Teacher Experiences and Practices in the time of COVID-19: Implications for understanding quality in teaching.

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Abstract

The concept of quality in teaching and how to accomplish it is a contested notion. This is because it is stakeholder, time, and context relative (OECD, 2005). The experiences and practices of teachers during the COVID-19 pandemic, appear to have changed how stakeholders think about the work of teachers and their professionalism (EI, 2020). Drawing on findings from two research projects, the ICET/MESHGuides international research on Teachers Experiences during Covid-19 (ICET/ MESHGuides, 2021) , the Northampton University Active Distance Learning (ADL) research and development project (Caldwell *et al.*, 2021), and the eye witness records of the pandemics impact on education in Leask and Younie (2021), we highlight how in the process of transitioning to online delivery and finding creative, offline ways of reaching students, teachers at all levels, demonstrated their capacity to be innovative and to take ownership of accelerating changes in how they think and work. They showed their willingness to practice agency and autonomy in developing the pedagogic skills, collaborative practices, knowledge, and competencies they considered most appropriate for teaching and learning during the pandemic. The responses of Ministers of Education at the OECD/EI conference in mid-2020 reported in EI (2020) suggests a shift to valuing concepts of professionalism opening opportunities for new stakeholder r perceptions of teacher professionalism where the importance of teachers' Voice is recognised and where teachers are considered capable and competent to lead in determining what quality in teaching is. In this chapter we consider the implications of this shift for new ways of thinking about what quality in teaching means and for future proofing educational practices to ensure such quality in teaching is maintained during crises.

Keywords: teacher education, teaching quality, online learning, pedagogy, teacher voice, teacher experience, Covid-19, active distance learning, teacher professionalism

Introduction

The concept of quality in teaching and how to accomplish it is a contested notion. This is because it is stakeholder, time, and context relative (OECD, 2005). In this chapter we compare teaching practices adopted during COVID-19 with established criteria for good pedagogic practice. We discuss teacher professionalism as tested and demonstrated throughout the pandemic when schools were closed, and teachers had to find other means of teaching. Our research (ICET/MESHGuides 2021, Hordatt Gentles & Leask, 2020; Caldwell *et al.*, 2021; Leask and Younie, 2021) suggests that during the pandemic many teachers have demonstrated tremendous capacity for leadership of learning and innovation. They have shown willingness and capacity to change their mindsets, upskill, acquire the knowledge and instructional competencies they thought necessary for managing rapidly changing teaching and learning contexts. They have collaborated with each other and parents in different and meaningful ways.

Consequently, the narrative about teachers and what they can do has shifted. This is evident in reports from global organizations who have described the response of teachers during the pandemic as heroic and praiseworthy. At the International Summit on the Teaching Profession (EI, 2020) hosted in June 2020 by Education International (EI) Ministers of Education from across the globe praised:

> The leadership of educators during the crisis, the ways in which they came together as a community to share ideas, knowledge, and experience to support their students. One minister referred to the mobilisation of educators as the "precious silver lining of the crisis. (Theme 3)

The Ministers further described teachers as essential, frontline workers who had shown, "leadership, resilience, adaptability, creativity, and dedication to their students" by taking on the role of "navigating this crisis, overcoming challenges, and ensuring educational continuity for students" (Education International, 2020, para 2). This report and data reported in Leask and Younie (2021) suggests that along with this recognition came the realisation that teachers just might have something to contribute to policy making for managing the pandemic. The scale of disruption to schooling had never happened before and it was evident that education was not prepared for such an unprecedented event. Stakeholders began to suggest that "teacher voice is a critical element in any successful approach" (Doucet, 2020. para 9) for delivering quality education in the time of Covid -19, and indeed in times of any future global crises.

This change in how teachers and the quality of their pedagogy and practice are viewed runs counter to pre-pandemic dominant discourses of "performativity" and "oppressive, neo-liberal" environments that stifle teacher agency and creativity", (Ball, 2012:31–32). In accountability driven environments teachers' ideas are marginalized and excluded from decision making about teacher work. What teachers have accomplished during the pandemic, however, provides evidence that teachers have the capacity to be innovative and to take ownership of accelerating changes in how they think and work. As we consider what *teachers said* about how and why their teaching changed across the globe, we consider the implications of these changes for how we should think about quality in teaching now and in the future.

Literature Review

The literature informing this chapter highlights how we understand quality in teaching and what is needed to facilitate this. The literature defines quality in teaching as bringing about quality learning and learner agency, through learners' active engagement in *both* face to face and online environments. This is best achieved if teachers enjoy agency and autonomy in their decision - making about what, when, why and how to organize their teaching.

Quality in teaching (pedagogy)

Defining the concept of quality in teaching is difficult because what it means changes according to context and culture. Much attention has been paid to identifying exactly what constitutes quality teaching. It seems there are a myriad of ways to think about the concept which raises numerous questions. Does quality in teaching refer to what teachers do in the classroom - how they teach to bring about student learning? Is it their personal characteristics – their morals, beliefs, attitudes, and values? Is it their capacity for providing psychological and emotional support to their students? Is it their willingness to deliver the types of student learning outcomes set out by curricula or is it their attempts to teach independently? Is it their commitment and dispositions to use their practice to build a better society or to contribute to building a stronger profession? Is it a combination of some or all of these?

Berliner (2005, p.207) suggests quality in teaching combines both good teaching and successful or effective teaching. Good teaching has to do with how well teachers enact the pedagogical competencies, personal qualities, content knowledge, knowledge of student learning and psychology, and moral dispositions that facilitate quality learning and learner agency (Wechsler and Shields, 2008; Darling Hammond, 2010). As Loughran (2010, p.61) contends, "Good teaching is about creating real opportunities for students to begin to determine for themselves how their knowledge needs to be structured and reconstructed in order to enhance the quality of their learning". Teaching is considered successful or effective when this type of student learning has taken place.

Hidson and Leask (forthcoming, 2022) also suggest that quality in teaching is dependent on strong connections between quality pedagogy, teacher professionalism, learner agency and quality learning. As they explain,

> Pedagogy can be thought of as an umbrella term that helps us to think about teaching and learning, and all the various processes that together make up the work of the professional teacher. Under the umbrella term *pedagogy*, we can identify *essential categories* [such as this cited above] *underpinned by theories* that shape our understanding of how learning occurs. *Theories of learning* fall into three broad groups broadly as behaviourism, cognitivism, and constructivism (Ertmer and Newby, 2013), aligning with what learners are *doing, thinking, and creating*. (Hidson and Leask,2022. publication forthcoming).

How teaching is undertaken and structured is dependent on the personality and knowledge of the teacher and the expectations of learners and their communities so teaching which leads to learning is complex and individual and so resistant to dictat. The ICET/MESHGuides research (Hordatt Gentles & Leask, 2020, ICET/MESHGuides 2021) found that during Covid, while some governments worked with teachers to find solutions to ensuring continuity of learning, others tried to dictate how teaching would be undertaken. The research findings suggest that the flexibility and context-dependent professional judgement required of teachers in adapting models of teaching meant that this level of control was not supportive of continuity of learning during the crisis.

Hidson and Leask (2022) define four areas constraining and shaping an individual teacher's approach to teaching any single lesson and these are included here as we suggest this makes the importance of teachers' professional judgement in 'in the moment' decisions transparent. Given local variations of context, controlling quality in teaching through dictat during crises is simply not possible. Instead:
- Teachers work with the mind and so should be experts in the *learning sciences:* how the brain works, cognition, motivation, behaviour, and development of positive attitudes are all relevant.
- But there is also a *craft* part of the work: constructing positive learning environments and learning materials.

- *Performance in the classroom* contributes to creating a teachers' unique pedagogical style. This includes the ways they capture the attention of a group, explain, question, model and demonstrate, use language effectively to convey meaning and the ways they respond to learners, their gestures, ways of moving, and dress.
- Then there are the *processes* which shape teaching: the structure of the school day, term, and year, whether classes are mixed ability or streamed, the length of the lesson, the space between lessons used for giving immediate post-lesson support and individual guidance, the assessment structures applied to your subject and classes. (Hidson & Leask ,2022. publication forthcoming)

Hidson and Leask also point to a study (Entz, 2006) from the Center for Research on Education, Diversity and Excellence (CREDE) which suggests five principles of effective pedagogy for all learners. These seem to include a focus on "what learners are *doing, thinking and creating*' which are identified as important foci for pedagogy from the learning theories mentioned above. For this chapter we use these five principles and the four elements listed above to provide a useful framework for thinking about quality in teaching. Table. 1 lists CREDE's five critical elements of pedagogy (Entz ,2006) and examples of practice which exemplify these. Later in this chapter these principles and elements are applied to teacher reported practices during Covid-19, to illustrate how quality in teaching was achieved in the circumstances created when schools were closed.

Table. 1 Adapted from CREDE's Five critical elements of pedagogy. (Entz 2006)

	CREDE's critical element	What this looks like in practice
1	Joint Productive Activity	Teacher and students producing together
2	Language development	Developing language and literacy across the curriculum.
3	Contextualization	Making meaning connecting schools to students' lives.
4	Challenging Activities	Teaching complex thinking
5	Instructional conversation	Teaching through conversation

These understandings, of what constitutes quality in teaching in normal times, provide an initial framework for analysing the quality of teaching approaches developed by teachers to support ongoing learning once schools were closed. In many countries, governments required teachers to switch to online learning (even though this excluded learners and teachers without access to the internet or personal devices). The next section therefore takes this discussion on pedagogy further by establishing criteria for quality in online pedagogy and outlining a model supporting deep learning using online tools developed and tested at the University of Northampton (UK) - the Active ***Distance*** Learning (ADL) model.

Quality in online pedagogies - an emerging Active <u>Distance</u> Learning model
In exploring what makes good online teaching and learning we can draw from a range of theoretical underpinnings. Theories of learning relevant to our digital age plot a journey from constructivism to social constructivism, with connectivism and constructionism acknowledging the central role of technologies. From constructivism we can take an emphasis on learners' active engagement with constructing

knowledge (Cummings, *et al.,* 2017) and the link between social interaction and learning (Vygotsky, 1978). There is also the notion of communities of practice with shared goals (Wenger, 1998), which many educators seek to nurture in online environments. Social online communities make it possible for students to 'join in' and 'apply to practice' at the same time, blending talking and doing, or "participation and reification", to use Wenger's terms (2011). Goggins *et al.* (2011. p. 210) describe this as,

> Participation involves acting and interacting, and reification involves producing artefacts (such as tools, words, symbols, rules, documents, concepts, theories, and so on) around which the negotiation of meaning is organized. (Goggins *et al.,* 2011 p.210).

Areas in need of further consideration, they suggest, are "the functions and uses of the technological tools that most effectively support and mediate a community's social and intellectual engagement" (Goggins *et al.,* 2011 p.224). This sits well with the idea that posted comments, media, images, and digital artefacts help articulate pedagogy and practice, and can act as anchors for the evolution of ideas within online communities (Caldwell, Whewell & Heaton, 2020).

Related to this are constructionist theories that suggest that digital environments create ripe conditions for active knowledge building through the creation and sharing of digital artefacts (Harel & Papert, 1991). When constructionist ideas are applied to communities of practice 'making' refers to the articulation of ideas, and might take a physical or digital form, consisting of articulation and externalisation of an idea or an example from practice in a form that someone can respond to. The to-and-fro between articulations and responses is essential to the knowledge building process within a learning community (Caldwell, Whewell & Heaton, 2020; Caldwell *et al.* 2021).

Connectivism also recognises the role of technology in learning, namely the integration of networked communication into collaborative learning environments and a suggestion that the nature of knowledge shifts as connections are formed and reformed (Siemens, 2005; Downes, 2010). This emphasises the links between people and resources, and the fact that knowledge can be encoded in digital artefacts (Siemens, 2005; Nilmanat, 2011; Young and Tseng, 2008). The tacit knowledge that can be encoded in an image can span several dimensions that would be difficult to explain in words, such as attitudes, motivations, and experiences, and can mediate the sharing of experiences (Nilmanat, 2011; Burnett, 2016). These findings are in line with connectivist theories of learning that emphasise the links between people and resources (Siemens, 2005), and the making of personal choices within an environment mediated by technology (Saadatmand and Kumpulainen, 2014).

The learning frameworks described in the section above highlight action, collaboration, and reflection as key aspects of online learning (Bonk and Zhang, 2006; Cartner and Hallas, 2009; Godlewska et al*.,* 2019). They also highlight the role of teachers working actively and collaboratively with students to build learner agency. A case study that illustrates how these aspects came together for practice is summarised in Table 2 below and can be seen in practice at the University of Northampton, UK, where a pedagogical model of ***Active Blended Learning (ABL)*** has been implemented across the institution since 2014. Its goal is to enhance student engagement through a digitally rich learning environment in which students interact with content, peers, and tutors (Palmer, Lomer & Bashliyska, 2017; Armellini, Antunes & Howe, 2021; Rodriguez & Armellini, 2021). The ABL precedent meant that lecturers were well placed to make the transition to ***Active Distance Learning (ADL***) in response to the demand for remote learning when the Covid-19 pandemic began (Caldwell, *et al.,* 2021). Through ADL learners make sense of ideas using digital tools to demonstrate their understanding, and then build upon them through social online learning. Collective knowledge construction is mediated by technology tools, the exchange of tangible outputs, and synchronous and asynchronous interactions (Caldwell *et al*., 2020; Caldwell *et al.*, 2021 in press).

In many ways the online environment has advantages over a face-to-face setting. There is also much to be learned from the theory and practice of quality online pedagogy that can be adopted to improve the quality of face-to-face teaching. For example, in their discussion of 'seamless flipped learning', Hwang *et al.* (2015 p.1) suggest that technology can facilitate across learning contexts, times, and social settings. They note that the use of media makes it easier to engage with, revise and share content. Similarly, Royle et al., (2014) draw attention to the opportunities for more agile learning using technology and the speed with which connections can be made and experiences shared across contexts. We can conclude that online environments can provide opportunities to develop shared understandings based on captured events, forming a bridge between informal and formal learning, and combining synchronous interaction with the creation of digital artefacts around which shared understandings evolve. In this way, the online community of practice amplifies the learning of individuals as the collective learning potential of the crowd exceeds that of the individual, (Richardson, 2010; Hung, 2002; Johnson, 2001). Conditions can be created for online learners to have agency and voice online by designing and nurturing community spaces that cut across formal hierarchies and cultivate trust and reciprocity.

Teacher Professionalism – Agency and Teacher Voice

Any discussion of quality in teaching must include concepts of teacher professionalism because these reflect societal perceptions of teaching and the value of teacher work. In their report titled *Thinking about pedagogy in an unfolding pandemic*, Doucet, Netolicky, Timmers & Tuscano (2020, p.2) argue, "This is not the time for unilateral, top-down only approaches to education. Teachers can and should lead in many ways and use their professional judgement to make the best decisions for their students". They contend that "A multilateral collaborative partnership across sectors is needed when approaching education during a pandemic with institutionalized dialogues that ensure teacher voices as a major part of the solution" (Doucet, Netolicky, Timmers & Tuscano, 2020, p.2). These views reflect a view of teachers' work and teacher professionalism that values Teacher Voice, Teacher Autonomy and Teacher Agency as critical parts of quality in teaching.

These challenge the dominance of a "managerial professionalism" which according to Stevenson and Gilliland (2016, p. 113) "relates to the ways in which teachers' professional knowledge has often been ignored as particular pedagogical practices have been imposed on teachers, whilst in other cases professional development has been used crudely to promote national initiatives or organisational objectives." The conditions that have been shaping the teaching profession for the previous decade concern public accountability, which prioritises external performance measures. Increased regimes of accountability and audit are meant to improve public trust in education, which are implemented through standards regimes. These political conditions confronting the teaching profession are becoming more universal,

> The strong and sustained push for accountability required by governments …ensures the external control of the teaching profession. Regulatory frameworks serve to constrain teachers' practices and to emphasise a conservative and reactive form of teacher professionalism. (Sachs, 2003, p. 9)

We find the idea of "democratic professionalism" useful for conceptualising quality in teaching driven by teacher confidence in their capacity and competence to shape and control their own practice and pedagogy. This is "based on fundamental values of social justice and democracy, [and] emphasises teacher control and influence in relation to three domains of professional agency – shaping learning and teaching conditions, developing and enacting policy and enhancing pedagogical knowledge and professional learning" (Stevenson & Gilliland, 2016, p. 113).   Teachers who practice democratic professionalism can exercise their Teacher Voice and agency. Borrowing from the theoretical discourse of Critical Pedagogy, Pennycook (2001, p. 130) defines 'Voice' as "far more than just speaking; rather, it is

a broader understanding of developing the possibilities to articulate alternative realities. And since it has to do with gaining the agency to express one's life, it is less about the medium of voice (speaking, writing, etc) and more about finding possibilities of articulation. "Democratic professionalism" places an obligation on the teacher to draw on their professional knowledge including what they know about local communities, conditions and research when reaching professional judgements about appropriate pedagogies.

In contrast, Strathern (2000) identifies "emerging universalism" through an audit culture of professional competencies.   Strathern argues that a tendency towards universalism can be found at a national and international level, where definitive lists of competencies for teachers are published. This indicates a move to a situation in which the work of professionals is "managed" by an external specification of competencies, which are measured by the "language of indicators" (Strathern, 2000, p.314). This drive towards universalism appears to be led by policy makers rather than teacher professionals and the value and merit of such measurability remains open to debate. Stronach et al., (2001), refer to such quantitative performance measures as an "economy of performance", which require universal criteria in order that standardised comparisons can be made locally and nationally, or even internationally. This supports the research of Day, Fernandez, Hauge and Moller (2000, p.116), who identified an "emerging international consensus" concerning "the need to identify . . . quality in teaching' as determined by a set of acquired competencies rather than as a professional act requiring judgement and deep knowledge.

The ICET/MESHGuides (2021) research findings reported below indicate that during the Covid-19 pandemic crisis standardised practices designed to assure quality in teaching had limited value. Some teachers were clearly able to operate as autonomous professionals arguably working within a "democratic professionalism" paradigm and taking independent action to overcome barriers to learning. Others reported they were operating in a more dependent non-professional mode - waiting for central government leadership.

The shift to online learning required teachers to enact digital pedagogies. However, we know from prior research (Atkins, 2018; Younie, 2007) that knowledge about effective digital pedagogies was not widely shared, due to insufficient focus in education systems on the opportunities for technology to support learning. Given that schooling for most children is normally based on a face-to-face pedagogic model it is perhaps not surprising that teachers were unprepared for remote learning with technology, although those schools that had invested in technology and training (infrastructure *with* teacher skills via CPD) were much better placed in the pandemic to transition to Active Distance Learning when school closures were announced by governments. The research we have undertaken shows a strong connection between the principles for effective pedagogies in face-to-face classroom settings and those required for online Active Distance Learning. We acknowledge that prior research had already highlighted lessons about inequity of access to online resources (UNESCO's International Teacher Task Force, 2020).

The Just-In-Time (JIT) Teacher professional development model
The 'just-in-time learning' (JIT) model for teacher professional development has been identified in prior research into the adoption of education technologies by teachers, (Younie, 2007, Atkins 2018) as the most effective way for teachers to upskill themselves, via a self-driven identification of their own needs and identifying which aspects of technology the teachers needed to learn for their professional / pedagogic practice. This research showed that not only urgent emerging needs for new knowledge can be met through more knowledgeable others (colleagues & IT experts known to the teacher), who provide 'community of practice' networks i.e., through -social constructivism -, but that collaboration fostered by these networks which allows teachers from dispersed locations to construct new pedagogical knowledge, when there are no 'experts' - together providing JIT learning when needed. This way of learning is conceptualized as 'communal constructivism', whereby 'teachers learn *with* and *for* each other' (Younie

& Leask, 2001, 2013). Communal constructivism was identified as an early affordance of *online* communities of practice. Research showing the power of 'communal constructivism' - where there is no knowledgeable other only a professional group exploring the unknown - was undertaken across Europe as part of the 1998 EU funded MM1010 online European SchoolNet initiative (www.eun.org) (Leask and Younie 2001) and the adoption of internet-based technologies in schools (Younie, 2007). The Covid-19 pandemic when teachers were faced with urgent professional learning needs with respect to shifting to online pedagogies highlights the need to move from a 'one-size-fits-all' model of CPD training to providing opportunities for teachers to continually update their knowledge and skills ('just-in-time learning' (JIT)).

METHODOLOGY

The data gathered during the Covid-19 pandemic in 2020 and used for this chapter came from

a) the ICET and MESHGuides research project gathering data on teachers' experiences during Covid-19 using ICET and MESHGuides international networks (www.icet4u.org and www.meshguides.org) (reported in ICET/MESHGuides 2021) and
b) the research and development work of the Tech for ADL research group at the University of Northampton UK (reported in Caldwell *et al.*, 2021).

For the ICET and MESHGuides research project, data were gathered during the period of June to December 2020, by ICET and MESHGuide network members from over 550 teachers from 47 countries through a series of qualitative group interviews and from discussions held in two international symposia on 8th and 15th October 2020. The aim of the project was to provide a space in which to document the Voices of teachers as they shared their experience during the first six months of the pandemic. The following questions were posed to educators in focus groups, in individual interviews and in break out room discussions during the symposia:

How has your job changed since the pandemic?
What new strategies/practices did you develop?
What strategies/practices do you want to continue using?
What do you see yourself doing differently in the future?
What do you see as challenges for sustaining education during times of crisis?

There was also the opportunity for educators to speak about other issues they thought to be important. What was gathered was seen as snapshots of educators' experiences - classroom teachers, teachers in training and teacher educators.

For the purposes of analysis, the data were collated around the themes which emerged from the data collected. The transcribed data were coded manually, categorized, and collated around emergent themes by the two lead researchers. The findings were then shared with co researchers for feedback. This allowed for peer debriefing and member checking as they read through the emerging results to verify the findings. The researchers complied with the ethical requirements for research in their contexts.

The Tech for ADL research group developed the concept of Active Distance Learning for university teaching during Covid-19 through building on research and development work on Active Blended Learning undertaken at the university (Palmer et al., 2017; Armellini et al.,2021; Wareing, 2021). The ADL model was developed through drawing on the learning theories mentioned above and the analyses of learning in online environments including the role of *dialogue*, *digital making* and *online posting* in the construction and sharing of knowledge in online environments. The Tech for ADL research group created and implemented a model for ADL prior to Covid-19. Student evaluations confirmed the power of the

model in enhancing learning. The advent of Covid-19 led to the development of and testing of the Active Distance Learning model with students (Caldwell *et al.,* 2020),

In addition, the Just-In-Time professional development model was developed from EU funded projects when the internet was being introduced into schools (Leask and Younie, 2001) and the integration of educational technologies in schools (Younie, 2007). Desk research for the quality in pedagogy section was undertaken for the pedagogy chapter in the *Learning to teach in the Secondary School (*Capel, S., Leask, M. and Younie, S. 2022).

Findings

ICET/MESHGuides Global Report summarising findings.
The findings from the ICET/MESHGuides research are drawn from what teachers shared about their experiences, challenges, and successes during the first six months of the pandemic. Examples are provided below. (See ICET/MESHGuides (2021) for a fuller report). They paint a picture of teaching in which examples of teacher agency and professional autonomy are evident and strong. Across all 47 countries, the closure of schools created fear, anxiety, and uncertainty. It was an unprecedented situation for which no one was adequately prepared. Yet, teachers rapidly adopted remote teaching using online technologies where possible. This change of role required teachers to adapt their professional practice, in some cases, literally overnight. Their deep commitment was testament to their professionalism, highlighting their ethic of care and dedication to continue to deliver schooling, even without classrooms. However, it should be noted that there were significant challenges thrown up by the pandemic. The analysis here is intended to reflect and record these so we can learn lessons and build a more robust future which considers the role of quality in teaching and defining it to 'future proof' education against major disruptions.

The specific challenges for teachers when schools and classrooms were closed was to provide alternative and remote ways of delivering education that allowed for continuity of learning. The challenges were multiple and involved utilizing educational technologies. Teachers reported that to survive and manage in virtual spaces, they made changes to their pedagogy. In many instances (at least initially) they had to do this with non-existent or limited government support. Many reported they found that online delivery made their teaching more student centred and they needed to be more mindful of practising differentiation. Teachers reported that the paradigm shifts they had been resisting for so long took place with respect to integrating digital technologies into pedagogic practice. There were numerous ways in which pedagogy changed.

As one teacher described it, *'Previously technology was used as a side dish – now digital tools are the main dish.'* Teachers became more creative. As another teacher shared *'my teaching improved'.* '*I had to think about moving from pen and paper assessments.'* She felt empowered to "*actually cater to all the different learning needs of my students."* Teachers reported they changed ways of providing feedback to students and parents, ways of record keeping, ways of recording memories of teaching and learning since actual snapshots and recordings were now possible and now allowed and they developed techniques for engaging students. Increased independent learning also took place. One teacher said,

> *I have begun to engage my students increasingly into self-exploration and independent learning. Before the pandemic 60% of my classes were used in information input through lecture. Today, information input in the form of lecture is almost 0%".*

Another said, *'The pandemic demanded a new methodology and teaching practices to support the students on a large scale.'*

The abrupt change in pedagogic practice to online delivery was not without its challenges though. Teachers did report that the shift to virtual classrooms created a major challenge of reaching and identifying students who needed assistance - "*often you have no way of knowing if a child has grasped a concept or not".* With online teaching the teachers struggled to be able to monitor the participation of learners in the lesson, especially where cameras were not permitted to be activated due to safeguarding concerns in some schools. Consequently, keeping all students engaged was reported as difficult to achieve consistently. Also, there was a decentering of power relations as teachers moved from a central role to a facilitating role, which demanded more autonomous self-directed learning from the students. However, not all students had the capacities or facilities to make the shift to home-centred learning. Teachers reported that learning equity and access were universal concerns,

> *One of the biggest challenges for teachers was to "keep students on board". Children's home situations do not always allow them to participate in lessons or the other educational activities offered by schools. Even though it was possible to observe a good deal of achievement in provision of distance education in schools, teachers noticed that some parents are not in a position to be able to support their children's learning effectively, especially those with insufficient digital skills and not having access to the Internet at home. Therefore, disadvantaged students were struggling to adapt to pandemic times reality, with less access to learning material, access to online platforms, and less parental support.*

In addressing these challenges, teachers responded by developing several strategies. For example, with engagement, teachers used a strategy to continuously pull students into the lesson with probing questions. Rather than present passively they directed questions at students, encouraging the use of the 'chat box' function for all students to respond. This was effective where cameras were switched off. Similarly, the use of 'breakaway rooms', available across many types of digital platforms, enabled student-led group work.

Teachers also recommended the use of 'flipped classroom teaching' as a useful strategy. This involves sending students off to research a topic offline. Students would have to collaborate offline and then present live and online and encourage feedback and constructive criticism from peers. Providing students with recorded lectures, presentations and other multimedia materials were also found to be useful. The teachers pointed out that the students who did not want to speak during the traditional classes often spoke out during online classes. Therefore, teachers appreciated the creation of online discussions using virtual forums and bulletin boards for this purpose, which improved communication with students. Some teachers pointed out that creating tasks, quizzes, and tests online was also helpful in verifying students' knowledge. Overall, teachers experienced steep learning curves as they tried to identify, learn, and manage technology. As one summarized, '*The bar of competences required for teachers to function was raised*.'

Adopting a New Mindset and Paradigm Shift

Teachers for the most part, reported that their teaching would be different in the future even if there was a return to the 'old normal'. There is now widespread knowledge across the profession of digital technology tools, which teachers had to learn about very quickly and which they wish to continue to use both for personalising learning, extending the subject matter available and improving communications with students and families. Teachers said they will incorporate the methods they used during the pandemic in future teaching to provide varieties of learning opportunities beside the traditional chalk and talk method that they practiced before the pandemic. The pandemic changed their mind set and they are willing to explore other teaching methods and new digital applications for teaching now. The following quotation provides an example of a positive outcome of the pandemic which is that there has been a shift

in teachers' pedagogical use of educational technologies which is likely to have long-term impact on classroom practices. "*COVID-19 has been a push to get teachers to use [online] interactive whiteboards and become expert users*".

Teachers said they want to capitalize on their experience of getting past their resistance to the use of technology and taking ownership of improving their professional capacity for virtual teaching and learning. The pandemic experience motivated them to feel confident about leaving comfort zones of traditional practices. In particular, teachers reported on their desire to capitalize on changes in their mindset around: i) seeing the value of using technology; ii) taking more ownership of their own professional learning; iii) teaching in more student-centred ways.

> *There has been a more valuable and more marked transformation and evaluation. Other ways to learn to participate, that teachers receive the training and are protagonists, leaders, of their own training. This is the scenario in the future.*

Benefits of Online Learning - teachers experiences during COVID-19.

Although online learning was missing many of the opportunities that make schools great learning environments - social interaction, community activities and face-to-face creative collaborative work across subjects, benefits of online learning emerged from the data including:

- Seeing the home of the student through a virtual lens gave new insights to other needs impacting students.
- Children with special needs who found school an uncomfortably challenging and competitive space found it a relief to be taught online.
- Some quiet students engaged more online than normally in the classroom through using the
- chat function to pose questions.
- Using online platforms to showcase students' work; to also gauge the progress of students' work, increase accessibility and make it more open to all.
- Teachers encouraged more independent learning among students.
- Multimodal approaches to teaching were used: more video clips, PowerPoints, multimedia resources.

Teachers often stated that they wanted to continue with some forms of remote learning, especially those ones that allow as much direct contact with students as possible. Teachers appreciated the possibility of providing students with lecture recordings and presentations and sharing them. Similarly, students reported liking recorded lectures because they could play them back repeatedly to learn more difficult material at their own pace. Teachers also reported that they also want to keep building the improved relationships with parents and community and capitalize on parents' involvement with supporting teachers' work. Overall, teachers positively testified to the unintended professional development that the pandemic created:

> *'COVID has provided us with many opportunities for developing ourselves which we did not do before.'*

Teachers want to maintain taking ownership over their own professional learning by continuing to train themselves and improve their capacity to teach online.

Reaching Students without online access

Our research also showed that for many teachers, it was difficult to reach their students online. Their responses demonstrated dedication, creativity, and innovation in working without online tools. More specifically, issues with poor wifi access, limited connectivity, limited devices, and limited funding to buy data severely hampered their ability to establish and maintain contact with their students. One teacher, for example, reported he had seen only 10 % of his students in four months. The data gathered demonstrated that to overcome this problem teachers had to be innovative and creative. Teachers worked to involve their communities in reaching students. Some relied on social media such as Whatsapp to communicate with students and parents. Others had to rely on producing packages of paper worksheets to distribute for children to collect, complete and return for marking. In one country, teachers used the egg vendor to distribute materials. Others approached store owners to be collection spots. In another country, a teacher came up with a plan to paint community blackboards on shop walls which she and some colleagues wrote lessons and activities for children in the area to copy and work on. Others utilized technologies like solar-powered radios (provided by charities) to link with their students.

Conclusions

These findings from the ICET/MESHGuides (2021) global report speak to teachers demonstrating quality in teaching through their motivation and determination to meet the learning needs of their students despite the challenges arising from the pandemic. They showed their willingness to navigate and manage dramatically changed educational landscapes with professional agency and autonomy. The strategies they used, and their changing mindsets suggest a shift to ways of teaching that reflect the CREDE critical elements of quality pedagogy identified earlier (Table 1). This is evident, for example, in teacher reports of being willing to engage in "joint productive activity" by sharing power in the online classroom, and collaborating with teacher colleagues, parents and students to build knowledge of what worked. Teachers facilitated meaningful conversations with their students that extended beyond the set curriculum. They contextualized learning by devising strategies to connect the new learning environments (both on and offline) to students' "new" lives in the pandemic. The experiences and practices of teachers during COVID-19 also conveyed heightened awareness of the value of online pedagogy for stimulating quality in teaching. This is evident in findings of the Technology for ADL group at the University of Northampton.

Tech for ADL research group findings

From the literature review, drawing on the key theories of constructionism (Harel and Papert, 1991), connectivism (Downes, 2010; Siemens, 2005), and communal constructivism (Leask and Younie, 2001), we provide examples below of ADL practice that embody key principles of effective teaching for online learning as mentioned earlier namely "*dialogue*, *digital making* and *online posting* in the construction and sharing of knowledge in online environments". The four examples of active online pedagogy which follow demonstrate the application of the Active Distance Learning pedagogy model in higher education teaching developed at the University of Northampton during Covid-19. These illustrate models of quality in teaching online which maximise the affordances of online teaching technologies**.**

Example 1 and Figure 1 demonstrate the use of the Padlet tool for facilitating collaborative construction of knowledge.

Example 1: Remixing and remaking digital artefacts

Students remake and reclaim the Padlet by following the teacher's list of directions/instructions (See Figure 1) to edit the posts to generate a new Padlet on a theme of their choice that demonstrates their understanding of the tool. In engaging in this activity, they are articulating their ideas and then sharing them with their group. The remade Padlets are posted in a 'Padlet of Padlets' and the group is invited to respond to the new set of posts.

Figure 1: Teacher's instructions for students to remake and respond to Padlets.

Example 2 and Figure 2 demonstrate group collaboration.

Example 2: Group collaboration within a community of practice

A Jamboard is a digital interactive whiteboard developed by Google. Here it is used for an interactive slide presentation on the impact of Covid-19 on children and families. Students begin by using the tools Kahoot and Mentimeter to explore and compare their personal reflections at the start of the teaching session. They are shown some theoretical frameworks. They then split into breakout groups to discuss the impact on an imaginary child in relation to her bedroom, her home, city, and the world. Each group uses sticky notes within Jamboard to record their responses and then they come back together to present their ideas and recommend some solutions as a whole group. This demonstrates how technology can facilitate the process of collective knowledge building within a learning community.
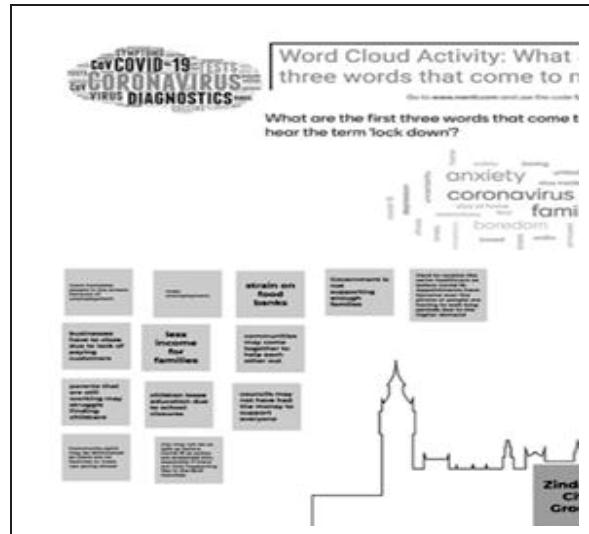
,

Figure 2: Digital tools facilitating the co-construction of knowledge through collaboration.

Example 3 and Figure 3 demonstrate the using of technologies to bridge formal and informal learning.

Example 3: Technology bridging formal and informal learning

In this example, students are invited to post an image and a reflection on what educational research means to them as a pre-session task. The resulting set of images then provides a hook for a discussion in a virtual space bringing together the synchronous and asynchronous activities. The use of images makes powerful steppingstones for the group to use to develop shared understandings, increasing the pace of the online teaching. In this way, technology can make for a more seamless link between learning that takes place before and after an online teaching session.

If research was a…it would be…because…

The british weather! Because its complicated, unpredictable and the outcome is never quite what you expect it to be!

An onion….loads of layers and it makes you cry. In a good way!

If research was a food it would be a pomegranate because it can be complex and very detailed.

Like our preschool's favourite book character, the colour monster! So many colours mixed together, you never quite know where it will lead

…. zebra it would never be black or white

Animal: Ants… Thousands of them and each with their own complexity. Creeps some people out whereas others find it interesting. Exceptionally strong when used correctly.

Figure 3: A pre-face-to-face task adding pace to online learning.

Example 4 and Figure 4 address inclusion issues.

Example 4: Inclusive learning environments mediated by technology

In this example several digital platforms and artefacts are combined to create a visually rich environment that allows for the evolution of ideas. The teaching session is structured and presented through the medium of a flip book using Book Creator. Within the pages are links to a collection of complementary tools: a blog for the assignment, a Padlet summarising progress across the module, and Adobe Spark and Powtoon for the session task of poster making on the theme of online safety. These tools combine to create a learning space that accommodates individual learning differences by offering flexibility and choice in the ways students access material, engage with it and demonstrate what they know, in line the Universal Design for Learning framework suggested by CAST (CAST, 2018).

Figure 4: A structured collection of digital tools creating a flexible learning space.

In summary, these four examples illustrate ways in which the online environment can provide an Active Distance Learning experience (ADL). Data gathered from students on ADL courses during COVID-19, indicate that carefully chosen combinations of collaborative tools can engender a feeling of belonging to a community that engages in social online learning and can offer choices that promote inclusivity for a diverse range of learners. They found it helped them feel as if,

> *The social aspect of university-level study was present, meaning that opportunities for networking and peer-support still existed regardless of our geographical separation.*

Students expressed satisfaction saying,
- *I find that the UON experience is supportive, encouraging, and motivational.'*
- *The online option was perfect for me and my situation.*
- *The course itself is highly engaging.*
- *Studying online allowed me to hear from peers from all walks of life.*
- *The University of Northampton's education department is research-led and conducts specific research projects looking into online teaching and learning. This means that their practice is up-to-the-minute and continually developing, rather than clinging to outdated teaching styles.*

The Tech for ADL research group concluded that an ADL approach can,
- facilitate sensemaking through digital making.
- enable virtual placements and debates.
- punctuate online sessions with creative digital activities.
- improve the pace and activity in online sessions.

- capture and share online collaborations.
- offer opportunities for assessment and reflection.
- increase accessibility and inclusivity.
- sustain a sense of community.

It is interesting that these examples of quality online teaching also reflect the five elements of effective pedagogies identified in Table 1.

Discussion
Positive Outcomes for Teaching Quality- what we take forward.

Using the criteria for effective pedagogies and effective online pedagogies summarised in the literature review the findings provided above show that during COVID-19, teachers demonstrated quality in teaching in how they navigated unexpected new contexts for teaching and learning in courageous ways working within the constraints (C1,2,3,4) set out in Table 1: using their knowledge of learning, to construct new learning environments (C2), changing their ways of performing in the classroom (C3) and developing new processes shaping their teaching environment (C4). They took on online pedagogy in exemplary ways and changed their mindsets about student centeredness, rebalancing power and authority by engaging with learners in a more egalitarian way that encouraged learner agency demonstrating the five elements of pedagogy critical to effective learning identified in Table 2. They also demonstrated caring, resilience, responsibility, and agency. As teachers supported students and parents in managing the crises of fear, uncertainty, well being, around loss of learning and simply surviving the pandemic, they rose to the challenge of learning how to teach online, and how to be innovative in reaching their students. For many teachers, they did this despite a lack of clear leadership and directives from policy makers- especially in the first few months of school closures. There is evidence that many took ownership over reconfiguring curricula, upskilling, devising new ways of planning, delivering, and assessing content. What seems to have motivated teachers most was their concern and caring for their students. They wanted to ensure continuity of student learning despite the many challenges they faced.

Another explanation for teachers practices during COVID-19 can be found in the research of Moore, Edwards, Halpin and George (2002) who discovered that teachers "reposition" themselves in the face of rapid and extensive educational change. Moore et al's., (2002) interviews with teachers indicated that responses to public policy were prompting teachers to become increasingly pragmatic in their practice. One form of pragmatism identified was "contingent pragmatism, adopted by teachers as reactions to change that take on the function of a survival strategy. We argue it is particularly important to understand this professional positioning in response to the pandemic, in particular the rapidity of the disruption that school closures brought to the profession during Covid. The multiple demands of teachers in their situated professional practice, between external pressures (government policy edits), local contextual pressures (school culture and region/ community) and teachers' preferred practice, leads us to consider how teachers came to rework their professional commitments during the pandemic:as an external pressure impacted on their preferred practice and they suddenly needed to move their pedagogy online.

Lessons learnt and future proofing.
Throughout this chapter we have identified key principles and practices that underscore quality in teaching in both face to face and online environments. These include contingent pragmatism, connectivism, just-in-time learning through communities of practice, communal constructivism, care and concern. Taken together these create possibilities for a model for the type of democratic teacher professionalism needed for teachers and learners to feel competent, confident, and capable of practising agency and autonomy. Our research suggests that teachers' practices during the pandemic show that teachers can reject the prioritisation of performativity cultures and regimes of accountability and adopt practices of agency and autonomy. They showed their capacity for professional decision making -

decisional capital "the ability to make discretionary judgements." (Hargreaves & Fullan, 2012, p. 93). By managing the rapidly changing contexts of teaching in a pandemic they were engaging in quality in teaching, as Loughran (2010, p. 82) states,

> Quality in teaching is when activities, procedures, and strategies are developed and used by teachers to encourage selection, attending and processing. ..... Quality in teaching is not about using a teaching procedure just to break up the normal classroom routine; it is about using a particular teaching approach for a particular reason.

Questions about Future Practices

In closing, we suggest we have identified what teachers' experiences during COVID-19 can teach us about maintaining quality in teaching for the future if learners are able to access educational technologies and in all the countries in our research, there were young people denied continuity of their education through lack of access to these tools. As we start to see a possible end to the pandemic, we must ensure that governments take action to ensure all learners can learn remotely and that the shift in narrative about teachers and teacher professionalism does not revert to one in which teachers',

> professional knowledge has often been ignored as particular pedagogical practices have been imposed on teachers, whilst in other cases professional development has been used crudely to promote national initiatives or organisational objectives. These initiatives are often geared to meeting externally imposed targets, rather than being driven by the professional needs of the teacher. (Stevenson & Gilliland, 2016, p.113)

The lessons we have learnt with respect to how teachers responded to providing continuity of learning during the pandemic provides important insights into how we can future proof educational practices to ensure quality in teaching is maintained. Given that future crises are inevitable, whether through natural disasters, pandemics or human made conflicts, we can plan to future proof against disruptions to schooling. We now know what is possible with educational technologies to fill the gap when teachers are removed from children, and how learning can be supported; with access to the internet and technology devices, online content repositories to support the curriculum and teachers' digital competencies for online pedagogies. The lessons learnt enable teachers to have 'emergency planning toolkits' in place, ready to go should such circumstances arise again.

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Recent Publications

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Recent publications:

Edwards, J., Heaton, R., and Caldwell, H. (2021). *Art in the primary school: creating art in the real and the digital world.* London: Pearson.

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