Learning to teach from home

CATHAL DOYLE, CAMERON M. PIERSON, CATHY BUNTTING, AND YEVGENIYA LI

KEY POINTS

- Teaching is an emotional practice, and teachers' feelings about their students can impact their responses during times of educational change.
- Teachers considered a range of factors when planning for school-led learning from home opportunities for students during the 2020 COVID-19 lockdown, and connecting with students to support student wellbeing was often a priority.
- Reflecting critically and purposefully on professional experiences leads to greater self-awareness and enhanced teacher practice.

This article presents the thoughts of six teachers asked to reflect on their experiences planning for and delivering school-led learning from home opportunities during Aotearoa New Zealand's COVID-19 Alert Levels 3 and 4 lockdown at the end of the first term and beginning of the second term 2020. What comes through is the efforts that these teachers made to keep connected with their students, the ways in which they prioritised student wellbeing ahead of formal learning, and the support that came from feeling part of a wider community where they could share their experiences and learn from others. The insights are shared in the hope that they inspire readers to reflect critically on their own experiences of learning to teach from home, identifying positive outcomes, insights into their own practice and motivations, and learnings that will continue to shape their professional practice moving forward.

Introduction

Aotearoa New Zealand's COVID-19 Alert Levels 3 and 4 lockdown from 25 March to 13 May 2020 had a significant impact on teaching and learning across all school levels. Teachers had to promptly develop, implement, and adapt strategies for continuing education remotely, consider how to connect with and engage students in this new context, and experiment with alternative communication modes. Reflecting on what was experienced and achieved is important. Raising the visibility of positive outcomes and what teachers learnt about themselves and their students can inform future approaches, both when students are at school, and when they might need to once again learn from home (Mutch, 2020). It is our hope that by sharing the insights that follow, readers will be inspired to reflect critically on their own practices and perhaps to interpret these in new ways—while also working towards using our collective learnings from COVID-19 to change the educational status quo ante for the better (Trombly, 2020).

The scenario that follows is drawn from an existing research project funded by the Ministry of Education's Teaching and Learning Research Initiative (TLRI) investigating the affordances of an online citizen science project for developing students' science capabilities and digital technology learning.1 This project consists of an interdisciplinary teacherresearcher partnership including researchers at Victoria University of Wellington (Faculty of Education, School of Information Management) and the University of Waikato's Wilf Malcolm Institute of Educational Research, advisers from Victoria University of Wellington, University of Waikato, and NZCER, and

seven teachers from the wider Wellington region. Four weeks into the 2020 Alert Levels 3 and 4 lockdown we asked the participating teachers to reflect on what influenced their approaches to school-led learning from home. We specifically use this phrase—school-led learning from home—rather than "home learning", "distance learning", or "remote learning" to signal the "belief that the learning schools provide is only one part of the rich learning that occurs across the boundaries between homes and schools" (Riwai-Couch et al., 2020, p. 65).

Understanding the influences on teachers' strategies to continue to support students' learning offers insights into the emotional practice of teaching during times of change (Hargreaves, 1998) and the huge commitment shown by so many teachers across Aotearoa New Zealand to remain connected with their students and foster ongoing learning opportunities despite schools closing during the nationwide lockdown in 2020.2

A dramatically different educational landscape

With students across the country unable to attend school, teachers "pivoted" to offer a wide range of "at home" learning opportunities. While digital connections were used by many, huge efforts were also made by teachers to connect with students who did not have reliable access to digital devices or the internet. Just like lockdown was experienced differently in each household, the individual experiences of each teacher-student dyad were likely uniquethe educational kaleidoscope had been shaken! To better understand the inspirations, challenges, and

personal and professional tools influencing teachers' decision making, we asked the teachers participating in our research to respond to an online questionnaire inviting them to reflect on their experiences when having to continue science teaching during the lockdown. The questions probed the strategies they considered using, the support they accessed, the challenges they faced, and the effect the experience had on them as teachers.

To present these reflections in an accessible and engaging manner, we have chosen to craft a fictional discussion with the teacher respondents. That is to say, while each teacher responded individually to the questionnaire, to present the data, we have created a theatrical narrative where the teachers discuss their experiences in relation to each other. While we mostly use exact responses from the teachers in their questionnaire, to help the conversation flow we have added some text, represented in square brackets, so the reader can distinguish between the direct quote and the added text. We've also used pseudonyms for their names, and together the teachers represent four primary schools, one intermediate school, and one secondary school. The schools range from deciles 2 to 9. The text between the teacher discussions represents the researchers making sense of the discussion.

In crafting this narrative, we hope to capture the essence of some of what it was like to be catapulted suddenly and unexpectedly into a teaching and learning context that was so very new to the majority of our nation's teachers and students.

The discussion

Thanks for delving into your experiences of teaching through lockdown, and for generously sharing some of the things you learnt about teaching, about learning, and about yourselves. Some key themes have emerged that we're looking forward to exploring further.

Student-centred approaches

It is very clear that, for all of you, student wellbeing was paramount. You were also all wholly committed to student-centred approaches—keeping your students at the centre of your planning. This often seemed to be a schoolwide kaupapa, too.

Jane: [Yes, at our school] most of the decisions were made collectively. For example, we decided that as a whole school we would prioritise the mental and physical wellbeing of our students and their families. In practice, this means we were not putting pressure on kids or their families to complete learning-from-home tasks.

Emma: [I agree,] our priority as a school was to check in and maintain wellbeing. School work was second to this. Shane: [Yeah,] I wanted to ensure that students could work at their own pace and access material at their own chosen times.

James: [I wanted a] safe online environment, keeping it light and happy. Embracing unusual scenarios: e.g., pets or family members joining; taking time to ask how students are at the start of Zoom lessons; sharing some of my online life-garden, objects in the background.

Student wellbeing and setting a supportive tone was clearly an important part of your approach. In what other ways did this come through?

Grace: Maintaining regular contact with students has been really important.

James: [Yes,] regular communication [through] Google Classroom; email; Zoom lessons [and providing] multiple ways students can ask questions (question docs, Google Classroom stream, email).

Grace: [Similar to James], I used different platforms [such as] Zoom meetings online organised through emails to parents and the school Facebook page. [I also used] phone calls."

Emma: [I was the same, with] weekly class Zoom meetings (involving a kahoot quiz during the last 3 weeks), individual Zoom meetings for those who needed them, emails to students and parents, phone calls, [and] text messages.

Jane: Google Classroom was the main communication platform. I maintained an online presence throughout the day so kids could ask questions about tasks or even just chat. [And] I posted a daily video each morning greeting everyone and briefly going over the day's learning tasks. The kids really looked forward to these and if they were late for some reason I got lots of 'where's the video???' messages. [We also had] whole school 'events' like House Pride Day and Virtual Pet Day where we encouraged everyone to dress in their house colours and share photographs of themselves and their pets on Google Classroom, Seesaw, or Facebook.

Driving online engagement

Clearly, regular connections were important. You also found novel ways to capture students' interest and maintain their engagement. James, you mentioned using a range of digital technologies. What did others tap into?

Jane: We had an online learning platform pre-established (Google Classroom) so it was a foregone conclusion that we would use this as our main means for remote teaching and learning. This means that we are both supported and constrained by the tools and affordances offered by the Google Suite. Asking students to lead our daily meeting was really motivating.

Grace: With a bunch of diverse learners and a range of technology available I had to think broad and wide.

Mary: [I was the opposite to others here, where] initially I provided written and printed resources to continue with the unit the students were part-way through, as only 50% of the students had access to online learning at that point.

Once the students had much more access to the internet through delivery of Chromebooks from the school, I created four short activities which they could choose from and which were available under the school's Home Learning Programme heading on the school website.

Grace: Building engagement and excitement for the science through connection with local experts. [I also made] movies for students about the things we were doing during

Emma: [Like Grace,] I also started to film kitchen science videos that were first for my kids, then the school, our kāhui ako-and then shared nationally.

Curriculum considerations

We're aware that many of you needed to take into account that not all of your students had reliable access to online resources, and that you went to extraordinary lengths to do so, spending the few days that we had before lockdown commenced creating hardcopy packs for your students and then delivering them to homes. We also know that, like Mary has indicated, online learning later became more available for some students. Where you did use online learning, how did this differ from your usual practices?

Jane: In almost every way! Honestly, this is so far from 'normal' that I can't even begin to list the differences.

Mary: Normally the lessons form part of a unit of work, and use a mixture of teaching practices: discussion, reading, viewing, experimenting, recording, sharing, reflecting.

James: Normally the kids might have topic notes (juniors) or textbooks/slides (seniors) that will tell them what the next section of the topic will be, but not activity by activity.

So there were sequencing differences, and differences in the types of activities that you were designing or facilitating.

Grace: Usually, students will work in small groups, developing their ideas and critiquing each other. [But now] most children listen but do not actively contribute to the discussions online. Our Zoom sessions were very teacher dependent and the quality of conversation and debate that I would see in the classroom was largely absent. Building engagement and excitement about the science was much more difficult.

Emma: We hadn't had the use of devices like this at all prior to lockdown! I really missed the real engagement and the way kids feed off each other with their learning. [On the other hand,] lots of siblings got involved here!

It seems that your pivoted strategies differed considerably from your usual practice, with reliance on online activities and the need to drive online engagement.

Moving beyond your engagement strategies, what other curriculum considerations influenced your decision making as teachers of science?

Mary: Only things I thought would be interesting, available, easy for the students to access.

Grace: [I asked] what prior knowledge do the students have? What vocabulary is involved? How is the science we are trying to learn represented in the activities I am providing? What is the level of reading needed for students to access the information provided?

James: [Yeah, like] can students continue to do Nature of Science, e.g., investigations. How do you replace practicals? Topics that lent themselves towards home investigation were swapped in during lockdown.

Emma: As I was recording the science experiments, I modelled the questions [related to science capabilities] for

Considerable thought was therefore put into providing relevant, accessible science learning opportunities at home. Sometimes, though, consideration of the family and whānau contexts meant that the volume of "home learning" was carefully managed.

Jane: Device and internet access at students' homes was the first consideration. We also had to take into account that many families would not be in a position to support students' learning [so] as a school we agreed that daily learning tasks would consist of a reading, writing, and maths task with optional challenges and extension tasks.

Professional inspiration

When thinking about the programmes that you would provide, where did you go for ideas?

Jane: The school community, MoE [Ministry of Education] resources/updates, other schools and teachers in our cluster, [and] teachers across the country sharing ideas.

Mary: [Yeah,] the staff had meetings to make decisions about designing and providing a learning programme. [And] some of our students received work packs from MoE.

Emma: [Similar to Mary, we had] discussions with senior leadership at school and across the Kāhui Ako team. There was a wide range of resources that I gleaned ideas from. Main class use though was: Hapara as a platform for our online learning, Study Ladder, Prodigy, CSI Literacy, Sunshine Classics, Twinkl.

Grace: [For us, it was] using experts from NIWA [National Institute of Water and Atmospheric Research] and Victoria University of Wellington's School of Biological Sciences.

It seems that support came from both within your school and kāhui ako communities, and from outside connections and resources, including online resources. The collegiality and ways in which teachers shared ideas across a large number of digital platforms was certainly inspiring.

Challenges in planning for distance learning

We also asked you what the challenges were when planning for distance learning during the lockdown.

James: Not being able to do practicals to demonstrate science 'phenomena' quickly. [It was] harder to keep engagement without practicals, especially for tricky concepts.

Jane: [I can relate to that], students not engaging in learning. On any given day around 50% of my students did not complete any of the set tasks. 70-80% did join our daily meeting however.

Grace: [Exactly], maintaining engagement over a session. [And] knowing there are some students who are not participating at all.

Emma: This was hard as not all got into the online environment. They went to ground and I never heard a peep

Engagement was clearly a challenging aspect for some students, and there were immense stresses on many households during this time. Other students may simply have used the fact that schools were closed to press pause on their formal learning. What other challenges were you managing?

Jane: Many students completed tasks at a superficial level. Professionally I'm beginning to worry about those kids who were not engaging meaningfully in learning tasks for whatever reason.

James: [It's also] difficult to evaluate progress, [and] whether or not you are going too fast or slow with the content [or] providing too much or too little work.

It was new territory for so many—teachers, students, and families and whānau. It is clear that significant teacher professional learning was occurring—sometimes with little time to pause and reflect.

Teacher professional growth

What impacts do you think the various experiences had on you as teachers?

Emma: I've become more confident in front of a camera something I used to dread.

James: [Yeah,] it has made me more tech confident! I am less afraid of troubleshooting on my own.

Jane: [While this may be true,] one of the reasons I became a teacher is I'm constitutionally unsuited to sitting in front of a screen all day and 'teaching' online has really sucked for

Grace: [Same with me, while] my level of competence in using some new apps has increased, I hate sitting in front of a screen for large parts of the day.

In other words, you've gained some new skills, but the prolonged periods of online engagement were physically, and probably mentally, draining. Interacting with your students is also core to much of your practice, and it's just different when it's online.

Grace: [Yeah,] I miss my kids and an online presence is nowhere near the same in terms of both personal and professional engagement.

James: [Definitely,] I miss the one-to-one 'a-ha' moments the students get when they finally 'get' a concept.

Shane: [Yeah,] I miss the face-to-face because teaching is really all about relationships.

It's inspiring to get these insights into the variety of channels you used and the efforts you went to in order to keep connected through a very unexpected time. It's also highlighted the importance of relationality in teaching. Thank you all for your contributions to this discussion.

Reflecting on what was learnt when teaching from home

Reflection is defined as the "examination of and thinking about the actions taken to deal with the unexpected" (Kunowski, 2009, p. 30). Such a definition is apt for considering experiences pre-, during-, and post-lockdown, where teachers had to develop strategies to deliver educational opportunities remotely; consider how to engage students in this new setting; and learn about, adopt, and adapt the technologies they could use to support this. What comes through from the discussion above is the efforts that the teachers made to keep connected with their students, the ways in which they prioritised student wellbeing ahead of formal learning, and the support that came from feeling part of a wider community where they could share their experiences and learn from others—all while other pressures were also at play. Some teachers were juggling family responsibilities and looking after and teaching their own children. Others had unwell family members or other calls on their time and energy. Across Aotearoa New Zealand, the majority of us did what we could to "get through" the challenges (and benefits) of imposed isolation.

Teaching is an emotional practice, where teachers' feelings about their students affect their emotional responses to the structures, practices, traditions, and routines during times of educational change (Hargreaves, 1998). The required educational changes resulted in teachers considering a range of factors when planning for school-led learning from home. This included promoting a student-centred approach by providing relevant, accessible learning opportunities that could be completed at home, with a supportive environment that prioritised student wellbeing. Sometimes this meant reducing pressure on students and their families to complete learning activities. The teachers also actively sought to encourage and nurture online engagement, such as involving pet and family member participation, getting students to lead discussions, and using home-made videos to demonstrate or explain new ideas. All this was achieved by sharing ideas, experiences, opportunities, things that worked well, and things that didn't work so well, with

colleagues in the local and wider Aotearoa New Zealand teaching community.

Further, the increased use of digital technologies was clearly an important part of school-led learning from home. The teachers speaking above used a wide spectrum of applications, tools, and technologies, and adapting to this new digital landscape required them to be quick learners. While "Zoom fatigue" (Bailenson, 2021) and other challenges of remote work are common in all spheres, they are important aspects to consider for school-led learning from home, where positive educational outcomes are linked with students' engagement and motivation. And while all the teachers spoke of how they missed the richness of the in-person classroom dynamic, trying to replicate that with digital technology was a challenging experience.

Riwai-Couch et al. (2020) report on the results of a survey that explored the experiences of parents of Māori and Pasifika students during their first week of the 2020 lockdown's school-led learning at home. Positive aspects included strengthened relationships within whānau, and getting insights into their children's learning and progress. However, tensions existed between enjoying the freedoms provided by the situation and anxiety that their children would fall behind, and between expectations from the

"The teachers also actively sought to encourage and nurture online engagement, such as involving pet and family member participation, getting students to lead discussions, and using homemade videos to demonstrate or explain new ideas. All this was achieved by sharing ideas, experiences, opportunities, things that worked well, and things that didn't work so well, with colleagues in the local and wider Aotearoa New Zealand teaching community."

school versus what was realistically manageable. In our study, teachers emphasised the need to provide sufficient scaffolding for students, the value of activities that students could do independently using common household materials, and opportunities to embrace pet and family member participation in online scenarios. All of the teachers stressed over and over again that it is the connection with their students that motivates them as teachers.

Reflecting critically and purposefully on professional experiences leads to greater self-awareness and enhanced teacher practice(s). We hope that by sharing the insights from our teachers' experiences of learning to teach from home, others will be inspired to critically reflect on their own experiences of learning to teach from home. In particular, we invite readers to consider the following:

- As educators, we're always learning. When learning how to teach from home, this includes learning to use different technologies, experimenting with how they might be used, including how technology can enable connections with and between students in order to support their learning. Lockdown fast-forwarded a teacher learning process that reflection can help transfer into in-school practices.
- Connections are important. Between teachers and students, teachers and colleagues, and teachers and themselves. Understanding why we respond to particular challenges in particular ways is an important part of managing the emotional practice of teaching.
- Safe-to-fail environments support innovation. Working in new ways won't always go smoothly or work beautifully the first time, but we can model resilience in how we adjust our approaches and strategies.
- Students who feel cared for are more likely to want to learn. The same is true for teachers.

To support an ongoing discussion, we have made the teacher reflection questionnaire available here.3

You can download the questionnaire, complete it, and share it back into the folder named "Submit Responses Here".4 Others will be able to see your responses and comment in order to generate ongoing discussion. Participants will be able to learn from and build on the insights shared by the wider community.

Acknowledgements

We gratefully acknowledge the support of our wider project team, including Dayle Anderson, Azra Moeed, and Brigitte Glasson; our advisors Rose Hipkins, Stephen Ross and Markus Luczak-Roesch; and all the teachers without whom this TLRI project would not be possible. In particular, we acknowledge their outstanding commitment to their students through the 2020 COVID-19 lockdown and beyond, and their generosity in sharing their

experiences with us. Funding from the Ministry of Education's Teaching and Learning Research Initiative (TLRI) is also gratefully acknowledged.

Notes

- I. http://www.tlri.org.nz/tlri-research/research-progress/ school-sector/on2science-multiple-affordances-learningthrough
- 2. While Auckland has gone in and out of Level 3 lockdown since the first country-wide lockdown in 2020, this study focuses on the first lockdown experienced across the country.
- 3. https://drive.google.com/drive/folders/1jkN1_ t46307pzteZN9ziCKVBvxuYi_l7?usp=sharing
- 4. https://drive.google.com/drive/ folders/IUXCT5AAm9fvlMK_COIVFlzoj9zCH8clU

References

- Bailenson, J. N. (2021). Nonverbal overload: A theoretical argument for the causes of Zoom fatigue. Technology, Mind, and Behavior, 2(1). https://doi.org/10.1037/tmb0000030
- Hargreaves, A. (1998). The emotional practice of teaching. Teaching and Teacher Education, 14(8), 835-854. https://doi. org/10.1016/S0742-051X(98)00025-0
- Kunowski, M. (2009). Learning to teach history in New Zealand secondary schools: Preservice teachers reflect on their practice. Curriculum Matters, 5, 25-41. https://doi.org/10.18296/
- Mutch, C. (2020). How might research on schools' responses to earlier crises help us in the COVID-19 recovery process? Set: Research Information for Teachers, (2), 3-10. https://doi. org/10.18296/set.0169
- Riwai-Couch, M., Bull, A., & Nicholls, J. (2020). Puna kõrero: Learning from the parents of Māori and Pasifika students. Set: Research Information for Teachers, (1), 58-65. https://doi. org/10.18296/set.0162
- Trombly, C. E. (2020). Learning in the time of COVID-19: Capitalizing on the opportunity presented by the pandemic. Journal of Professional Capital and Community. Online first. https://doi.org/10.1108/JPCC-05-2020-0016

- Dr Cathal Doyle is a senior lecturer in information systems at Victoria University of Wellington whose research platform runs across three strands: open science; online citizen science; and design science research. His aim with these research strands is to make research more accessible to the wider public; involve citizens in doing science; and solve problems by building artefacts.
- Email: cathal.doyle@vuw.ac.nz
- Dr Cathy Buntting is Director of the Wilf Malcolm Institute of Educational Research (WMIER), University of Waikato, co-director of the TLRI project that forms the broader context for this article, a director of the New Zealand Science Learning Hub. Cathy is passionate about the teaching-research nexus, and much of her research has led to the development of teacher-facing educational resources. Email: cathy. buntting@waikato.ac.nz
- Dr Cameron M. Pierson is a researcher and former librarian whose professional practice has brought him to different types of libraries around the world. His research interests focus on librarian professional identity, education, info-ethics, and information seeking behaviour of under represented populations.
- Yevgeniya (Jane) Li is a PhD candidate at Victoria University of Wellington. Her research interests include information diffusion and virality, data science, social media activism.