be positive/ Overall, I feel confident that this online learning experience was positive	28.7 (55.2)	30 (53.4)	51.8 (82.5)

Firstly, in terms of experiences with the analysis reveals:

1. A dramatic improvement in the number of students who indicated comfort with the use of technology from 50.4% to 53.7% to 74.6%.
2. Percentages of students who found the technology easy to access, use and navigate increased by 23.2%, 30.9% and 20.9% respectively, a factor influenced perhaps by an institutional decision to move to Zoom technology.
3. Still 51.7% of students found support with technology inadequate.

Secondly, in terms of experience with faculty and teaching, dramatic positive changes were more limited:

1. Students reported somewhat improved contact with professors–down from 71% who saw less contact online to 61%–thus only 10% seeing improved connection with instructors.
2. Online discussion (especially in the second year) as well as group work - practices which are more closely aligned with contemporary learning theories, saw an increase of 18.5% and 9.2%, respectively.
3. Calls by instructors for students to interact in online spaces increased, according to students, from 32.5% to 63.4%, representing a 30.9% increase.
4. Numbers of survey participants attesting to a visible Improvement in online teaching style rose by 15.7%.
5. Instructors' *confidence with technology* rose dramatically from 10.5% to 75.6%, indicating a 55.1% improvement.
6. Importantly, 35.7% students indicated virtually *no changes in their instructors' efforts to adapt to the virtual classrooms* over the two years.

Thirdly, in terms of learning experiences, the data analysis revealed the following changes:

1. A 19.2% increase in agreement that assessment processes were being adapted to the realities online.
2. By the end of the two years, students' concern about their performance on assessments and learning online in general decreased by 44.8% and 24.1%, respectively.
3. Also, change was seen in the recognition by learners that they would be left to their own devices in terms of learning, from 79% at the beginning of 2020 to 60.9% at the end of the study.

While in most cases these changes could suggest a positive improvement to students' experiences with

(a) technology,

(b) faculty and their teaching, and

(c) their learning, they could also be interpreted as an indication of mixed conditions in these areas similar to the results of the analysis of the qualitative data.

Adopting a critical lens, it is evident that most students (51.7%) who had technology issues were not receiving efficient support. Despite the increased confidence of most instructors with technology at the end of the two years, only 23.9% of participants were content with teachers. Indeed, according to students' perspectives, 62% of teachers were *not* incorporating interactive pedagogy in the form of group work in their practices and 61.2%, were *not* fostering in class discussions, and instead were relying on increased assessments in their courses. All of these factors have been shown to be barriers to learning in online spaces. (Gutiérrez-Santiuste et al., 2015). While the number of students who viewed their learning online positively increased over the two years (from 28.7% to 51.8%), there is much to learn from the 48.2% who remained skeptical.

A consideration of the theoretical framework described earlier helps to shed light on the significance of these results. The divergent experiences revealed by participants can be explained by the dichotomous views of learning we discussed above. These experiences reflected *either* autonomous (silo) learning, teacher directed, conventional, information and assessment driven *or* socially mediated, formative, and dialogic. The uses of technology in each case supported these mindsets. Scholars have shown the disadvantages and advantages to learning and learners in pre-pandemic research (Pange & Pange, 2011; Tait & Gore, 2015) and in the context of what transpired online in the years during the pandemic (Rosenberg, 2022). World Bank's (2020) predictions (**Figure 2**) in terms of losses to learning, increases in inequality and mental health issues as well as a sense of detachment from the 'real' value of learning are reflected in those participants whose experiences with teaching, learning, and technology were negative, and are threaded through their testimonies. Those participants whose experiences were more positive were exposed, according to our analysis, to learning contexts that can be mapped to some degree against Picciano's (2017) model with its components for quality online learning. Elements of these components such as collaboration, dialogue, self-directed learning, social-emotional support, the use of learning analytics in assessment and social media technology, surface in our analysis of their experiences. It would be difficult to refute that the dichotomous contextual factors, complex as they may be, that are revealed through the negative and positive testimonies of experiences online are not connected to some degree to the identity formation revealed in the data - further evidence of the dialectically- bound nature of identity and learning (Dudek & Heuser, 2017). Indeed, the identities attested to by participants are the ultimate indication of the quality of their learning experiences (Engell & Coll, 2021) and their future as life-long learners.

CONCLUSIONS

Our study focusses on HE learners and the interconnected and complex experiences they had with technology teaching and learning during the pandemic-imposed period of online learning from 2020-2022. In response to our research questions, findings from the individual in-depth stories we gathered that were corroborated by data from student-wide surveys revealed that experiences were mixed. For some students, the conditions were ideal in terms of having access to quality technology combined with exposure to caring, innovative instructors whose teaching and creative assessment practices reflected contemporary learning theories (RQ1, RQ3). For these individuals, both their learning and their identities as learners thrived (RQ2). Yet, for most others who participated in the inquiry, they were less fortunate. Lack of appropriate technological tools and support, exposure to instructors who were ineffective both in their teaching and assessment practices and seemingly uncaring, despite efforts to improve their use of technology tools (RQ1 & RQ3), left these individuals adrift, discouraged, demotivated and despairing, especially as they contemplated their future preparedness for a world, where individuals with 21st century skills will be prioritized (RQ2). These are stories of inequity that have been replicated in other contexts (Boke, 2021, Tate & Warschauer, 2023). What are the implications of uncovering these conditions for moving ahead in our new post-pandemic reality, whatever that may be? In other words, how do we take a constructive perspective on the disruption we have all faced in education in 2020-2022? Or as phrased in RQ4, what can these findings tell us about moving ahead?

An important implication of our study, and in response to RQ4, concerns the actions of institutional decision makers. In the new realities post pandemic, when most stakeholders in this essential process of human development called education are looking for a way forward, the message that arises clearly from our

findings is that it is the utmost responsibility of macro-level leaders in institutions, regardless of the context, to recognize that each action they themselves take has a direct and important impact at the *meso* level of operational decision making and most importantly the *micro* level - on learning and the identities of both educators and learners in those spaces. Blieck et al. (2020) propose that going beyond a preoccupation of management operational issues to a focus on pedagogy, and we would add, on the alignment of pedagogy with design and the use of technology, is essential. If those pedagogical decisions are made with the following criteria in mind, then the lessons learned from the two years of learning online will be of value. The decision making must be:

(a) made collaboratively at all levels,

(b) aimed at empowering instructional designs and approaches in both teaching and assessment, especially for those on the margins,

(c) made in multi-level communities where the importance of discourse and critical reflection and where teaching, cognitive and social presences are upheld (Garrison et al., 2010).

The stories behind encouraging signs of improved attitudes towards online learning in some participants in our study and the overwhelming student interest in online learning recorded elsewhere (Venable, 2021) lead us to conclude that success in educating in these spaces will solidly lie *from now on*, not in the content absorbed nor the abilities acquired. These are fleeting goals, and they cannot keep pace with the demands of the unknown changes to come in our world. If we extrapolate the insights gained from this inquiry, it seems clear, that successful changes to online education will be found in the kinds of identities in learners we help mediate and promote through our designs, approaches and technologies–in the *kinds of learner identities*, not the content knowledge, of students we graduate from our programs.

We acknowledge that the understandings we have reached in these findings cannot be generalized across all e-learning sites. As we have pointed out above, the complex nature and uniqueness of the Chilean context–historically, culturally, pedagogically, socio-economically, politically, institutionally for example, compared to other learning contexts, would prevent drawing such conclusions. We also recognize that our findings, despite our efforts to ensure their trustworthiness, cannot be completely unraveled from the impact of myriad other factors at play that affected how education was being conducted online during this unprecedented period in our human history. Yet, we believe strongly that the contribution of this study lies not in such generalizations but rather in the invitation it presents to a broad range of stakeholders to join in responding to the call for looking broadly, deeply and longitudinally at the lessons learned from the pandemic. This call is to examine our institutional decision making at all levels, regardless of the area. It involves examining these decisions for how the designs, pedagogies, and technologies we use in the activity we call education, which is increasingly taking place online, impact the individuals for whose futures we claim to be concerned with preparing. In other words, gathering more empirical evidence in digital spaces grounded in contemporary learning theory, 21st century goals and with a focus on identity can be a powerful step in moving forward towards transforming e-learning.

Author contributions: All authors were involved in concept, design, collection of data, interpretation, writing, and critically revising the article. All authors approved the final version of the article.

Funding: The authors received no financial support for the research and/or authorship of this article.

Ethics declaration: Authors declared that the study was approved by the Comité de Bioética Facultad de Educación y Ciencias Sociales Universidad Andrés Bello [Bioethics Committee of Faculty of Education and Social Sciences at Universidad Andrés Bello] on 20 April 2020.

Declaration of interest: Authors declare no competing interest.

Data availability: Data generated or analyzed during this study are available from the authors on request.

REFERENCES

Abu Talib, M., Bettayeb, A. M., & Omer, R. I. (2021). Analytical study on the impact of technology in higher education during the age of COVID-19: Systematic literature review. *Education and Information Technologies, 26*, 6719-6746. https://doi.org/10.1007/s10639-021-10507-1

Adinda, D., & Mohib, N. (2020). Teaching and instructional design approaches to enhance students' self-directed learning in blended learning environments. *The Electronic Journal of e-Learning, 18*(2), 162-174. https://doi.org/10.34190/EJEL.20.18.2.005

Adnan, M., & Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students' perspectives. *Journal of Pedagogical Sociology and Psychology, 2*(1), 45-51. https://doi.org/10.33902/JPSP.2020261309

Agnoletto, R., & Queiroz, V. C. (2020). COVID-19 and the challenges in education. *Centro de Estudos Sociedade e Tecnologia* [*Society and Technology Study Center*]*, 5*(2), 1-2.

Anderson, T. (2011). *The theory and practice of online learning*. AU Press.

Anderson, T., & Dron, J. (2011). Three generations of distance education pedagogy. *International Review of Research in Open and Distance Learning, 12*(3), 80-97. https://doi.org/10.19173/irrodl.v12i3.890

Azzahra, N. F. (2020). Addressing distance learning barriers in Indonesia amid the COVID-19 pandemic. *Center for Indonesian Policy Studies, 2*, 1-8. https://doi.org/10.35497/309162

Bailey, S., Hendricks, S., & Applewhite, S. (2015*).* Student perspectives of assessment strategies in online courses*. Journal of Interactive Online Learning, 13*(3), 112-125. https://www.ncolr.org/jiol/issues/pdf/13.3.2.pdf

Bakir, N. (2016). Technology and teacher education: A brief glimpse of the research and practice that have shaped the filed. *Tech Trends, 60*, 21-29. https://doi.org/10.1007/s11528-015-0013-4

Bassey, M. (2006). Creating education through research, *British Educational Research Journal, 18*(1), 3-16. https://doi.org/10.1080/0141192920180101

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report, 13*(4), 544-559. https://doi.org/10.46743/2160-3715/2008.1573

Blieck, Y., Chang, Z., Schildkamp, K., Struyven, K., Pynoo, B, Poortman, C., & Depryck, (2020). A conceptual model for effective quality management of online and blended learning. *The Electronic Journal of e-Learning, 18*(2), 189-204. https://doi.org/10.34190/EJEL.20.18.2.007

Boke, S. S. (2021). Socio-economic inequalities in Europe: Time to restore social trust by strengthening social rights. *Council of Europe Report, Committee on Social Affairs, Health and Sustainable Development*. https://assembly.coe.int/LifeRay/SOC/Pdf/TextesProvisoires/2021/20210909-SocialInequalities-EN.pdf

Borthwick, A. L., & Hansen. R. (2017). Digital literacy in Teacher Education: Are teacher educators competent? *Journal of Digital Learning in Teacher Education, 33*(2), 46-48. https://doi.org/10.1080/21532974.2017.1291249

Bosch, C. (2017). *Promoting self-directed learning through the implementation of cooperative learning in a higher education blended learning environment* [Doctoral dissertation, North-West University].

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), *77*-101. https://doi.org/10.1191/1478088706qp063oa

Burkholder, G. J., & Krauskopf, E. (2022). Experience and lessons learned from the COVID-19 pandemic. *Higher Learning Research Communications, 12*(0), i-v. https://doi.org/10.18870/hlrc.v12i0.1372

Castro, M., & Tunibay, G. (2019). A literature review: Efficacy of online learning courses for higher education institutions using meta-analysis. *Education and Information Technologies, 26*, 1367-1385. https://doi.org/10.1007/s10639-019-10027-z

Charbonneau-Gowdy, P., & Herrera, M. (2019). 'Breaking bad': Overcoming barriers preventing higher education faculty from offering quality blended learning programs. In *Proceedings of the 18th European Conference on e-Learning (ECEL)* (pp. 128-136). https://doi.org/10.34190/EEL.19.127

Charbonneau-Gowdy, P., & Chavez, J. (2019b). 3-M Model for uncovering the impact of multi-level identity issues on learners' social interactive engagement online. *Electronic Journal of e-Learning, 17*(2), 131-143. https://doi.org/10.34190/JEL.17.2.06

Charbonneau-Gowdy, P., Pizarro, J., & Salinas, D. (2021). Finally in the spotlight: How contemporary learning theory is saving education online during COVID. *Electronic Journal of E-Learning, 19*(6), 642-655. https://doi.org/10.34190/ejel.19.6.2199

Charbonneau-Gowdy, P., & Galdames, C. (2022). The impact on learners' identities of aligning pedagogy, design and technologies with theory in online courses. In *Proceedings of the 21st European Conference on e-Learning (ECEL)* (pp. 51-60). https://doi.org/10.34190/ecel.21.1.899

Cheung, S. K. S., Wang, F. L., & Kwok, F. L. (2023). Online learning and blended learning: New practices derived from the pandemic-driven disruption. *Journal of Computing in Higher Education, 35*, 1-5. https://doi.org/10.1007/s12528-023-09350-9

Chisadza, C., Clance, M., Mthemb, T., Nicholls, N., & Yitbarek, E. (2021). Online and face-to-face learning: Evidence from students' performance during the COVID-19 pandemic. *African Development Review, 33*(1), S114-S125. https://doi.org/10.1111/1467-8268.12520

Delahunty, J., Verenikina, I., & Jones, P. (2014). Socio-emotional connections: Identity, belonging, and learning in online interactions: A literature review. *Technology, Pedagogy and Education, 23*(2), 243-265. https://doi.org/10.1080/1475939X.2013.813405

Denzin, N. K., & Lincoln, Y. S. (2017). Introduction: The discipline and practice of qualitative research. In N. K. Denzin, & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research*. SAGE.

Di Pietro, G., Biagi, F., Karpiński, Z., & Mazza, J. (2020). *The likely impact of COVID-19 on education: Reflections based on the existing literature and international datasets*. Publications Office of the European Union. https://doi.org/10.2760/126686

Dimitriados, G. (2016). Reading qualitative inquiry through critical pedagogy: Some reflections. *International Review of Qualitative Research, 9*(2), 140-146. https://doi.org/10.1525/irqr.2016.9.2.140

Dudek, J., & Heuser, R. (2017). Elements, principles, and critical inquiry for identity-centered design of online environments. *International Journal of e-Learning and Distance Education, 32*(2), 1-18. https://www.ijede.ca/index.php/jde/article/view/1037

Engell, A., & Coll, C. (2021). La identidad de aprendiz: El modelo de Coll y Falsafi [Learner identity: The Coll and Falsafi model]. *Papeles de Trabajo sobre Cultura, Educación y Desarrollo Humano* [*Working Papers on Culture, Education and Human Development*], *17*(1), 1-12. http://psicologia.udg.edu/PTCEDH/admin/publicacions/EngelColl2021_PTCEDH.pdf

Essel, H. B., Vlachopoulos, D., Adom, D., & Tachie-Menson, A. (2021). Transforming higher education in Ghana in times of disruption: Flexible learning in rural communities with high latency internet connectivity, *Journal of Enterprising Communities: People and Places in the Global Economy, 15*(2). https://doi.org/10.1108/JEC-08-2020-0151

Flores, M. A., & Gago, M. (2020). Teacher education in times of COVID -19 pandemic in Portugal: National, institutional, and pedagogical responses. *Journal of Education for Teaching, 46*(4), 507-576. https://doi.org/10.1080/02607476.2020.1799709

Garrison, D. R., Cleveland-Innes, M., & Fung, T. S. (2010). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *Internet and Higher Education, 13,* 31-36. https://doi.org/10.1016/j.iheduc.2009.10.002

Guangul, F. M., Suhail, A. H., Khalit, M. I., & Khidhir, B. A. (2021). Challenges of remote assessment in higher education in the context of COVID-19: A case study of Middle East College. *Education Assessment, Evaluation and Accountability, 32*, 519-535. https://doi.org/10.1007/s11092-020-09340-w

Gudmundsdottir, G., & Hatlevik, O. (2017). Newly qualified teachers' professional digital competence: Implications for teacher education. *European Journal of Teacher Education, 41*(2), 1-18. https://doi.org/10.1080/02619768.2017.1416085

Gutiérrez-Santiuste, E., Gámiz-Sánchez,V., & Gutiérrez-Pérez, J. (2015). MOOC & B-learning: Students' barriers and satisfaction in formal and non-formal learning environments. *Journal of Interactive Online Learning, 13*(3), 88-107. https://www.ncolr.org/jiol/issues/pdf/13.3.1.pdf

Hill, J., Song, L., & West, R. (2009). Social learning theory and web-based learning environments: A review of research and discussion of implications. *American Journal of Distance Education, 23*(2), 18-103. https://doi.org/10.1080/08923640902857713

Howe, K. R. (2004). A critique of experimentalism. *Qualitative Inquiry, 10*(1), 42-61. https://doi.org/10.1177/1077800403259491

Huber, S. G., & Helm, C. (2020). COVID-19 and schooling: Evaluation, assessment, and accountability in times of crises–reacting quickly to explore key issues for policy, practice and research with the school barometer. *Educational Assessment, Evaluation and Accountability, 32*, 237-270. https://doi.org/10.1007/s11092-020-09322-y

Jordan, K. (2014). Initial trends in enrolment and completion of massive open online courses. *International Review of Research in Open and Distributed Learning, 15*(1), 133-160. https://doi.org/10.19173/irrodl.v15i1.1651

Kibuku, R. N., Ochieng, D. O., & Wausi, A. N. (2020). e-Learning challenges faced by universities in Kenya: A literature review. *The Electronic Journal of e-Learning, 18*(2), 150-161. https://doi.org/10.34190/EJEL.20.18.2.004

Kwon, S., Kim, W., Bae, C., Cho, M., Lee, S., & Dreamson, N. (2021). The identity changes in online learning and teaching: Instructors, learners, and learning management systems. *International Journal of Educational Technology in Higher Education, 18*(1), 67. https://doi.org/10.1186/s41239-021-00304-8

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation, Learning in doing: Social, cognitive and computational perspectives*. Cambridge University Press. https://doi.org/10.1017/CBO9780511815355

Lefebvre, H. (1991). *The production of space*. Blackwell.

Margaryan, A., Bianco, M., & Littlejohn, A. (2015). Instructional quality of massive open online courses (MOOCs). *Computers and Education, 80*, 77-83. https://doi.org/10.1016/j.compedu.2014.08.005

Medina, L. (2018). Blended learning: Deficits and prospects in higher education. *Australasian Journal of Educational Technology, 34*(1), 42-56. https://doi.org/10.14742/ajet.3100

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook*. SAGE.

Morales, R., Frenzel, M., & Bravo, P. (2022). Perceived preparedness for testing in higher education online English courses during a global pandemic? Challenges, tensions, and opportunities. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2022.891566

Moralista, R. B., & Oducado, R. M. (2020). Faculty perception toward online education in a state college in the Philippines during the coronavirus disease 19 (COVID-19) pandemic. *Universal Journal of Educational Research, 8*(10), 4736-4742. https://doi.org/10.13189/ujer.2020.081044

Noben, I., Deinum, J. F., & Hofman, W. H. A. (2020). Quality of teaching in higher education: Reviewing teaching behaviour through classroom observations. *International Journal for Academic Development, 27*(1), 31-44. https://doi.org/10.1080/1360144X.2020.1830776

Noman, M., Kaur, A., & Nafees, N. (2021). COVID-19 fallout: Interplay between stressors and support on academic functioning of Malaysian university students. *Children and Youth Services Review, 125*, 1-7. https://doi.org/10.1016/j.childyouth.2021.10600

Norton, B., & Toohey, K. (2011). Identity, language learning, and social change. *Language Teaching, 44*(4), 412-446. https://doi.org/10.1017/S0261444811000309

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods, 16*(1). https://doi.org/10.1177/1609406917733847

Pange, A., & Pange, J. (2011). Is e-learning based on learning theories? A literature review. *International Scholarly and Scientific Research and Innovation, 5*(8), 932-936.

Picciano, A. (2017). Theories and frameworks for online education: Seeking an integrated model. *Online Learning, 21*(3), 166-190. https://doi.org/10.1163/9789004471382_005

Rosenberg, J. (2022). Harvard Business School's bold agenda. *Harvard Magazine*. https://www.harvardmagazine.com/2022/01/harvard-business-school-dean-datar-agenda?utm_source=email&utm_medium=newsletter&utm_term=weekly&utm_content=mostpopularstories2022&utm_campaign=123022

Sa'di, R. A., Sharadgah, T. A., Abdulrazzaq, A., & Yaseen, M. S. (2022). Future proposals for e-learning at conventional tertiary institutions as they move on past the COVID experience. *The Electronic Journal of e-Learning, 20*(5), 523-537. https://doi.org/10.34190/ejel.20.5.2565

Schindler, A. K., Polujanski, S., & Rotthoff, T. (2021). A longitudinal investigation of mental health, perceived learning environment and burdens in a cohort of first-year German medical students' before and during the COVID-19 'new normal'. *BMC Medical Education, 21,* 413. https://doi.org/10.1186/s12909-021-02798-2

Sharadgah, T., & Sa'di, R. (2020). Preparedness of institutions of higher education for assessment in virtual learning environments during the COVID-19 lockdown: Evidence of bona fide challenges and pragmatic solutions. *Journal of Information Technology Education: Research, 19*(1), 755-774. https://doi.org/10.28945/4615

Siemens, G. (2004). *Connectivism: A* learning *theory for the digital age.* http://www.elearnspace.org/Articles/connectivism.htm

Singh, G., & Hardaker, G. (2014). Barriers and enablers to adoption and diffusion of eLearning: A systematic review of the literature–a need for an integrative approach. *Education and Training, 56*(2/3), 105-121. https://doi.org/10.1108/ET-11-2012-0123

Stevanović, A., Božić, R., & Radovic, S. (2021). Higher education students' experiences and opinions about distance learning during the COVID-19 pandemic. *Journal of Computer Assisted Learning, 37*(6), 1682-1693. https://doi.org/10.1111/jcal.12613

Tait, A., & Gore, H. (2015). *Student success in open, distance and e-learning: Research findings*. http://www.icde.org/assets/WHAT_WE_DO/studentsuccessappendix.pdf

Tate, T., & Warschauer, M. (2022). Equity in online learning. *Educational Psychologist, 57*(3), 192-206. https://doi.org/10.1080/00461520.2022.2062597

Thorne, S., Sauro, S., & Smith, B. (2015). Technologies, identities, and expressive activity. *Annual Review of Applied Linguistics, 35*, 215-233. https://doi.org/10.1017/S0267190514000257

UNESCO (2020). *COVID-19: A global crisis for teaching and learning*. https://teachertaskforce.org/knowledge-hub/covid-19-global-crisis-teaching-and-learning

Usher, E. L., Golding, J. M., Han, J., Griffiths, C. S., McGavran, M. B., Brown, C. S., & Sheehan, E. A. (2021). Psychology students' motivation and learning in response to the shift to remote instruction during COVID-19. *Scholarship of Teaching and Learning in Psychology*. https://doi.org/10.1037/stl0000256

Vaismoradi, M., Jones, J., Turunen, H., & Snelgrove, S. (2016). Theme development in qualitative content analysis and thematic analysis. *Journal of Nursing Education and Practice, 6*(5), 100-110. https://doi.org/10.5430/jnep.v6n5p100

Venable, M. (2021). *Online education trends report*. https://www.bestcolleges.com/research/annual-trends-in-online-education/

Vlachopoulos, D. (2022). How the "lessons learned" from emergency remote teaching can enrich European higher education in the post-COVID-19 era. *Higher Learning Research Communications, 12*(0), 147-156. https://doi.org/10.18870/hlrc.v12i0.1357

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press. https://doi.org/10.1017/CBO9780511803932

West, D., Luzeckyj, A., Toohey, D., VAnderlie, J., & Searle, B. (2020). Do academics and university administrators really know better? The ethics of positioning student perspectives in learning analytics. *Australasia Journal of Educational Technology, 36*(2), 60-70. https://doi.org/10.14742/ajet.4653

World Bank. (2020). *The COVID-19 pandemic: Shocks to education and policy responses*. https://openknowledge.worldbank.org/bitstream/handle/10986/33696/148198.df?sequence=4

Yan, L., Whitelock-Wainright, A., Guan, Q., Wen, G., Gašević, D., & Chen, G. (2021). Students' experience of online learning during the COVID-19 pandemic: A province-wide survey study. *British Journal of Educational Technology, 52*(5), 2038-2057. https://doi.org/10.1111/bjet.13102

Yin, R. K. (2003). *Case study research: Design and methods*. SAGE.

Zhang, L., Carter Jr, R. A., Qian, X., Yang, S., Rujimora, J., & Wen, S. (2022). Academia's responses to crisis: A bibliometric analysis of literature on online learning in higher education during COVID-19. *British Journal of Educational Technology, 53*(3), 620-646. https://doi.org/10.1111/bjet.13191