



Technology-enabled learning in the
foundation education sector
Summary Report

Anne Alkema

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Technology-enabled learning

The recent Covid-19 crisis has been a stark reminder of the existing gap between policy discourse and reality: a gap that already existed in the pre-COVID-19 era and negatively affects the learning of youth and adults, who have no or low literacy skills, and therefore, tend to face multiple disadvantages. During COVID-19, in many countries, adult literacy programmes were absent in the initial education response plans, so most adult literacy programmes that did exist were suspended, with just a few courses continuing virtually, through TV and radio, or in open air spaces (United Nations, n.d.).

Highlights

- Employers supported workplace learners with technology.
- Educator capability grew rapidly as an emergency response to delivery in the COVID-19 environment.
- With support, foundation-level learners can engage with and learn in the synchronous online environment.
- Learners' digital skills develop alongside literacy and numeracy skills as does a greater sense of social inclusion.
- There were high levels of whānau participation and flipped tuakana-teina relationships as younger people supported older family and/or workmates to use technology.

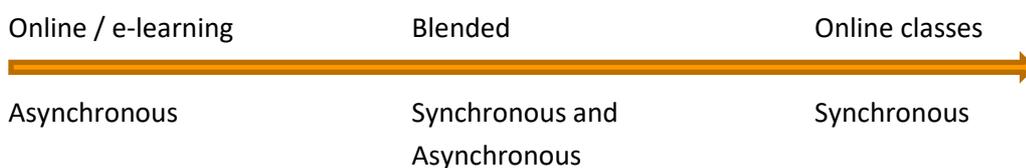
This research on technology-enabled learning in the foundation sector took place July-November 2020 in the COVID-19 environment. It was conducted through an evidence review, key informant interviews (3), provider survey (24 responses); case studies (4).

It explores the extent to which this form of learning is worthwhile for adult learners in non-formal, pre-qualification programmes and formal level 1 and 2 certificate programmes. The research looks at: what's happening nationally and internationally; feasible delivery approaches; barriers and enablers; and the benefits and drawbacks of technology-enabled delivery.

There is a sense of urgency required around this work. As COVID-19 settles into our lives and ways of working, and as we work around it, we need to recognise the impact it has on adult learners. Stories from Australia (ACAL, 2020, August) and New Zealand (Ace Aotearoa, 2020) show the challenges being faced by foundation-level learners who want to stay engaged with education. Many of these adults no longer have the supports they did and are not equipped with the skills required for new ways of living and working, e.g., home schooling children, being out of work and needing new skills for the job market, and having the ability to understand public health messages.

Technology-enabled learning

Technology-enabled learning is the term used in this research given that it is a 'catch-all' for the various approaches as shown on the continuum below.



What's happening nationally and internationally

It is not clear how much technology-enabled delivery there is for foundation level learners internationally (Litster, Mallows, Morris, Redman, Benefield, & Grayson, 2014) and in Aotearoa New Zealand Guiney (2016) found little delivery in level 1 and 2 certificate programmes. Up until March 2020 the majority of programmes for foundation-level learners were delivered in face-to-face environments.

Developing adults' traditional literacy and numeracy skills has been at the forefront of countries' policy agendas, including New Zealand's. This has been the case as these skills are seen as underpinning digital literacy (Tertiary Education Commission, 2015). This thinking is confirmed by international research showing that the use of technology at work and in everyday life is contingent on a range of factors, including literacy skills (van Deursen & van Dijk, 2016; Wicht, Reder, & Lechner, 2019).

However, New Zealand is starting to give a focus to the development of digital literacy. The Department of Internal Affairs Te Tari Taiwhenua (2019, 2020) has a digital inclusion blue print and an action plan. The development of digital literacy skills is also included in the Tertiary Education Strategy (Ministry of Education, 2020).

Work is also underway internationally. The National Adult Literacy Agency (NALA) (2020) shows digital skills development is on Ireland's agenda and it is on Australia's with their newly developed digital skills framework (Australian Government, Department of Education, Skills and Employment, 2020). It is also being given a focus in the United Kingdom through the Digital skills Partnership. In addition, starting in 2020, lower skilled adults in the United Kingdom are being given access to funded digital skills programmes in the same way they have been for traditional literacy and numeracy programmes (Kis & Windisch, 2018).

Feasible delivery approaches

This research shows adult learners can undertake technology-enabled learning. In the main this is through synchronous online classes where they are taught how and supported to use the technology, and have interaction with tutors and their peers. During the COVID-19 lockdowns motivation, engagement and attendance at sessions was very high, but many learners needed support and wanted to get back to face-to-face learning once restrictions were lifted. Those who wished to stay in the online environment were those who appreciated flexible learning options, e.g., those living in provincial regions where there are no face-to-face opportunities; those who are in full time work and like the option of learning from their own homes in the evening.

From the education providers' perspective synchronous online classes are feasible. Those who participated in this research were quickly able to adapt what they were doing and come up to speed with the technology platforms, software, and resources that enabled them to deliver. This included delivering to learners who were together in classrooms in their workplaces (each with their own device) and to those who were learning in their own homes. The lessons learnt about the technology and the pedagogies will continue to be refined as providers look to build from what they did as an emergency response.

However the extent to which online, synchronous classes are viable in the long-term, for all adult learners is not clear. This research suggests it can be a tool in providers' delivery kits to be used to reach adults who prefer to learn in this way or adults who might otherwise not engage with learning. It has the advantage of widening the scope of what providers can offer. But it comes with the caveat that support for learners around the use of technology is required, along with learner-centred approaches that incorporate whanaungatanga and manaakitanga similar to those used in the face-to-face environment.

The literature and providers see a blended approach as being the most suitable way to go in the future. This enables support mechanisms to be in place through synchronous delivery and some autonomy and flexibility for learners in the asynchronous space.

Enablers

Enablers and barriers operate across the system: learners, educators, tertiary education organisations, and operational and strategic policy settings.

Learners

Starting with learners there are four factors at play: the agency they have over their learning; their literacy and numeracy skills; their digital literacy skills; and their access to technology.

Underpinning learners' willingness to engage in learning generally is their agency. Learners need to, "*believe they can learn, that they can overcome difficulties, and that their actions are the primary contributor to success*" (Whitten, 2020, p. 14). With technology-enabled learning as the only option available during lockdowns and with considerable support from educators, agency grew as learners realised they could, e.g., log on, undertake literacy and numeracy activities online, engage with others online. The "fear was taken away".

This research found that the synchronous online learning environment meant the traditional literacy skills were not the impediment to learning through technology that it was anticipated they might have been, although it was very challenging for learners with very low levels of English. It also shows digital skills developed alongside the content knowledge and skills. This left learners feeling more included at their workplaces, "we're in a Teams meeting", and in their home lives, and better placed to operate in everyday online environments.

Access to technology was mixed. Here learners in community settings found it challenging given that firstly, phones (which were stated as not being ideal) were their main learning devices and secondly devices (e.g., ipads) are often shared in families. Laptops were described as a luxury item with very few learners having these. Those learning in workplace settings were well-served in relation to technology. Here one employer purchased Chrome Books for 10 employees on a programme and other providers and employers accessed the Technology Access Fund for Learners (TAFL) to buy devices.

Access to data and the internet does not seem to have been the issue it was anticipated to be. But finding quiet learning spaces in home environments was challenging for many. The other challenge relates to learning as a social process. While those who learnt online in real classrooms had social interaction with peers, those in the virtual environments in their own homes missed the social interactions even though these were possible with tutors and in virtual breakout rooms with peers.

Education organisations, employers and educators

An important, but perhaps not surprising, finding is that educators are key. Technology-enabled learning requires educators to be familiar with the technology, content and pedagogy along with needing to develop relationships with learners and provide learning, technical and pastoral support for them. The support needs were high for these learners. In relation to technical support it was about getting learners familiar with how to log on to devices, how to use software, e.g., Zoom, Microsoft Teams, and how to use interactive online resources.

Building the capacity and capability to deliver happened apace as providers looked to keep learners engaged. Programme designers and educators were willing to come up to speed quickly in relation to pedagogies and technology, while also recognising the importance of relationships and interaction - online

classes were not one way, teacher-student lectures. At the same time though, they were concerned about using technology, felt vulnerable and a bit out of their depth at the outset, “I was scared, I kid you not”.

Educators’ confidence and ability to deliver in the online environment grew and they were supported by their organisations’ systems and infrastructure and were given professional development that supported their capability building. Organisations willingness to invest in licences that allowed for online delivery showed their commitment to this.

The response developed by providers during the COVID-19 lockdowns show they have been innovative with the technology and connecting with learners. They may not have had the time to fully think through their pedagogical approaches but they can take this learning forward as they continue to consider how to better and more frequently use technology to reach and teach adult learners.

Where employers have been in a position to continue with programmes they have supported their employees through the provision of devices, funded by themselves or TAFL. They provided IT support so employees could log on and access the systems required for learning and work.

Policy Settings

From a system perspective, strategic and operational policy mechanisms can support education organisations to provide technology-based solutions that reach learners. This may be a consideration under Objective 2, “barrier free access” in the Tertiary Education Strategy (Ministry of Education, 2020). This increases flexibility and accessibility and puts “education opportunities within reach for every learner.” The other enabler from the Tertiary Education Strategy perspective is to recognise and support the capability development of the educator workforce.

During the national COVID-19 lockdown, TAFL was an example of an enabling mechanism. The \$20 million fund helped education organisations and employers to support learners’ to access technology-enabled education. As the case studies show, this fund has been well received and appreciated by educators, employers, and learners.

Barriers

While there are barriers in terms of learner capacity, capability and access and with educator capacity, capability, pedagogical approaches and delivery models these, in the main appear to have been overcome through the emergency response generated in the COVID-19 environment. It remains to be seen whether this continues to be the case as we move from an emergency response to business as usual.

Value

The preparedness and ability of education organisations and educators (along with the willingness of employers to continue with training) meant foundation level learners had equitable access to learning in the same way their counterparts did in higher and vocational education settings. It also provided some of them with the flexibility to fit learning into and around work and family life.

While the research literature shows learners develop digital skills alongside traditional literacy and numeracy skills, the extent of skills growth is not known. However, one of the unforeseen outcomes from case studies in this research is the sense of social inclusion that has come from developing digital skills. For example, learners in workplaces have been given access to workplace systems that they have not previously had, they have email addresses, and they are now using technology outside of work.

Another unforeseen outcome seen in the case studies is the connection with whānau. Here, family members often helped learners with the technology, but learners also shared learning with family who, on occasions, joined learning sessions. While this was helped by lockdown and “kids hanging off the ceilings” which was challenging for some, it helped learners feel they are now part of a digital environment.

Conclusion

During COVID-19, technology-enabled learning at the foundation level provides the same access to learning that those in polytechnics and universities have as a matter of course. What’s at stake here is equity and ensuring that foundation-level learners have the same access to education as their higher-level learning counterparts and subsequently the same opportunities for skill development. If this approach is not allowed for, “the poor get poorer and the rich get richer in terms of skills” (Whitten, 2020, September 8).

In spite of the challenges, education providers have quickly developed their capability to deliver in synchronous online learning environments that have enabled foundation-level learners to engage with learning during the COVID-19 lockdowns. In turn this has led adult learners, with quite a bit of support at the outset, to develop digital skills and some digital literacy, and to feel more socially included and better able to participate in work, community and whānau lives. It has shown that under supportive conditions, technology-enabled learning can work for these learners. However, a wider evidence base is needed to determine the extent of intermediate or longer-term outcomes. This is a small study and it remains to be seen whether the level of engagement – from providers and learners - will remain as high over the next few years.

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