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Building Back Better? Exposing Enduring Challenges of Curriculum and Learning Design

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Abstract

This exploratory qualitative study analyses challenges to curriculum and learning design and suggestions for support, as described by educators at a university in Aotearoa New Zealand. Thematic analysis informed by specialist literature on course design shows the COVID-19 pandemic was not a purely anomalous episode. While nationally mandated lockdowns forced the institutional response of Emergency Remote Teaching (ERT), and COVID-19 added novel challenges, this time of emergency also exacerbated more enduring challenges of resources (skills, support, and time), as well as of meeting student needs. Further, it hastened a long-called-for move to incorporate online and blended learning. Some institutional responses, such as insisting on dual delivery, were discretionary. Reviewing challenges ("big asks" and "sheer obstacles") forced participants to reconsider the basics of course design. The study vindicates course design as a field whose knowledge is integral to teaching and learning but not pre-provided by teachers recruited for their disciplinary expertise. A basic lesson from this research for both future emergencies and "normal" times would be to consider the relationship between technology and pedagogy, the strengths and requirements of online/face-to-face modes, and the professional development and other support mechanisms for curriculum and learning design.

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Introduction

Curriculum and learning design encompass the thoughtful design of assessments, courses, resources and tasks (Goodyear, 2015). The processes, design models, and principles that are used to implement it are regarded as the key mechanisms to support and drive curriculum change. Adaption of curricula and courses in higher education (HE) is often a key organisational focus with institutional systems and processes that support quality assurance in curriculum design and delivery. However, curriculum and learning design as a purposeful practice which supports student success is not always appreciated. Curriculum design is often assumed to be an inherent skill in educators which is easily absorbed into workloads, rather than recognised as a distinct step to master and apply systematically in collaboration with learning design experts (Agostinho et al., 2018; Goodyear, 2015).

This article is set against the backdrop of the Higher Education landscape with increasing online teaching and learning and in the context of COVID-19. The pandemic notoriously forced sudden transitions to online student engagement, also known as Emergency Remote Teaching (ERT) (Hodges et al., 2020). Educators in Aotearoa New Zealand (henceforth Aotearoa, its indigenous Māori name) had to pivot to online teaching in as little as two days (Muir et al., 2022). As senior academic developer, I support academics with curriculum and learning design and capability building. My role started in May 2020, then helping staff to familiarise themselves with ERT and to decide which online learning practices would be appropriate for their course design under the circumstances at that time.

The exploratory qualitative study described in this paper analyses curriculum and learning design challenges and suggests solutions, as identified by academic staff (in mid-2021) at an internationally well-ranked, research-intensive, campus-based university. The research questions were: (a) What were the perceived challenges – aspirations, directives, or obstacles - to curriculum and learning design at this university? (b) How far were they due to the pandemic and how far more general and/or longstanding? (c) How could the challenges be better understood, and potentially met, through insights from curriculum and learning design literature and practice and participant suggestions? The purpose of answering these questions is to view the COVID-19 experience as surfacing more enduring challenges and to inform how we might enhance the conditions for curriculum and learning design. An allied purpose is to describe support mechanisms to potentially meet these challenges in future emergencies and, more importantly, the evolving “new normal” times.

Background

Pre-pandemic, the university operated mostly face-to-face. Its many students from overseas provided substantial revenue. On 19 March 2020, Aotearoa closed its borders and began imposing various alert levels from maximum lockdown to near normality minus border flow. By the time of participant interviews, this university had endured several sudden periods operating only online, interspersed with face-to-face periods while the virus was not circulating. Moreover, in early 2020 the central unit that had supported teaching and learning was replaced with fewer faculty-based staff and a learning design team with a project-based approach. Given economic,

cultural and societal changes, the university had already embarked on reconsidering its study offerings, informed partly by constructivism and associated learner-centric approaches.

Literature review

Approaches in curriculum and learning design development

In this article *curriculum and learning design* is used to mean all the processes of planning and developing a course of study and engagement with how students will learn. This reflects the reality that the terms of curriculum design and learning design are often used interchangeably, and processes can overlap (MacNeill & Beetham, 2022). What Mayes and de Freitas (2004) call the curriculum design cycle spans defining learning outcomes, designing activities and assessment and evaluating achievement, and aligning or scaffolding with the wider curriculum. It considers students, subjects or disciplines, and types of learning required. Curriculum and learning design issues central to contemporary HE include learner engagement and flexible learning (Bates, 2019), integrating appropriate educational technologies (Ako Aotearoa & Synapsys, 2018), and embedding Indigenous ways of knowing into default Western systems (Barber & Naepi, 2020).

Broadly curriculum and learning design in most Western-colonised countries offers four main approaches, which overlap, and complement each other and should all be tailored to circumstances: first, align learning outcomes, activities, and assessment for each level of learning (Biggs & Tang, 2011; Mayes & de Freitas, 2013); second, emphasise what students are to learn and what they need to do to show their learning (Biggs & Tang, 2011); third, consider how people learn and build knowledge (Beetham & Sharpe, 2013; Mayes & de Freitas, 2013); and, fourth, recognise learners' different preferences and resources (Rogers et al., 2007). The theory underlying these approaches is increasingly learner-centric, broadly constructivist.

Constructivism holds that knowledge should focus on what students do to learn, designing for students to interact face-to-face or online with resources, their peers and teachers (Hong & Sullivan, 2009). This proves especially pertinent to online delivery where students collaborate with other students and staff in flexible ways, at differing times. Material accessed when the student chooses, must engage students, with collaborative and authentic activities designed to provide both learning and social contact (Clapp, 2021). My approach to curriculum and learning design is underpinned by the approaches outlined above, and I support Māori as an ally.

Curriculum and learning design approaches in Aotearoa have to consider how to incorporate Māori ways of knowing and learning and appropriate support for Indigenous learners (Barnes, 2013). Student-centred challenges during COVID-19 of disengagement, inequity, and indigeneity are especially relevant to curriculum and design in today's Aotearoa (Barber & Naepi, 2020). The country is officially bicultural; however, Māori face structural barriers in HE (Hunia et al., 2020; McLoughlin & Oliver, 2000). Biculturalism includes honouring indigenous ways of learning (Kennedy et al., 2020), crucially showing *manaakitanga* (defined here as care) and supporting *whanaungatanga* (defined here as building and maintaining relationships) in the online and face-to-face environment (Hunia et al., 2020; McLoughlin & Oliver, 2000). Encouraging participation, knowledge co-construction and fostering of teacher–learner relationships are vital for supporting Māori students (Stucki, 2012).

Challenges in Curriculum and Learning Design

Existing challenges in the HE landscape such as inequities among students and staff (Adnan & Anwar, 2020; Aristovnik et al., 2020; Neuwirth et al., 2020) were accentuated with sudden Emergency Remote Teaching (Hodges et al., 2020) during lockdowns and border closures. These challenges comprise what could be called systemic issues such as workload models and investments in curriculum and learning design knowledge (MacNeill & Beetham, 2022); educational technology related changes, such as integrating digital pedagogy with face-to-face practices (Bates, 2019; Shand & Farrelly, 2018); more student-centred challenges of meeting the needs of diverse learners with increasingly flexible learning (Schwenger, 2019); and more teacher-centred challenges of resources teachers lack such as time, skills and support (Zhao & Song, 2021).

Bennett et al. (2016) found that design seems underrated and regarded as an innate part of teacher competencies. Educators are hired for disciplinary expertise and may acquire only modest pedagogical content knowledge (Shulman, 1987; Rapanta et al., 2020). Reflecting this stance, curriculum and learning design in practice is often under-resourced even when its value is officially recognised as universities globally prioritise research over teaching and learning (Callejas Restrepo et al., 2017). Various studies break down resource challenges into a lack of time, skills and support (Schwenger, 2019; Zhao & Song, 2021). The many aspects of staff's time resource (Gratz & Looney, 2020), include adequate time to engage appropriately with training in pedagogical understanding and technical practices (Clapp, 2021); time to reconsider, redesign, trial new ideas, practise and reflect to amend existing pedagogical and technical practices. Workloads are always topical. Workload models of campus-based institutions often fail to adapt quickly to the challenges of online teaching to acquire skills and to plan more pre-course (Gregory & Lodge, 2015; MacNeill & Beetham, 2022).

Individual educators have embraced technology unevenly, and institutions not necessarily in a systematic manner (Mirriahi & Alonzo, 2015). An institutional Learning Management System (LMS) can easily become a static file repository when little attention is given to how the design of learning activities can add value, particularly for Indigenous students. Educators might design for interactivity in the classroom but be unsure of how to do so for teaching and learning online (Zhao & Song, 2021). Uneven digital capabilities of staff, e.g. technical skills with online tools were most discussed among skill gaps (MacNeill & Beetham, 2022; Zhao & Song, 2021). These include identifying if a tool is suitable to support learning, including assessment, and how to integrate and use technology effectively, e.g. to achieve learning outcomes (Bates, 2019; Rapanta et al., 2020). However, all aspects of curriculum and learning design require understanding, knowledge, and good practice. Since most new HE educators lack these and wider teaching skills, they depend on support mechanisms such as development.

Literature on support for curriculum and learning design highlights development for designing courses and adapting pedagogical understanding and technical skills. One option is group learning (Beaty, 1998). Peer networks help provide the multiple pathways necessary for professional development, such as by sharing learning modules and inter-disciplinary/inter-institutional opportunities. Further, to be sustainable and effective, academic development requires high trust by academics, and their involvement in designing and implementation (Bond & Blevins, 2020). Pedagogical aspects to engage students, as identified, for example, by Dyke et

al. (2007), should inform design of professional development through activity and experience, social interactions, conversations, thinking and reflection.

Informal exchanges and conversations with colleagues can support teachers to change practices as Boud and Molloy (2013a, 2013b) found. The concept of reciprocal benefits from collaborating with experienced staff aligns biculturally with the Māori idea of *tuakana-teina*, where the less and the more experienced learners work together to improve the knowledge of both. Distributing information or one-off workshops are a starting point (Ball & Cohen 1999) but are unlikely to transform practice or develop deep conceptual understanding. Self-access resources such as web pages require supplementary wrap-around processes for use in one's own context and should be signposted. The University of New South Wales Educational Design website (UNSW Sydney, n.d.) provides an example of implementation support through well-signposted materials. All forms of support should consider the staff's existing skills and grasp of pedagogical theories (Adams Becker et al. 2018; Schwenger, 2019; Walker & Kerrigan, 2016).

Methods

The study investigated challenges faculty teaching staff faced and how support mechanisms should be augmented to meet their needs. Planned as Educational Design Research (EDR), the study underwent pragmatic but principled adaptions because the pandemic intervened. It became 11 parallel mini projects, supporting eleven educators (eight from Arts, two from Engineering, and one from Science) through real-time responses. Based on the findings from an initial questionnaire and interview conducted during the first research phase, the data reported in this article served as the baseline for a larger study. Participants could raise issues on their own and were supported through follow-up of issues reported, e.g. to integrate Mātauranga Māori or getting practical support with course design issues.

The methodology aligns with EDR's structured approach, with a systematic analysis and evaluation phase, and supports the aim to generate "research-based solutions for complex problems in educational practice" (Plomp, 2013, p. 16). Since *Kaupapa Māori* is by-Māori-for-Māori, as Pākeha, my stance can be described as an ally and supporter of change for Māori through acknowledging the principles of *Kaupapa Māori* theory, a "theoretical framework that ensures cultural integrity is maintained" (Pihama, 2010, p.10). My work is underpinned by Cram's (2001) *Kaupapa Māori* researcher guidelines which include treating participants with respect, sharing knowledge, and being cautious and reflective.

The study received ethical approval (The University of Auckland Human Participants Ethics Committee number UAHPEC3241) before commencing. A qualitative approach with a non-probability, purposive sampling method (Bekele & Ago, 2022), suited the exploratory nature of the research. The 11 teachers (henceforth P1-11) volunteered in response to an invite through a third party. The goal was to sample participants who have control over the design of a semester-long course, so that the research questions being asked are relevant. The roles included Professional Teaching Fellow, Senior Tutor, Lecturer, Senior Lecturer, Associate Professor and Professor, teaching at pre-degree, undergraduate or postgraduate levels. Eight taught in the arts faculty, two in the engineering faculty and one in the science faculty. Only P2 had taught online pre-pandemic. Two were men, nine women.

Table 1

Participant characteristics

Participant Number	Faculty	Role	Course level(s)	Previous training in online teaching
1	Arts	Senior Tutor	TFS	No
2	Arts	Senior Lecturer	UG + PG	Yes
3	Arts	Associate Professor	PG	No
4	Arts	Professor	PG	No
5	Arts	Associate Professor	UG + PG	No
6	Arts	Senior Lecturer	UG + PG	No
7	Sciences	Professional Teaching Fellow	UG	No
8	Arts	Lecturer	UG +PG	No
9	Engineering	Professional Teaching Fellow	UG	No
10	Arts	Senior Lecturer	UG	No
11	Engineering	Professional Teaching Fellow	UG	No

TFS – Tertiary Foundation Studies, UG – Undergraduate Studies, PG – Postgraduate Studies

The response rate probably reflected the time pressures of the crisis, as participants' narratives detailed. A small *n* is acceptable in exploratory qualitative research with reflective and highly articulate participants (Bekele and Ago, 2022, p. 46). Guest et al. (2006) say 6-12 interviews suffice for one qualitative research project. The high consistency found, easily understood subject matter and ease of eliciting information also supported the *n*. Data saturation was reached when no relevant new categories were found, and issues began to be repeated.

Questions

The participants shared their perspectives via an interview each averaging 35-40 minutes, ten face-to-face and one by Zoom from May to July 2021. Open-ended questions were used to elicit answers. Participants could also raise issues of their own. The questions asked relevant for this article were Q1 "What do you see as the big challenges for curriculum and course design this year?" and Q2: What type of support at the faculty did you or would you find helpful?

Thematic Analysis

The findings were generated inductively from participants' experiences. Interviews were digitally recorded and transcribed. Following Braun and Clarke's (2006) six-step method of thematic analysis, transcripts were read and re-read, and initial codes were generated using a manual, open-coding approach (Saldana, 2013). The small data set meant the stages of coding and identifying preliminary themes (Braun & Clarke, 2006) overlapped. These were manually mapped to visualise their relationships to each other and the research questions. Themes were refined and remapped, and data reconsulted, until each final theme was distinct, and their relationships could be visually represented. When delineating themes, I critically consulted related studies

(Bryman, 2008) for potential inspiration and comparability. The breakdown into challenges from COVID responses, teachers' resources (time, skills, support), and more learning-centred concerns for meeting students' needs was compatible with themes in the literature review. However, participants' voices were always respected: preserved as the evidence basis for all themes, and as central indicators of the overall results (Matthews & Kostelis, 2020).

Results

Three Key Themes

Throughout, I discerned that participants used "challenge" to mean both a difficult undertaking or '"big ask" and a "sheer obstacle". Three main themes of challenges emerged from the data, in fact interacted and overlapped:

- The challenges from governmental and institutional responses to COVID-19, which dictated online delivery.
- Challenges from staff' constraints resources (time, skills and support).
- Challenges of responding to students' needs.

Challenges from Governmental and Institutional Responses to COVID-19

All participants saw thoughtful curriculum and learning design as vital to their teaching, both for knowledge creation and to enhance their commitments to students. Although the pandemic itself received some mention, challenges from governmental and institutional responses to it were more prominent in participants responses. Participants were not asked about personal-level challenges, however, many educators faced COVID-19 and caregiving duties including home schooling, while all faced the universal challenge of 'Work from Home'. Challenges comprised lockdowns, social distancing requirements and limits on gatherings; closure of borders; sudden shifts between Alert levels; and mandatory self-isolation. Some of the university's COVID-19 response plan, policies and strategies were direct implementations of government mandates or discretionary reactions to them. Others consisted of general university standards and goals, including those recently revised. Participants discussed, for example:

- Planning and designing for ERT and face-to-face delivery between lockdowns. (P1, P3, P5, P6, P7, P8 and P9).
- Emphasis on making online learning materials (e.g., slides, recordings, readings) equitably accessible to students in accordance with university policy (P2, P3, P7 and P8).
- Posting appropriate learning content quickly (P1, P2, P6 and P9). P6 described a lockdown being announced on a Saturday and having to "rejig"' a class for the Monday.
- Adapting assessment design quickly to be online, more flexible and open book (P3, P4, P5, P7, P10 and P11).
- Designing contingencies for changing environment (e.g. lockdowns and illness cover) into courses (P1, P3, P5, P6, P7, P8 and P9).
- Navigating practical course components like field work (P4, P7 and P10) to maintain the "materiality" of their work.
- Participants struggled to grasp or operationalise leadership's explanation for online teaching and learning because few guidelines and definitions were supplied, and leadership engaged little with digital education previously (all participants).

Challenges from Constrained Resources: Time, Skills and Support

Most challenges with curriculum and learning design fell into the "resource" theme: time, support and skills, where skills also mean understanding, practices and knowledge. Most were amplified by COVID-19, rather than entirely novel. Participants had to do more with less. Personal and institutional resources were often inextricable. For example, time was primarily articulated as a personal resource. But educators' available time depends on institutional workload and workforce provisioning. Likewise, a lack of skills, upskilling requires training allocations at the institutional level.

a) Lack of time

Of the resource constraints, the lack of time to adapt to an online environment before and during COVID-19 dominated the participants resources. First was time to plan, design and create activities and assessments; second, time to learn about pedagogy and technologies. Participants acknowledged that effective curriculum and learning design work was a high time-cost endeavour. As P3 explained, the bigger changes especially would take "significant amounts of time" for proper research, namely to "figure out what would work, what wouldn't work, … what the implications would be for your students." Too daunted to overhaul their curriculum and learning design, the same participant only had time to redesign part of it. Participants consistently stressed as barriers heavy workloads and limited or no access to dedicated leave. For P1, lack of leave meant their development work was done "on the fly".

Time poverty constrained not only decisions whether to engage in course development, but decisions about delivery as well. P7 faced redesigning their course after enrolment multiplied due it being made a core course. They were "pretty nervous" about scaling the previously very hands-on course from 30 to over 200 participants, given inadequate time and resources and without, as they put it, "multiple of me".

b) Lack of skills (including understanding, practices and knowledge)

Participants reported they lacked the skills to follow what I call "big ask" institutional directives such as dual delivery and of online teaching. Gaps concerned:

- Pedagogical understanding and knowledge of design principles for online learning and teaching.
- Technical skills: new technologies, scaling for increasing enrolments.
- General design knowledge: designing to meet outcomes, indigenising and catering to diversity; communicating a rationale for course design.

For example, P8 felt they lacked curriculum and learning design skills for the institution's increasing reliance on digital learning environments and were not 'super proficient' at Zoom. P10 and P11 reported they needed to upskill in designing to manage online live discussions and technical skills such as editing video clips. Given their existing course delivery experience and knowledge, P4 described moving from a lecture-based approach to more discussion-based learning as an anxious decision. It required:

> getting away from my own preoccupation with thinking that there's a, there's a kind of a *set* body of knowledge that I have to impart and do it in a lecture format, to […] instead um, let them lead where they want, y'know, the emphasis to go … and the discussion to go.

P9 pointed out the lack of consistent requirements or offerings for central training in teaching and curriculum and learning design, which they felt were left to the faculties to enact. None of the participants had received formal staff development at this institution for applying pedagogical knowledge when teaching online. Nearly all participants felt unconfident to teach online. The one participant who had previously taught online at another institution felt the kinds of demands but expressed less difficulty with the pedagogical concepts underpinning online delivery and redesign.

c) Lack of support

Responses to the core question about the biggest challenges of 2021 (Q1), and to Q2 about support wanted, underlined a lack of curriculum and learning design support mechanisms. Again, the challenge was often how to meet university directives, or how to do so while honouring principles of teaching and learning that university policy itself articulated. Some who were proactive in course design, like P10, who wanted to bring in alternative forms of assessments, also wanted help understanding how their innovations could fit official policy. Participants discussed the type of support needed, its accessibility, content, and how well an offering was signposted and communicated. These included more formal support from curriculum and learning design specialists and funding provided by the university or participants' faculties, and more hands-on support from ancillary staff like Graduate Teaching Assistants (GTAs) and informal help from peers or seniors.

Support for technical skills was deemed lacking, especially for the COVID-19 forced move online, underpinning pedagogical understanding and course design knowledge. There was a sense that both pedagogical, design and technical changes were under-supported at every level, given the magnitude of the change. Thus, P5 commented that they needed help that included teaching pedagogy rather than technical instruction, e.g. more help to think about online delivery that helps you to achieve "what you're trying to do" rather than replicating in-person instruction in an online format. One participant had received formal staff development for applying pedagogical knowledge or design principles when teaching online. Also reported was the absence of a teaching and learning 'culture'.

Technical and pedagogical support at university level was "terrible and insufficient" according to P5, who missed the disestablished academic development centre for teaching. In the same faculty, P6 confirmed that relying on one technical faculty person for timely support in online tools and LMS was difficult and remarked: "We can't lose them". Central university technical support had to be timelier to be helpful. They wanted resources such as academic developers, learning designers and consistent access to systematic and valued academic development. Additionally, existing support needed to be better communicated and more personalised. For example, P1, P6 and P8 wanted teaching and learning webinars, online resources, workshops and seminars to be signposted clearly. Support needed to be both timely – prompt and available at the most applicable opportunities – and ongoing, to embed sustainable teaching and learning. Most remarkably, only few of these educators knew that the university had published a new framework for teaching and learning.

Among specifics, participants asked for exemplars such as alternative, more engaging ways of students' demonstrating their knowledge. They asked for templates, for example of appropriate marking rubrics: "Everyone says 'Oh I love the idea, how do you mark that, how do you assess it? … What are the logistics?"(P10). Further, P11 suggested support design drop-ins, "a working

bee with experts and doing it there ..." P3 thought "more achievable" small ideas targeting current issues should be shared between colleagues. They sought research-based but practical advice on what worked: "Here's a really simple thing that I did, it made a big difference in my course, and it didn't take a lot of time and effort." (P3)

Many participants praised the various curriculum and learning design support they received and wanted more of the same, emphasising the importance of the hands-on support. Among these was guidance from colleagues, and support staff such as markers or GTAs. Popular were showcases where colleagues presented their practices, workshops and drop-ins for specific pedagogical, design or technical aspects which had been regularly provided in the Arts faculty in recent years. One-to-one design, pedagogical and technical support and just-in-time models and demonstrations were also highly valued.

Challenges of Responding to Students' Needs

COVID-19 also illuminated student-centred challenges to curriculum and learning design. As challenges faced by students became challenges to curriculum and learning design, P9 and P11 reported designing courses to respond to students' needs, realities and feedback even more than usual in assessments and considerations of accessibility, engagement and retention. P1 noted that student circumstances relevant to curriculum and learning design now either went beyond or exacerbated the familiar need to multi-task amid cost-of-living pressures, family commitments and work obligations and students' diversity of, for instance, educational background and ethnicity. Students' statuses as caregivers and workers – particularly in 'essential services' which operated during lockdowns – were a new consideration. P6 noticed more students "[taking] on extra work or [having] to wait until StudyLink (Student Support Payment) comes through so that they can afford to take the bus".

An ongoing issue had been student attendance falling during each semester. The pandemic exacerbated this: local students left the city, and their external obligations increased. As remote learning also heightened students' sense of isolation, lowered their engagement and impaired performance in assessments, participants approached assessment design differently, increased opportunities for discussion and other modalities for engagement such as online meetings and extended office hours, and de-prioritised traditional 'lecture' content. P5 noted that adjusting course design was simpler and fairer than making bespoke arrangements with students directly.

Two participants worried about how changing their course design would affect students' assessment of their courses via the university's Summative Evaluation Tool (SET). One concern was that processed feedback would arrive too late for them to adjust course design. Thus, P7 would have created more short, reusable explainer videos "had I known how they liked the […] video but I only found out after the SET evaluation". P4 and P5 reported a change in focus on what students are doing for learning rather than on content.

Some staff wanted to indigenise their course design and embed Māori knowledge. P2 planned to bring Māori principles into the course design of two courses and wondered about faculty support for indigenising courses. P6 asked for more dedicated, ongoing support for embedding Mātauranga Māori, "… just embedding more and more over time … the more we start to make the curriculum more inclusive". P8 recognised that staff need support to indigenise their curricula, "if we're really true about paying attention to Te Tiriti o Waitangi." Additionally, P8 felt that basic

te reo Māori should be compulsory for staff “to use, pronounce, understand basic greetings …[and] why that’s important.”

Discussion

The thematic analysis above already addresses research questions (a) (main curriculum and learning design challenges) and to some extent (b) (how far they were due to the pandemic versus ongoing). This Discussion extends those answers and addresses question (c): how challenges could be better understood, and potentially met, by support suggested by participants themselves and by literature and practice. In the context of wider curriculum and learning design literature and practice, participant responses identify challenges and support solutions applicable in *ordinary as well as emergency times.* Most responses were reasonable and constructive: neither a litany of grievances nor an impracticable wish-list. The study induced useful reflection among participants and led to troubleshooting of individuals’ challenges. Thus, although famously “unprecedented”, COVID-19 is no irrelevant anomaly. Within curriculum and learning design it has variously exacerbated and added to more enduring challenges. It also hastened a move online. Some of the big asks and the obstacles could have been avoided or lessened. Calderon et al (2022) foresaw ERT lessons as assisting in future climate change emergencies, and indeed in early 2023 some Aotearoa universities had to shift online briefly for emergency situations of flooding and a cyclone. More significantly, just as participants had to “refocus”, COVID-19 forces our attention back to the basics of curriculum and learning design.

Dominance of Resource Challenges

Given the compendious term, the dominance of “resources” is perhaps unsurprising. Unpacking that theme is instructive, though. The primacy of time aligns with academic development literature highlighting teachers’ need for time to trial, practise and reflect (Clapp, 2021), particularly when trying new approaches like teaching online (Adams Becker et al., 2018; Schwenger, 2019; Walker & Kerrigan, 2016). Likewise, both the design and a redesign process take time, normally several months plus adjustment for feedback. While flexibility and the wished-for contingency plans should be built in, it is more sustainable and time-effective to design in a systematic manner than reactively. Under COVID-19 workloads though, immediate time pressures dictated decisions to skimp on course design. Time pressures probably resulted from:

- Institutional workload models still assuming face-to-face teaching (Gregory & Lodge, 2015).
- Meeting new institutional directives such as dual delivery without more resources.
- Existing institutional policies perhaps inadequately reduced for online learning as required during COVID-19, with recent changes of overall university strategy.
- Missing pedagogical, technical and general course/curriculum and learning design capabilities in a digital environment.

Uneven digital capabilities comprise missing technical skills and lacking knowledge of using technologies to achieve learning outcomes. The fact that the one participant trained in online delivery by a previous employer fared much better indicates ERT could have been smoothed if this university and others had heeded the advice of researchers and academic developers pre-pandemic. For instance, Mirriahi and Alonzo (2015) had urged “academic-development strategies

that would help academics build capacity and feel confident about effectively integrating technology into their course design." (p. 11).

Having to prioritise delivery skills over design in extreme situations such as the ongoing COVID-19 situation compromised participants' expressed starting point that design was fundamental. However, their reflections, unprompted but admittedly in the context of interviews explicitly on curriculum and learning design, returned emphatically to seeing a long-term need to invest time in design knowledge, understanding and practices. Such reflections were reinforced by refocusing from content to concepts and to what students do. Rapanta et al. (2020) precisely recommend these things: "shifting your attention from coverage of prescribed 'content' so that you can focus sharply on what your students are actually doing" (p. 929).

Online delivery also raises technical challenges, and these can unfortunately overshadow design questions. However, while lamenting their technical skill gaps like video editing, participants edged towards realising the need for pedagogical rationales. Rapanta et al.'s warning above extends to seductive technologies and superficial fixes: "The COVID-19 crisis has brought forth a plethora of advice aimed at teachers" (2020, p. 924). Much of this advice focuses on tools and materials to replace face-to-face classes. In addition, teachers have been offered many 'tips and tricks', mostly without the contextualising knowledge needed to judge which teaching tactic is likely to work where (Rapanta et al., 2020). Likewise, Alammary et al. (2014), pre-pandemic, called for a focus on course objectives rather than technology. Good strategy informs design by considering the rationale and learning activities to be offered, and how the use of a tool can contribute to achieving a course objective. The need for sound skills in teaching in turn requires understanding learning: "For good pedagogical design, there is simply no escaping the need to adopt a theory of learning" (Mayes & de Freitas, 2013, p. 18).

Responding to Students' Needs

Participants sensed but lacked the time and skills to fully act on how the online/face-to-face difference impacts course content, structure, and assessment. This included how to scaffold students' self-directed learning that online education entails. Participants were aware that universities cannot assume students are independent digital learners (Mayes & de Freitas, 2013) and tried to offer appropriate practices. At the same time, constructivism lent theoretical support to P4 who dared to amend their teaching approach and "let them [the students] lead".

Meanwhile, the fact that at least three educators openly grappled with biculturalism suggests that the embedding of Māori knowledge continues to be an area where ongoing support should be offered. It could be that others felt confident about institutional expectations, but it is highly likely that many colleagues would like sustainable support for indigenising curriculum design. This topic is relevant globally for incorporating indigenous peoples' ways of knowing into teaching and learning.

Suggested Support Mechanisms: Back to the Basics

Support suggestions here address challenges the participants specified and also draw opportunity out of the crisis to outline fundamentals desirable for effective curriculum and learning design in general and in "normal" circumstances. In the times-skills-support trio, support is the resource

that can mitigate deficiencies of the other two, as well as improve challenges of meeting students' needs and to some extent of institutional and governmental COVID-19 responses. Academic development in online teaching before the pandemic, and better specified and more integrated support during it, would have alleviated the huge challenge of ERT. Curriculum and learning design challenges are multifactorial, and good support requires a systemic, multipronged, sustained approach.

Using the literature to expand on themes and subthemes signalled by participants, the following aspects are recognised to enable and underpin a research-informed approach to curriculum and learning design in our post-COVID-19 environment (MacNeill & Beetham, 2022; Rapanta et al., 2020). Figure 1 represents vital administrative and leadership processes, such as controlling educators' workload through a model that recognises online learning and the institutional need to plan for consistency, flexibility, and contingency in teaching and learning.

Figure 1

Administrative and process-related aspects to underpin curriculum and learning design

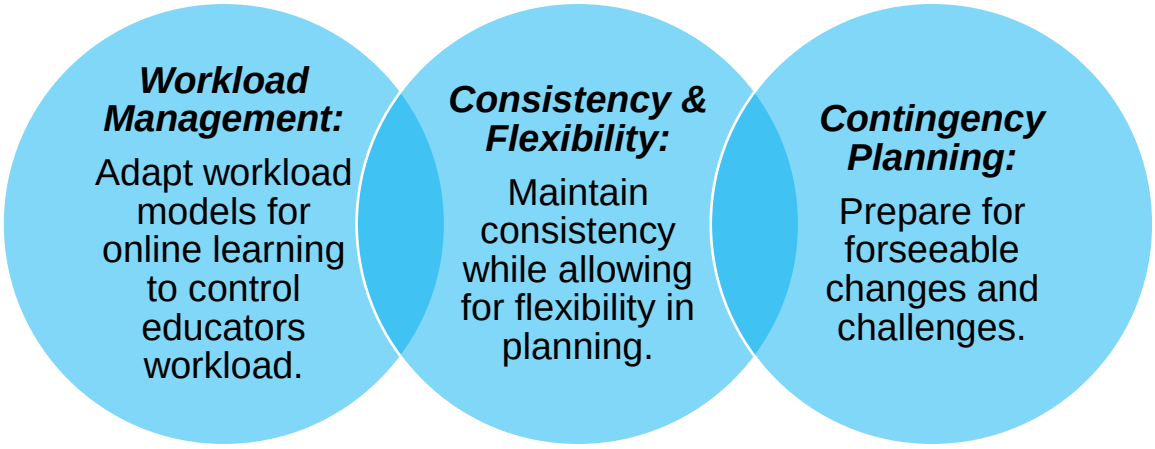

Table 2 highlights the skills, strategies, and content for professional development that can improve educators' curriculum and learning design abilities. Incorporating a process for educators to identify their current skills as a starting point will be advantageous for providing targeted skill development. Educators will benefit from strategies for managing the design process and for creating specific artifacts, to determine which mode best supports learning (online or face-to-face), interweave learning experiences, and tying educational technologies use to learning outcomes.

Table 2

Strategies and content for professional development in curriculum and learning design

Strategy	Definition
Skills identification	Identify educators' existing skills and understanding of teaching and learning (Schwenger, 2019).

Process management	Manage the overall design process efficiently (Richey et al., 2011), both product and process (Goodyear, 2015).
Artifact development strategies	Strategies for creating specific artifacts, such as lesson plans, effectively (Schwenger, 2019).
Mode selection	Determine if online or face-to-face is the best approach for supporting learning (Bates, 2019).
Technology integration	Link technology use to learning outcomes and leverage new opportunities (Bates, 2019; Rapanta et al., 2020).
Integrated learning experience	Integrate modes to provide diverse learning experiences (Shand & Farrelly, 2018).

What might be called support *channels* are vital to achieve effective, accessible, engaging, and well-integrated curriculum and learning design in the post-COVID-19 environment. These should include:

- Initial training and ongoing development which is resourced and communicated well.
- Collaborations between academic developers, course coordinators and teachers.
- Educators working in teams on curriculum and learning design and sharing knowledge across faculties.
- Peer-to-peer mentoring networks.
- Ancillary personnel like GTAs, as design sounding boards and to relieve workload.

Curriculum and learning design require timely academic development (Clapp, 2021) and at convenient times (Muir et al., 2022) with allocated leave. Like participants, researchers have called for more training in response to ERT (Das & Meredith, 2021). To be most effective, academic development must be systemic, consistent, and available to all teaching staff, including options for those with short-term contracts. The points made about support mechanisms need to be considered in the light that roles in this university have little or no development time allocated. Ideally, each teaching contract should include appropriate time. More flexible academic development also needs to be made available, e.g. offered online so that staff can access it at a convenient time when needed, with follow-up options.

Forms and loci of support should certainly encompass not only well-signposted virtual materials but also learning designers and academic developers, spread between centre and faculties (not too few per faculty as participants complained) to promote accessibility. Probably to fill the perceived void left by disestablishing the central unit, this Aotearoa university launched a self-access online site with information about learning and teaching, including curriculum and learning design, in early 2023. If well signposted, self-access resources are efficiently flexible and reusable; whether they should stand alone is debatable. Participants and literature suggest sustainable change requires a planned approach with wrap-around, human-delivered services specific to individual staff situations (Clapp, 2021; Rapanta et al., 2020; Zhao & Song, 2021).

Culture Change

To embrace and sufficiently resource curriculum and learning design in theory and practice would help to address the lack participants noted of a teaching and learning “culture” at the university

and to embed and sustain progress. Culture change would help reorient HE from subordinating all of teaching and learning beneath research or turning teaching into a profit-maximising venture where classes are the saleable frontline product and design "merely back-office", as it were. Culture change would demand delivering with wholehearted resourcing on the design promises professed in institutions' mission or values statements (MacNeill & Beetham, 2022; Zhao & Song, 2021). Participants reported possessiveness around course materials, and a lack of trust or real sense of a team pulling together from management (as would be shown, partly, by voluntary pay-cuts) all the way to teachers. These perceptions symptomise a strained teaching and learning culture. In this vein, Bond & Blevins (2020) find sustainable development requires a high degree of trust by academics, and involvement of them in designing and implementation.

As participants intimated, management and CLD teams must reach out to educators with practicable exemplars and hands-on help about implementing visions, values, and directives. I have observed the result of lack of signposting in that this university's new teaching and learning framework of January 2020 (with sound design principles) remained mostly unread on a web page. Reporting an apparently smoother transition to ERT in a Spanish university, Calderon et al. (2022) conclude: "the leadership of the University, the prompt and fluid communication between the different agents and the collaboration between teachers, were key to the success" (p. 13).

Culture change takes time, and a key driver is the individual institution. Citing San-Martin et al. (2020) as applied to Asian universities during COVID-19, Das and Meredith (2021) state: "Institutional support was essential for the teachers to convert contents and teaching approach from face-to-face to online teaching" (p. 4). Participants in the present study expressed some resentment of the institution (the university more than their faculties), and a sense of being left to carry an unfair share of the COVID-19 burden. However, they praised support that had been supplied such as drop-ins and workshops on teaching with digital tools and offered constructively specific suggestions. It is difficult to estimate how far the university's hand was both forced by lockdowns and border closures and tied by arguably a lack of financial support to tertiary institutions. Both contributed to many hundreds of academic staff redundancies nationwide. Institutional responses to COVID-19 were largely institutional reactions to national responses: As a result, how much leeway the institutions had was unclear.

Theoretical Contributions and Practical Implications

Addressing gaps in the theoretical standing of curriculum and learning design and in well-resourced practice, this study adds an empirical validation to this field, to be practised by educators and specialist support staff collaboratively, not imposed on educators. A focus on the practices that contribute to curriculum and learning design applies a line of thinking that COVID-19 exacerbated more enduring challenges such as those outlined earlier. Previous theoretical interrelationships of themes of challenge are reinforced.

The teachers' experiences were central to the study. The process-oriented scoping approach led to troubleshooting of individuals' challenges, to address issues within the teachers' control and enhancing practices for their specific situations. The findings have been used to advocate for change in practice and policy at the institution, e.g. by promoting a workload model that considers online teaching requirements, and by advocating a systemic approach for support mechanisms.

The findings provide a basis for staff in HE who seek to enhance curriculum and learning design. The suggested support mechanisms are actionable by institutional decision-makers, along with HE policymakers, and can be framed as questions for an institutional needs' identification, for example:

- How does an institutional workload model reflect increasing online learning and its specific time requirements?
- What is the investment in academic staff development? How does the content and facilitation reflect the current teaching and learning landscape and how does it cater to diverse student and faculty needs?
- How can the university communicate its vision and support a culture of teaching and learning?

Educators and academic developers will find the suggested support mechanisms useful to reflect on, to identify gaps or opportunities, and advocate for themselves, for example:

- What support and development do I require and how accessible and systematic is this support? What development mechanisms are in place?
- Who can I collaborate with for the curriculum and learning design? How can working with colleagues in certain roles help to enhance the outcomes of this process?
- How can I integrate opportunities for discussion and other modes of online engagement in course design to enhance online learning?
- What are students to learn and demonstrate in their assessment? How might a digital tool be used to enhance this process? What digital skills might my students and I need?

Limitations and Future Research Avenues

The small *n* is justified for this exploratory study. The number prevents generalisation, and the qualitative method prevents ascribing causation. Quantitative studies could test for a more representative staff need for and receptiveness to curriculum and learning design training. That participants came from one university is an inevitable limitation insofar as institutional factors are university specific. However, these exploratory findings can suggest useful lines of inquiry and analysis, and differences among universities might be more of a degree than kind. Other Aotearoa universities faced the same government responses which varied in application between regions though, according to outbreaks and lockdowns. The breadth of the ERT literature shows how many universities worldwide were unprepared for online teaching. Universities with previously high international enrolments should also be comparable in that respect. Finally, COVID-19 circumstances were, ultimately, unprecedented and the university faced the proverbial perfect storm. This study is an exercise in constructive responses and planning for change, not blaming.

Conclusions

This study used "big asks" and "sheer obstacles" present during COVID-19 as a window into more enduring challenges present in HE, and into potentially solving them through implementing various support mechanisms. An atypical situation offers an opportunity to revisit typical HE pedagogical challenges of inadequate time, skills and support resources and difficulties meeting students' needs. It also forces us to return back to the basics - such as reviewing existing support

principles, channels, and various forms of support to identify gaps - albeit these have been learned the hard way during a prolonged time of crisis due to COVID-19. We must revisit the frequently underrated need for well-resourced and well-integrated, intentional, and collaborative curriculum and learning design systems and their underlying field of knowledge. Curriculum and learning design is a key driver for curriculum change, a mechanism to enhance quality, accessibility, effectiveness, efficiency, and equity in the teaching and learning aspects of HE's mission.

Thoughtful, reflective design is vastly preferable to design on the fly, although flexibility and contingency plans are vital and amendments inevitable. In particular, the appearance that COVID-19 challenges emphasized the technical skills gap seemed to put the technical cart before the pedagogical horse but confirmed the interrelated nature of technology and pedagogical knowledge. Curriculum and learning design practices demand effective pedagogy, to make sure technology serves intended learning outcomes, and to instil and sustain a culture of trusting, collaborative, well-rewarded curriculum and learning design that will live up to professed mission and values statements. The importance of design, especially of assessment, looms only larger, given the rise of artificial intelligence. If recognised, it will prepare us better for future emergencies and a no-doubt-evolving series of "new normals".

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References

Adams Becker, S., Brown, M., Dahlstrom, E., Davis, A., DePaul, K., Diaz, V., & Pomerantz, J. *NMC horizon report: 2018 higher education Edition*. The New Media Consortium. Retrieved 20 October 2024 https://library.educause.edu/~/media/files/library/2018/8/2018horizonreport.pdf

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

Agostinho, S., Lockyer, L., & Bennett, S. (2018). Identifying the characteristics of support Australian university teachers use in their design work: Implications for the learning design field. *Australasian Journal of Educational Technology, 34*(2), 1-15. https://doi.org/10.14742/ajet.3776

Ako Aotearoa & Synapsys (2018). *Technology in learning: Benchmarking and developing sector capability.* Ako Aotearoa. Retrieved 20 October 2024 https://ako.ac.nz/assets/Reports/Synthesis-reports/REPORT-Technology-in-learning-benchmarking-and-developing-sector-capability.pdf

Alammary, A., Sheard, J., & Carbone, A. (2014). Blended learning in higher education: Three different design approaches. *Australasian Journal of Educational Technology*, *30*(4). https://doi.org/10.14742/ajet.693

Aristovnik, A., Keržič, D., Ravšelj, D., Tomaževič, N., & Umek, L. (2020). Impacts of the COVID-19 pandemic on life of higher education students: A global perspective. *Sustainability, 12*(20), 8438. https://doi.org/10.3390/su12208438

Ball, D., & Cohen, D. (1999). Developing practice, developing practitioners: Towards a practice-based theory of professional education. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp. 3–32). Jossey-Bass. Retrieved 20 October 2024 https://www.fisica.uniud.it/~stefanel/PerMarisa/ProfessionalDevelopment/ball_cohen_-_developingpractice.pdf

Barber, S., & Naepi, S. (2020). Sociology in a crisis: COVID-19 and the colonial politics of knowledge production in Aotearoa New Zealand. *Journal of Sociology, 56*(4), 693–703. https://doi.org/10.1177/1440783320939679

Barnes, A. (2013). *What can Pākehā learn from engaging in kaupapa Māori educational research?* New Zealand Council of Educational Research, Te Wāhanga. Retrieved 20 October 2024 https://www.nzcer.org.nz/sites/default/files/downloads/Pakeha_Kaupapa_Maori_Research.pdf

Bates, A. T. (2019). Building an effective learning environment. *Teaching in a Digital Age*. (2nd ed.). Tony Bates Associates Ltd. Retrieved 20 October 2024 https://teachonline.ca/sites/default/files/pdfs/teaching-in-a-digital-age-second-edition.pdf

Beaty, L. (1998). The professional development of teachers in higher education: Structures, methods and responsibilities. *Innovations in Education and Training International, 35*(2), 99–107. https://doi.org/10.1080/1355800980350203

Bekele, W., & Ago, F. (2022). Sample size for interview in qualitative research in social sciences: A guide to novice researchers. *Research in Educational Policy and Management*, *4*(1), 42-50. https://doi.org/10.46303/repam.2022.3

Beetham, H., & Sharpe, R. (2013). An introduction to rethinking pedagogy. In H. Beetham & R. Sharpe (Eds.), *Rethinking pedagogy for a digital age: Designing for 21st century learning* (2nd ed., pp 1–12). Routledge. https://doi.org/10.4324/9780203078952

Bennett, S., Agostinho, S., & Lockyer, L. (2016). Investigating university educators' design thinking and the implications for design support tools. In J. Dalziel (Ed.), *Learning design: Conceptualizing a framework for learning and teaching online* (pp. 146–162). Routledge. https://doi.org/10.5334/jime.404

Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university: What the student does* (4th ed.). Maidenhead, England: McGraw-Hill, Society for Research into Higher Education and Open University Press.

Bond, M. A., & Blevins, S. J. (2020). Using faculty professional development to foster organizational change: A social learning framework. *TechTrends, 64*(2). https://doi.org/10.1007/s11528-019-00459-2

Boud, D., & Molloy, E. (2013a). *Feedback in higher and professional education: Understanding it and doing it well*. Routledge.

Boud, D., & Molloy, E. (2013b). Rethinking models of feedback for learning: The challenge of design. *Assessment and Evaluation in Higher Education, 38*, 698–712. https://doi.org/10.1080/02602938.2012.691462

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

Bryman, A. (2008). *Social research methods* (3rd ed.). Oxford University Press.

Calderon, K., Blanco, C., Gutierrez, I., Serrano, N., Santos, J., & Sanchez, G. (2022). Evaluation of emergency remote teaching during COVID-19 lockdown in a Spanish university. *Journal of University Teaching and Learning Practice, 19*(5). https://doi.org/10.53761/1.19.5.6

Callejas Restrepo, M. M., Blanco-Portela, N., Ladino-Ospina, Y., Tuay Sigua, R. N., & Vargas, K. O. (2017). Professional development of university educators in ESD: A study from pedagogical styles. *International Journal of Sustainability in Higher Education*, 18(5), 648–665. https://doi.org/10.1108/IJSHE-02-2016-0031

Clapp, A. (2021). Preparing to teach online before and during emergency pandemic teaching: Staff perceptions and future directions. *Journal of Perspectives in Applied Academic Practices, 9*(3), 6-114. https:https://doi.org/10.14297/jpaap.v9i3.511

Cram, F. (2001). *Rangahau Māori: Tona tika, tona pono: The validity and integrity of Māori research*. In M. Tolich (Ed.), *Research ethics in Aotearoa New Zealand: Concepts, practice, critique* (pp. 35–52). Longman.

Crawford, J., Cowling, M., Ashton-Hay, S., Kelder, J. A., Middleton, R., & Wilson, G. S. (2023). Artificial intelligence and authorship editor policy: ChatGPT, Bard Bing AI, and beyond. *Journal of University Teaching and Learning Practice, 20*(5). https://doi.org/10.53761/1.20.5.01

Curtis, B., & Matthewman, S. (2005). The managed university: The PBRF, its impacts and staff attitudes. *New Zealand Journal of Employment Relations, 30*(2), 1–18. Retrieved 20 October 2024 https://www.nzjournal.org/NZJER30%282%29.pdf

Das, R., & Meredith, D. P. (2021). Factors affecting effective online teaching transition in Asian universities during COVID-19. *Journal of University Teaching and Learning Practice, 18*(8). https://doi.org/10.53761/1.18.8.7

Dyke, M., Conole, G., Ravenscroft, A., & de Freitas, S. (2007). Learning theory and its application to e-learning. In G. Conole & M. Oliver (Eds.), *Contemporary perspectives in e-learning research: Themes, methods and impact on practice* (pp. 82–97). Routledge. Retrieved 20 October 2024 https://pureportal.coventry.ac.uk/en/publications/learning-theory-and-its-application-to-e-learning-2

Goodyear, P. (2015). Teaching as design. *HERDSA Review of Higher Education, 2*, 27–50. Retrieved 20 October 2024 www.herdsa.org.au/herdsa-review-higher-education-vol-2/27-50

Gratz, E., & Looney, L. (2020). Faculty resistance to change: an examination of motivators and barriers to teaching online in higher education. *International Journal of Online Pedagogy and Course Design, 10*(1), 1-14. https://doi.org/10.4018/IJOPCD.2020010101

Gregory, M. S.-J., & Lodge, J.M. (2015) Academic workload: the silent barrier to the implementation of technology-enhanced learning strategies in higher education. *Distance Education, 36*(2), 210-230, https://doi.org/10.1080/01587919.2015.1055056

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods, 18*(1), 59–82. https://doi.org/10.1177/1525822X05279903

Hong, H.-Y., & Sullivan, F. R. (2009). Towards an idea-centered, principle-based design approach to support learning as knowledge creation. *Educational Technology Research and Development, 57*, 613–627. https://doi.org.10.1007/s11423-009-9122-0

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review* 27 March. Retrieved 20 October 2024 https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning .

Hunia, R., Salim, S., McNaughton, S., Menzies, R., Gluckman, P., & Bardsley, A. (2020). Addressing Rangatahi Education: Challenges after COVID-19 (p. 19). Koi Tū: The Centre for Informed Futures. Retrieved 20 October 2024 https://informedfutures.org/addressing-rangatahi-education-challenges-after-COVID-19/

Kennedy, A., McGowan, K., & El-Hussein, M. (2020). Indigenous Elders' wisdom and dominionization in higher education: Barriers and facilitators to decolonisation and reconciliation. *International Journal of Inclusive Education, 27*(1), 1–18. https://doi.org/10.1080/13603116.2020.1829108

MacNeill, S. & Beetham, H. (2022). *Approaches to curriculum and learning design across UK higher education*. Jisc. Retrieved 20 October 2024 https://repository.jisc.ac.uk/8967/1/approaches-to-curriculum-and-learning-design-across-uk-higher-education-report.pdf

Matthews, T., & Kostelis, K. (2020). *Research in Health and Human Performance.* (2nd Ed). Routledge. https://doi.org/10.4324/9780429452314

Mayes, T., & de Freitas, S. (2004) *Review of e-learning theories, frameworks and models*. Jisc. Retrieved 20 October 2024 https://core.ac.uk/download/pdf/228143942.pdf

Mayes, T., & de Freitas, S. (2013). Technology-enhanced learning: The role of theory. In H. Beetham & R. Sharpe (Eds.), *Rethinking pedagogy for a digital age: Designing for 21st century learning* (2nd ed., pp. 20–29). Routledge. https://doi.org/10.4324/9780203078952

McLoughlin, C., & Oliver, R. (2000). Designing learning environments for cultural inclusivity: A case study of indigenous online learning at tertiary level. *Australasian Journal of Educational Technology*, *16*(1), 1. https://doi.org/10.14742/ajet.1822

Mirriahi, N., & Alonzo, D. (2015). Shedding light on students' technology preferences: Implications for academic development. *Journal of University Teaching and Learning Practice*, *12*(1). https://doi.org/10.53761/1.12.1.6

Muir, T., Livy, S., Murphy, C., & Trimble, A. (2022). Making the transition from on-campus to online learning: Pre-service teachers' experiences of online learning as a result of COVID-19. *Journal of University Teaching and Learning Practice*, 19(5). https://doi.org/10.53761/1.19.5.3

Neuwirth, L. S., Jović, S., & Mukherji, B. R. (2020). Reimagining higher education during and post-COVID-19: Challenges and opportunities. *Journal of Adult and Continuing Education*, 1477971420947738. https://doi.org/10.1177/1477971420947738

Pihama, L. (2010). Kaupapa Māori theory: Transforming theory in Aotearoa. *He Pukenga Korero: A Journal of Māori Studies, 9*(2), 5–14. Retrieved 20 October 2024 http://www.hepukengakorero.com/index.php/HPK/article/view/2

Plomp, T. (2013). Educational design research: An introduction. In T. Plomp & N. Nieveen (Eds.), *Educational design research* (pp. 10–51). SLO Netherlands Institute of Curriculum Development. Retrieved 20 October 2024 https://slo.nl/publish/pages/2904/educational-design-research-part-a.pdf

Purvis, A. & Crawford, J. (2024). Ethical Standards in Educational Research and Publication. *Journal of University Teaching and Learning Practice, 21*(9). https://doi.org/10.53761/hqnqr710

Rapanta, C., Botturi, L., Goodyear, P. Guàrdia, L., & Koole, M. (2020) Online University Teaching During and After the COVID-19 Crisis: Refocusing Teacher Presence and Learning Activity. *Postdigital Science Education, 2*, 923-945. https://doi.org/10.1007/s42438-020-00155-y

Richey, R., Klein, J. D., & Tracey, M. W. (2011). *The instructional design knowledge base: theory, research, and practice*. Routledge.

Rogers, P., Graham, C., & Mayes, C. (2007). Cultural competence and instructional design: Exploration research into the delivery of online instruction cross-culturally. *Educational Technology Research and Development, 55,* 197–217. https://doi.org/10.1007/s11423-007-9033-x

Saldana, J. (2013). *The coding manual for qualitative researchers.* Sage.

San-Martín, S., Jimenez, N., Rodríguez-Torrico, P., & Piñeiro-Ibarra, I. (2020). The determinants of teachers' continuance commitment to e-learning in higher education. *Education and Information Technologies*, *25*, 3205–3225. https://doi.org/10.1007/s10639-020-10117-3

Shand, K. & Farrelly, S.G. (2018). The art of blending: Benefits and challenges of a blended course for preservice teachers. *Journal of Educators Online*, *15*(1). Available at https://www.thejeo.com/archive/2018_15_1/shand_farrelly.

Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review, 57*(1), 1-21. https://doi.org/10.17763/haer.57.1.j463w79r56455411

Schwenger, B. (2019). *Navigating new terrain: Designing blended learning to develop digital literacies for students in a tertiary institution*. [Unpublished doctoral thesis]. University of Auckland, New Zealand. Retrieved 20 October 2024 https://researchspace.auckland.ac.nz/handle/2292/49253

Stucki, P. (2012). A Maori pedagogy: Weaving the strands together. *Kairaranga, 13*(1), 7-15. Retrieved 20 October 2024 https://files.eric.ed.gov/fulltext/EJ976653.pdf

UNSW Sydney (n.d.). *UNSW Educational Design*. Retrieved 20 October 2024 https://www.teaching.unsw.edu.au/educational-design

Walker, S., & Kerrigan, M. (2016). Learning design in the new digital age. In J. Dalziel (Ed.), *Learning design: Conceptualizing a framework for teaching and learning online* (pp. 78-95). Routledge. Retrieved 20 October 2024 https://gala.gre.ac.uk/id/eprint/18068/

Zhao, S., & Song, J. (2021). What kind of support do teachers really need in a blended learning context? *Australasian Journal of Educational Technology*, *37*(4), 116–129. https://doi.org/10.14742/ajet.6592