COMMONWEALTH *of* LEARNING

ODL and Workplace Learning TVET Programmes in New Zealand

2019

ODL and Workplace Learning TVET Programmes

in New Zealand

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Abbreviations

BCITO: The Building and Construction Industry Training Organisation

COL: Commonwealth of Learning

ITOs: Industry Training Organisations

ITPs: Institutes of Polytechnics and Technology

ODL: open and distance learning

TEL: technology-enhanced learning

TVET: technical and vocational education and training

OPNZ: The Open Polytechnic of New Zealand

1. Introduction

The Commonwealth of Learning commissioned this research. They wish to understand the contribution and value of combining workplace-based learning with open and distance learning (ODL) and technology-enhanced learning (TEL) in technical and vocational education and training (TVET) in New Zealand. The Commonwealth of Learning then intends to use this research to inform their work with developing nations in order to improve their access to education and training.

The research was conducted March-June 2019 through case studies with:

- The Open Polytechnic of New Zealand (OPNZ) - around 30,000 learners in 2017. The case study focus was on a level 5 qualification for adult teaching. (OPNZ, 2018)
- The Building and Construction Industry Training Organisation (BCITO) – just over 12,000 apprentices in 2018 (BCITO, 2019). The case study focus is on a level 4 qualification in carpentry.
- Careerforce (Health and Social Services Industry Training Organisation) – just under 20,000 trainees and apprentices in 2018 (Careerforce, 2019). The case study focus is on level 2 and level 3 qualifications in the health and wellbeing sectors.

The case studies are in Appendices One, Two and Three of this report. This thematic report draws on the findings from these case studies and describes the approaches these organisations use to ODL and workplace learning, the barriers and enablers, and the value of the approaches to the organisations, employers, learners and trainees/apprentices.

Figure One: Education and Training System
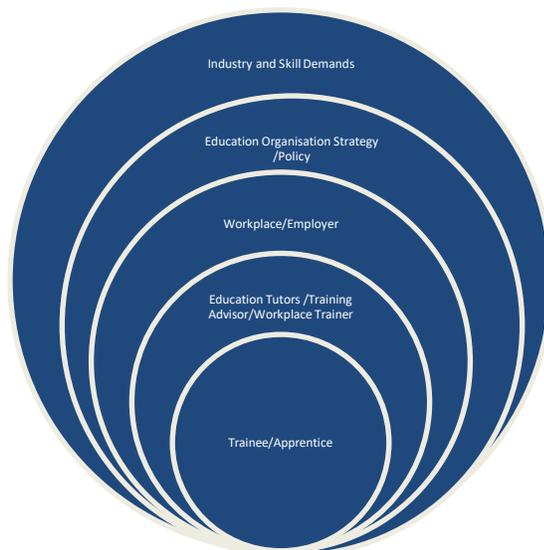
ODL and workplace learning operate within a wider training system. As Figure One shows the system operates across five levels:
The learner/trainee/apprentice who is learning, in the main, while they are at work and using ODL to support knowledge and theoretical aspects required for the job. Practical aspects are learnt on the job and taught by the employer in the workplace.

Education tutors (in institutions), training advisors and workplace trainers whose role is to support those who are learning through both the

ODL and through the practical aspects on the job. In Industry Training Organisations (ITOs) training advisors can also work closely with employers.

Employers have an active role in supporting trainees and apprentices to grow their skills in workplaces. They do this through opportunities for skill development that is connected both to the job and to the theoretical aspects of the ODL.

Education Organisations, including Institutes of Polytechnics and Technology (ITPs) and ITOs design ODL programmes resource materials and assessments that support learners and trainees/apprentices to complete qualifications.

Industry determines and defines the skills that are needed and provides guidance to education organisations about what should be included in qualifications and the subsequent programmes of learning.

2. Key Point Summary

- Industry and sector input into qualification and programme development is essential
- Upfront development of online ODL resources is 'costly' and time consuming and so only worth doing at scale
- ODL enables scale, increases consistency and provides access to learners who do not have the time or means to attend institution-based learning
- ODL can be delivered in different ways to learners and trainees/apprentices in workplaces, for example online or through print-based resources
- Workplace learning can be supported in different ways for example with a focus on learners or on employers
- Additional support is required to enable learners and trainees/apprentices to complete qualifications through ODL and while they are working
- Technology enables a number of benefits including:
    - multimedia which brings learning materials to life
    - opportunities for automated assessment
    - zero cost of delivery and sharing once materials are created
    - equal access to information by different players in the system wherever they are
    - connections between learners and peers, tutors and assessors
    - digital materials can be updated more easily than print materials
- Use of technology also introduces some challenges such as access to devices and new digital literacy skills, although developing digital literacy is increasingly seen as important for futureproofing workers, so could also be seen as a benefit from using technology for learning

- ODL and workplace training operate in a system. As such there are enabling factors at each level of the system that need to be considered in the design and delivery of programmes:
  o Industry bodies / stakeholder groups proactively provide input into the skills needs of the various sectors
  o Education providers who develop ODL programmes that connect theory to practice that is applicable to the jobs and roles people have at work
  o Employers who have the capability and capacity to train learners and apprentices/trainees, provide time for study at work, and opportunities to learn and practise skills
  o Tutors, training advisors and/or workplace advisors from tertiary education organisations who have the capability and capacity to educate and support
  o Motivated learners and apprentices/trainees who, when needed, have access to and the ability to use technology, and are able to apply this new knowledge at work
- Considerable value accrues to learners and trainees/apprentices, employers and education providers through the combination of ODL and workplace learning. For example:
  o learners and trainees/apprentices develop theoretical, technical/practical skills at the same time; can be assessed in real life situations and use naturally occurring evidence from those situations, and while working they develop employability skills
  o employers have access to theoretical thinking and the opportunity to grow new employees
  o education organisations have direct connections with industry and workplaces and can use this knowledge to inform ongoing programme development
  o different costing models which can lower the overall cost per learner when using ODL at scale, the physical infrastructure already in workplaces, and support and training from workplace staff.

3. Research Approach

The research used an explanatory case study approach (Yin, 2009; 2014). This allowed for the views and perspectives of a range of people – managers, resource developers, training advisers, workplace advisors, employers, and trainees – to be gathered and used to inform this study. A rapid literature review was also used to check the extent to which their thinking resonated (or not) with other research findings. A description of the research approach can be found in Appendix Four.

4. Open and Distance Learning: The New Zealand Context

The organisations in this study operate ODL in two different ways.

• The OPNZ offers distance learning online to individuals who wish to develop their skills and pursue their chosen careers. While the learners do not need to be in work, 72 percent of them are, with 93 percent of them studying part-time. (OPNZ, 2018).

• In the ITO model trainees/apprentices need to be employed (full or part-time) before they sign a Training Agreement and undertake a qualification. This means trainees/apprentices learn and are assessed in two ways: the theoretical aspects through ODL; and practical aspects in the workplace. ITOs are responsible for setting standards and for arranging training, including the assessment for qualifications. They do not provide training themselves, as they are not registered training providers.

4.1. Meeting Skill Demand: Establishing and Developing Programmes

Skill demand in New Zealand is set by industry. Here groups from industry work with education organisations to say what industry needs and what should be included, firstly in qualifications and secondly in the programmes that learners and trainees/apprentices go through as they work towards the achievement of these qualifications. While this takes time, it is a way of ensuring that what is supplied by the education market is relevant to and meets the skills and knowledge demands of industry and workplaces.

Education organisations make connections with industry in different ways and there are both formal and informal mechanisms for industry input. The approach is both top-down and bottom up in that skill needs are determined by those working at higher levels in industry and its sectors, and also by those who are working on the "shop floor". They are enabled to do this as they have staff whose role it is to engage frequently and face-to-face with trainees and/or employers in workplaces.

> … The qualification is driven by what the sector want… We have business development consultants who work with the sector and find out what they are looking for. We also have frontline staff – apprentice support and advisers who form part of the team and find out directly what workplaces need. (Careerforce, Interviewee)

> Workplaces need to give feedback to Careerforce on assessments and keep us up-to-date. Some resources are not that user friendly in the workplace. We check in with them [employers], ask, "What we could do better?". (Careerforce, Interviewee)

> Employers are the experts and say what skills are required. We review our qualifications every five years. We're also driven by some new legislative requirements, for example

around health and safety, leaky homes. So, there is new theory and resources. It's about being proactive, nimble and flexible. (BCITO, Interviewee)

Ensuring our programmes remain relevant to learners, employers and industry need is a constant focus for Open Polytechnic. New programmes introduced in 2017 followed an extensive engagement period with a variety of stakeholders. (OPNZ, 2018)

Once knowledge and skills needs are determined the organisations go about designing and developing programmes and the supporting learning resources and assessments. The delivery approaches vary between the organisations. OPNZ operates a fully digital model; Careerforce provides materials on a digital platform that many of the trainees can then choose to download if they prefer a paper-based approach; BCITO is currently fully paper-based, but is looking to move into the use of more digital materials, particularly for their higher level qualifications.

All the education organisations described the development and design processes as costly and time-consuming. Here the process varied between one to four years across the organisations and involve a range of people. Digital development appears to take more people than paper-based, given the additional need for those with multimedia skills.

Online development is costly. It takes over a year, but we are able to take a multi-programme approach [where the same modules can be used in different in some programmes]. (OPNZ, Interviewee)

Across the organisations there is agreement that the development approach allows for national consistency. For OPNZ this is relatively easy given that they run out of one site, but for the BCITO who runs across 21 operational sites, and Careerforce who work across 14 regions, the materials bring consistency to what trainees/apprentices learn. For the BCITO, consistency is also supported by materials that are developed for Training Advisors and assessment teams (Vaughan, Gardiner, & Eyre, 2012).[1]

4.2. Delivering programmes

Across the organisations the learning resources take different approaches. In the fully online environment of OPNZ, the materials are placed on the iQualify platform. Here learners log in and work their way through modules that can include, reading materials, formative assessment activities (e.g., automated multi-choice quizzes, written answers that are supported by an exemplar model answer), weblinks to other resources. Launched in 2015 it is described by an interviewee as,

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[1] Assessment teams comprise of the employer (trainer/evaluator), training advisor/assessor, moderator, and apprentice.

> An engaging tool, it uses multimedia, print online, quizzes, comment boxes, practice assessments. It also has the facility to bring in really useful and relevant resources from other sites. ...Technology brings the materials to life. (OPNZ, Interviewee)

Assessments are also completed and submitted online to a marker. For the Level 5 adult education qualification employers are involved as observers and verifiers of learners' teaching practices. This approach actively and deliberately includes the employer in the teaching and learning process in that they are invited to moderate, comment on, and critique learners' practice.

Learners are also encouraged to connect with each other through asynchronous online communities. These are driven either by: the OPNZ tutor who, might, for example, pose a question or scenario and ask learners what they might do; learners who can ask questions and invite chat with others. There are varying levels of engagement in these forums but the OPNZ is not surprised by this. Interviewees acknowledge learners have busy work and family lives and therefore don't have time to participate as fully as they could or might like.

Careerforce is relatively new to working in the online environment. An interviewee talked about the move from paper-based workbooks, to slimmed down versions of these with information about where to find information online – to drive people to use this mode. This approach was driven off an e-learning strategy developed in 2010. There has been a slow transition to materials being fully delivered online.

All materials, learning guides and assessment tasks, are placed on the Aka Toi (Vine of Knowledge) intranet which is only accessible by Careerforce trainees. Materials are also freely available online through the Careerforce library on https://library.careerforce.org.nz/, but consideration is being given to removing these for commercial reasons. The move to online learning resources started with, "just using powerpoint". But Careerforce now uses the software platform Rise 360 that allows for a range of interactive learning activities, along with assessment activities for those studying Levels 2-4 qualifications.

Trainees access the learning materials online – either at home or at work. Many download the materials at work, and while an interviewee thought that in, "an ideal world everyone would be online", the reality is that there is both a digital skills and technology access issue for many in this workforce. In workplaces, trainees are supported through the materials by trainers, assessors, mentors or buddies. Workplace Advisors from Careerforce connect with these trainers and assessors rather than directly with trainees. An example of mentoring is provided in the Careerforce case study.

While trainees are required to complete some of the assessment online in the form of multi-choice answers, much of the assessment is practically based. Here trainees have

workplace assessors or verifiers who sign off that they have the requisite skills to perform tasks required for the qualification and for their actual work. Workplaces then advise Careerforce that the competencies have been achieved.

For carpentry the BCITO has learning materials known as, "the box of books". A revised and slim-downed version of these was launched in June 2019. [2] These are described as, "Far more stripped back and tightly aligned to the qualification's content than the traditional box of books." In the BCITO context the "books" serve as background materials and it is not compulsory for apprentices to use them. This is the case as apprentices are not required to complete bookwork in the traditional sense of writing answers and submitting them for assessment. Rather they use the technical information in the learning materials to background and inform conversations they have with their training advisors and employers.

In the BCITO context the delivery model of ODL is mediated by training advisors who are the interface between the learning materials, the apprentice and the employer. Training Advisors visit apprentices on a three-monthly basis, in what has been described as a "high-touch" model that is appreciated by employers and apprentices.

> TAs are passionate and good role models. They have a good yarn. They are there for the kids and want them to achieve. They are always there at the end of the phone. (BCITO, Interviewee)

> Catch up on what I was doing, what I had done and we went through the units that I'd been set to do on the last visit. He quizzed me about the units and picked my brain. The hardest thing about it was trying to put it into words. [TA] would use big words. And he knew that, so he would get me to describe things in my own words. (BCITO, Interviewee)

There is no written work involved with assessments for carpentry. Rather, there are professional conversations between the training advisor and the apprentice that can be for formative (performed as a casual chat) or summative assessment purposes. It is seen as being flexible, integrated, and individualized to the work apprentices are doing. The work of the apprentice is then verified by observation, examples of evidence provided through photos or diaries, and conversations with the employer. This process encourages the apprentices to be reflective about what they have done and how they have done it. Further information about the assessment approach can be found in the BCITO case study.

SUPPORT

Regardless of the approach used, most learners and trainees/apprentices require support to complete qualifications undertaken through ODL. It is not a matter of simply putting

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[2] See https://bcito.org.nz/news-and-publications/news/bcito-launches-new-resources-carpentry-apprentices/

materials out and thinking that learners and trainees/apprentices will all be sufficiently motivated, persistent and able to complete them on their own.

The organisations take different approaches to this. OPNZ provides a range of supports that extend beyond academic support to include technical, learning, and pastoral support. An interviewee noted the importance of contact as it can help to motivate students.

> There is value in a tutor who sends out weekly announcements. Learners get the sense that there is someone there – they get guidance, and there is real value in this. Every week there is a reminder that someone is there. (OPNZ, Interviewee)

While OPNZ actively supply support through the mechanisms listed above, learners also demand it through direct contact via email or phone. Here they mainly ask about assessment and course materials. Learners may also be supported by employers when they observe their teaching practice for assessment purposes. Anna in the case study sees the personal contact as being pivotal to her success. She talks about her facilitator as, "Believing in me when I didn't have hope for myself – she believed I could."

In Careerforce support for trainees who are working with the ODL materials comes from staff within workplaces. These are either senior staff or peers. Interviewees noted it was important for organisations to encourage training, be invested in training, and have structures in place to support it.

> You need go-to people, and not just one person. You need assessors and observers… [And trainees] need to have time during work to training – they are too busy outside of work to do this. (Careerforce, Interviewee)

As Careerforce operates an employer-led model, employers determine the model of support they will use. The two employers in the study took two different approaches: a peer-mentoring system; and a dedicated nurse educator model. Both of these approaches provide trainees with the access to go-to people who can motivate trainees, get them started, and support them when they come across barriers to completion. (See Careerforce Case Study)

In the BCITO model the direct contact with the training advisor provides the mechanism for further support should a trainee need it. Such support could include learning support such as literacy and numeracy, or pastoral support when apprentices find themselves in stressful or difficult situations. While employers offer learning support in that they are the primary trainers of the apprentices, they also offer study support should apprentices require it.

4.3. Enablers and Barriers

Enablers and barriers to ODL combined with workplace-based learning operate across each level of the system shown in Figure One. OPNZ sees the enablers as starting with stakeholder input so that the qualifications are fit for industry and relevant and applicable in workplaces. This in turn is followed by well-designed programmes delivered on digital platforms that are easily accessible by learners. OPNZ also thinks learners need support from them as an organisation and from employers. Along with this are learners who need to be (intrinsically or extrinsically) motivated; literate (in both a traditional and digital sense), confident, independent and self-directed.

> Despite support being available for online learners this method of delivery can be challenging for someone who hasn't had positive prior experiences at education. However, it suits people who are able to study more independently and who enjoy the flexibility that online learning offers. (OPNZ, Interviewee)

The BCITO agrees with this thinking but describes it in slightly different terms. Here the interviewees talked about the enthusiasm and motivation of all of those involved – the BCITO staff, employers and apprentices. Those working at the BCITO see the key enabling factor being about relationships that exist between the training advisor, the employer and the apprentice, described by one interviewee as "the three-legged stool".

Employers in the building trade also see their role as important, especially for developing the apprentices' practical, on-job skills. One of the employers described himself as "passionate" about this and the other about his drive for perfection that leads to his apprentices learning to do things properly. As one employer notes, "I was given a chance. I have worked with great guys and it is about giving back to others." In turn employers say their apprentices need to be, "keen, enthusiastic, and hard working."

Another enabler, and one not articulated by all the BCITO interviewees as it is possibly just taken for granted, is the 'learning on the job' aspect. Here it is full-time, experiential and situational learning, that utilises skills throughout the time of the apprenticeship. It is 'learning about and learning through' work. Learning that is real, "Just in time and on time."

Careerforce talks about the enabler as being the commercial reality of an education organisation needing to move to a digital environment so they have the capacity to produce materials and get them out quickly and efficiently. This has been supported and driven from within the organisation. In addition, there has been increased demand from people looking to get qualifications as a result of the Care and Support Workers (Pay Equity)

Settlement in July 2017.[3] In part this has meant some economies of scale for the organisation.

In workplaces the enablers are Careerforce staff who meet with and explain to employers what the ODL programme is about and how it operates, a training manager who is supportive and approachable and who understands and identifies the learning issues that trainees have. For trainees the enablers also come in the form of peer mentors and dedicated nurse educators (in some workplaces) and the opportunity, in paid work time, to meet and talk with others, who are undertaking the same qualifications. Combined these activities ready trainees for the assessment tasks.

> Here we'd would go through the material, brainstorm, talk about experiences… Everyone is different. It was a good way of getting together. I really enjoyed it. It also kept me motivated to get the work [bookwork] done. (Careerforce, Interviewee)

Where employers use a dedicated nurse educator to work with trainees they are able to make a direct connection between the theory in the learning materials and the practice on the floor.

> What we do lines up with the learning guides, but I can make specific references to aged-care. Luckily I have the ability to give real life examples that relate to residents [in the aged-care facility]. (Careerforce, Interviewee)

Another enabler across all the organisations is the connection between the learning resources and the requirements of the workplace. Those interviewed were clear this was important for them, given that they wanted to be able to apply the theory they were learning, or take their learning and workplace experience to help them understand the theory. This is particularly important given the practical nature of work for trainees and apprentices.

As with enablers, the barriers to ODL and workplace learning operate across the system. At an education organisation level the skills of resource designers and developers are continuing to grow as they become more familiar with the digital platforms they are using. For the ITOs it is best described as a transition phase as designers move to working with new tools and resources.

In the online environment the key barriers for learners and trainees/apprentices are access to technology, including access to data, and the extent to which they have the skills and ability to operate in a digital learning environment. The access barrier can be overcome where workplaces provide access to computers, as is the case with some employers of Careerforce trainees, or by learners accessing community resources such as

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[3] Here the workforce of around 55,000 care workers received increased pay rates that were linked to qualifications. Further information can be found at https://www.msd.govt.nz/documents/what-we-can-do/providers/factsheet-pay-equity.pdf

local libraries in the OPNZ case study. This barrier can be somewhat alleviated as organisations start to make resources more suited to tablets and smart phones.

Developing the learners' and trainees'/apprentices' skills to use technology means providing a resource that can support them to do this. In the OPNZ case this means the provision of technical support – phone and email. For trainees in workplaces it needs a more hands-on approach in either upskilling individuals, or as in the Careerforce case, there are 'work-arounds' whereby resources are downloaded and used in hard copy form. Overtime there is an expectation that trainees' digital skills will grow as they have increased interactions with technology in their everyday lives.

Another barrier to ODL and workplace learning comes when learners and trainees/apprentices are in a position where they lack the support of peers, mentors, advisors, or employers. An employer described this as, "Being out in the wilderness on your own, where it is too hard." OPNZ offer support through interactive online communities. In the Careerforce case some employers provide the opportunity for support through allowing trainees paid work-time to meet in learning groups led by peer mentors or dedicated educators.

For many trainees / apprentices the provision of time for learning and/or assessment during work time is critical to the completion of qualifications through workplace learning plus ODL. Those who need to complete this in their own time need to, make the time, understand the assessment requirements and be motivated. If they are not, these factors act as a barrier.

In addition, and for almost half of people who wanted more workplace training, too much work or too little time were the main reasons preventing more training – indicating they hadn't been able to find sufficiently flexible training to fit within their workplace constraints (ABS 2017).

4.4.   The Value of ODL and Workplace Learning

By combining ODL and workplace learning there is value to education organisations, employers and learners and trainees/apprentices. As can be seen in the case studies, value is talked about in a variety of ways that goes beyond price. While not being in a position to cite price, those interviewed are clear there are considerable costs in the development, design, delivery, and maintenance of ODL.

However, research has shown the ODL model through ITOs is cheaper cost-wise to government than that offered through institution-based study. Here ITOs are funded at a lower rate than institution- based provision with the remainder of the cost being picked up

by industry and employers. [4] Recent work undertaken by the Industry Training Federation and referred to in the in BCITO case study shows,

> Industry training as currently structured is by some margin the most efficient mode of tertiary education for the taxpayer – with a $1m investment in industry training yielding approximately 300 qualifications, compared to the 50 achieved for the same investment in ITP learners (p.9). [5]

From a wider perspective, the value of ODL when using technology is the ability to reach and teach to scale. As OPNZ notes, it is possible to get to, "hundreds in one space". Here they provide the example of having 100 students in each of the four blocks a tutor runs. In addition to the ability to reach numbers there is also reach equity whereby ODL and the combination of earning and learning, can be made available to people who cannot otherwise attend institution-based education. This applies to those who are working, people who do not have access to transport, those who have at-home / family commitments, and those who live in regions where there are no institutions or suitable courses available.

The value to tertiary education organisations also lies in consistency through having the same resources available to all learners without the mediation of a face-to-face tutor. While this can have drawbacks for some learners who see it as a one-size fits all approach, it does mean that at a national level, employers have surety about the qualifications staff have. This in turn has the potential to make employees more mobile between workplaces.

> The overall benefits of the [Careerforce] approach creates consistency in and across workplaces in New Zealand. We get industry feedback so we can adapt. We can make things happen really quickly. It gives workers mobility between workplaces - and the same level of service to all clients. (Careerforce, Interviewee)

The use of technology in ODL also means that education organisations can be "nimble and responsive" to changes required by employers or to wide legislative changes. One interviewee noted the need to listen to employers and trainees, "We encourage feedback so that we can make changes quickly".

The value for employers comes in the form of employees who have access to new ways of thinking and learning which they can then immediately transfer to the workplace. In case study organisations learners and trainees/apprentices are not taking time off work to attend institutional-based education. An added value for two employers was the

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[4] Note, this has been the case up until 2019, but policy work is currently being undertaken to equalise the funding rates.

[5] Further information about the cost of tertiary education provision can be found at
https://app.powerbi.com/view?r=eyJrIjoiZDFkNjY0OGEtMDdiNC00YmExLWFhOTQtZjc3ZGZhOTVhNWMyIiwidCI6ImRhYTIwNzExLWFmZTktNDY4Yi04ZGZkLTM5ZTY0MDg1ZjBkNSJ9

knowledge/theory the ODL materials provided to support trainees' ways of working that meant they were grounded in the basics and then able to provide safe and reliable services to clients. With the basics in place, trainees are then able to be creative, "thinking outside the square" of what they can do and deliver to clients.

Value for employers also comes with ongoing relationships that are established by ITOs through their field staff who directly interact with employers. This approach is taken by the BCITO and Careerforce. From the former's perspective it is resource intensive given the number of apprentices and their employers they are responsible for, but they see the ongoing interaction and engagement as essential for understanding industry and skills needs and demands. The Careerforce model is not so resource intensive as workplace advisors' relationships are solely with employers.

There are a several value points for the learners and trainees/apprentices, including access to ODL while they are working which provides the opportunity to earn and learn at the same time. Value comes for learning for current roles (upskilling), along with the opportunity to learn for future roles (reskilling).

> I love the work, the organisation, the philosophy, the opportunity to grow. I can go in lots of different directions. People's engagement with learning is recognized. It's talked about a lot. Training augments the role and makes it more interesting. It adds value to the work. (Careerforce, interviewee)

> Study is relevant and timely. I can prepare myself ahead of time for possible other jobs – preparing myself for the future. There are always new courses. The cool thing is that [while] my manager doesn't support PD on the [work] website as there is no money for it, I can do what I want to do. (OPNZ, Interviewee)

Value in workplace learning also comes to trainees and apprentices when they see the direct application of theory to practice and practice to theory. This two-way interaction endorses the relevance of theory and brings it alive in relevant and authentic contexts. While theory is seen as formal learning there is also the opportunity to bring it into informal learning through workplace conversations and on-job tasks that contribute to the overall employability skills being developed in context.

https://bcito.org.nz/news-and-publications/news/upskill-required-meet-demand/

5. Conclusion

Research in New Zealand on successful workplace learning endorses the systems approach that the case studies in this report show. (See bibliography for some examples.) Here it is about all parts of the system working together to ensure positive and equitable outcomes

for learners, and trainees/apprentices. Since the time the case studies were conducted this thinking has been further reinforced by organisations in New Zealand.

> Online learning is a versatile and flexible way to acquire knowledge of the full range of construction activities. TANZ eCampus and their partner ITPs, working alongside the Building Construction Industry Training Organisation (BCITO) will provide both on-the-job and theory learning via online delivery. The goal of this partnership approach is to enable more people in construction and those wanting to enter the industry, to undertake formal qualifications through methods that suit their work commitments and lifestyles. [6]

The information gathered for the case studies shows similarities and differences across the approaches the three organisations use. They do this based on what they see as fit-for-purpose delivery models for learners and trainees/apprentices and the industries and sectors in which they work.

For the course at the centre of the OPNZ case study the approach to ODL is reasonably traditional in that digital resources are provided to individuals who progress through them at a pace determined by OPNZ. There is minimal contact with the employer whose only requirement is to observe and verify practice for assessment purposes.

The ITOs, while delivering an ODL model in the workplace use a more hands-on approach with trainees/ apprentices and employers. This approach means a greater role for employers so the learning process is seen as a partnership between the three players involved – the trainee, the ITO and the employer. The differences between the two ITOs come with the delivery models. This sees:

- BCITO, through training advisors, directly interacting with apprentices, conducting the assessments and having conversations with employers about apprentices' progress and the quality of their work for assessment.
- Careerforce, through workplace advisors, directly interacting with employers, who have responsibility for monitoring trainees' progress, supporting them to learn, and signing off practical assessments that contribute to qualifications.

Overall the approaches show how ODL and workplace learning models reach learners and trainees/apprentices who wish to earn and learn while upskilling and reskilling. The approaches are inclusive of employers who have a stake in, and a responsibility to grow the knowledge and skills of their workforces. Above all they are about collaboration and partnership across the levels of the education and training system.

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[6] TANZ e-Campus. (2019). *Upskilling required to meet demand.* Press release 6 August 2019. Accessed 8 November 2019 at https://bcito.org.nz/news-and-publications/news/upskill-required-meet-demand/

Table One: Approaches to ODL and Workplace Learning

Organisation	Development & Design	Delivery ODL	Delivery Workplace	Assessment
OPNZ	Development - engage with industry to determine knowledge and skills needs. Design using in-house expertise including, designers, writers, multi-media expertise.	Online – with support available via phone and email Low-touch approach with learners and no direct connection with employers.	Limited to observations and verification by employers.	Written and online with practice verified by employer through observations.
BCITO	Development - engage with industry to determine knowledge and skills needs. Design using in-house expertise including, designers, writers.	Paper-based with support available through quarterly visits from a training advisor for carpentry apprentices. The option of online delivery for those who pathway to a higher- level qualification. High-touch approach with apprentices and employers.	Support visits from training advisors who engage with apprentices and develop relationships with employers. Employers support learning by providing authentic contexts that align with the learning and assessment materials and verify apprentices' knowledge and skills.	Conducted by BCITO training advisor through professional conversations with the apprentice. Practical work signed off by employer.
Careerforce	Development - engage with industry to determine knowledge and skills needs. Design using in-house expertise including, designers, writers, multi-media expertise.	Online – with much of the material being downloaded by trainees. No touch approach with trainees and high touch approach with employers	Trainees supported by in-house trainers or peer mentoring systems. Employers support learning by providing authentic contexts that align with the learning and assessment materials and verify trainees knowledge and skills.	Assessments for Level 2-3 submitted online. Practical work assessed by trained in-house assessors and verified by supervisors.

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Appendix One: Partnership in Practice: BCITO Case Study
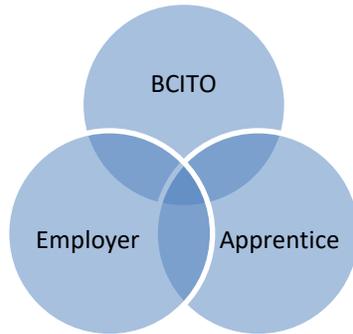
This is one of three case studies that look at workplace learning plus open and distance learning (ODL). It has been commissioned by the Commonwealth of Learning. This study tells a story of distance and workplace learning from seven different perspectives: national office (2), operational management and advisory (2) employers (2), and a newly qualified builder. It is a snapshot of the Building and Construction Industry Training Organisation's (BCITO) practice. The case study focuses on a Level 4 qualification in carpentry. This qualification is achieved through full-time work, supported by learning resources and staff from the BCITO.

Background

Over the past few years New Zealand's tertiary education system has been in a state of disruption as we have: worked through a qualification review process to reduce the plethora of qualifications available; developed qualifications that take a holistic approach to describe graduate profiles and focus on outcomes required by learners/apprentices to perform in workplaces; and worked towards ODL models of delivery that encompass and embrace technology. New Zealand has also undertaken a number of research projects that have explored success factors related to workplace-based learning (on-job) being combined ODL (off-job).[7]

The BCITO is one of 11 Industry Training Organisations (ITOs) in New Zealand. These ITOs are responsible for arranging training for around 146,000 trainees /apprentices each year. Here trainees/apprentices work full time, while also undertaking learning through resources and advisory support provided by their ITO. In 2017 the industry training sector was responsible for training around 57 percent of the TVET sector in New Zealand.[8]

The BCITO arranges training across 15 building sectors and in 2018 had over 12,000 apprentices enrolled in a range of industry related qualifications. To achieve this, the BCITO engages with over 6000 employers.[9] It operates from a head office in Wellington and has 21 operational offices across New Zealand.

Over the last 8-10 years the BCITO has used a research-informed approach, along with sector engagement, to look at ways in which to develop training processes that meet the needs of industry, employers, and trainees. While previous research has delved into both

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[7] This are documented in the bibliography of thematic report.

[8] Industry Training Federation. (2019). *Submission on the reform of vocational education.* Wellington: Author.

[9] BCITO. (2019). *A constructive year: 2018 BCITO annual report.* Wellington: Author.

learning and assessment,[10] current research is looking at how to encourage more women into trades along with the development of a predictive profiling tool that will be able to identify the combination of factors that lead to trainees withdrawing from the training system.

A body of research commissioned by Ako Aotearoa has looked at success factors related to workplace learning. A summary of this research shows that it is about collaboration and partnership that sees learners/apprentices, employers, and tertiary educators working together. Each of these players has their own role to perform. For example:

- learners/apprentices need to be motivated, reflective and able to transfer theory into practice. They need to be supported to learn through learning resources and materials; have opportunities to practise in real world settings; and have support and mentoring
- employers need to take structured approaches to training, support and mentoring and supervision; provide opportunities for learners/apprentices to practise and transfer theory into practice
- tertiary education providers need to work in collaboration with learners/apprentices and employers; provide resources and learning materials, along with authentic, valid and reliable assessments; and provide learning and pastoral support.[11]

The combination of ODL and workplace learning provides the opportunity for what Kolb calls, "a holistic integrative perspective on learning that combines experience, perception, cognition, and behaviour" (1984, p. 21).[12] Here the cognitive is dealt with through the resources and learning materials which are in turn used by the apprentice (and in some cases the employer) and transferred into experiences and behaviours in the workplace. In the case of BCITO, it is a two-way street as apprentices also take their practice to the theory and the assessment.

Design and Development

The building industry comes with a long and rich history. Training for this industry aims to bring people into a career and give them an identity as a tradesperson. It was described by

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[10] Vaughan, K. & Cameron, M. (2010). *A guide to good practice in industry training organisation structures and systems for on-job assessment*. Wellington: Industry Training Federation. Vaughan, K., O'Neil, P., & Cameron, M. (2011). *Successful workplace learning: How learning happens at work.* Wellington: Industry Training Federation; Vaughan, K., Gardiner, B., & Eyre, J. (2012). *A transformational system for on-job assessment in the building and construction industries*. Wellington: Ako Aotearoa.

[11] Alkema, A., & McDonald, H. (2014). *Learning in and for work: Highlights from Ako Aotearoa research.* Wellington: Ako Aotearoa.

[12] Kolb, D. (1984) *Experiential learning. Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

one of the interviewees as an occupation, "with strong, long and lasting roots … it's been recognised for centuries… it is about becoming a member of trade, more than just getting a qualification." As such there is a sense of pride that goes with becoming a builder. This thinking is supported by Employer Two when he says that it is not just about being, "a builder with a certificate, but about being a tradesman." Those involved in the operational side of BCITO are also of the same view.

> We have a good reputation as an industry and we pass this on to young people that this is a good industry. It is a journey, not just about getting a qualification. (Operational Manager)

Given the rich history there is a need to preserve this in an apprenticeship model that grows people in workplaces with the support of BCITO learning materials and its staff. Industry sets the standards and following this, programme design takes the traditional approach through the combination of instructional designers and subject matter experts. It is a time-consuming process and can take three-four years to get programmes fully developed. The BCITO are currently looking at ways do this more quickly. And they can do this when needs drive. For example, the Training Adviser (TA) talked about having the ability to develop new resources quickly when there are legislative or regulatory changes to practices and/or specifications.

The BCITO has not yet moved to digital resources, but are looking to do this. Currently for the carpentry apprentices, the resources are a "box of books." Those interviewed had varying views about these.

- Really good as the information allows for the connection between theory and practice to be made. (TA)
- Really boring – a whole bunch of words and I mostly learn by doing. (newly qualified builder)
- The boxes of books they get at the start – they are excited. They know there is a big task ahead, but it dwindles. The approach is too theory-oriented. The amount of book work is ridiculous. It is too much to retain. Kiwi builders are hands-on. Apprentices struggle with the bookwork. (Employer One)

There is a tension here then about how to learn the required theory. None of the interviewees disagreed that it needed to be done, just about how it should be done. Employers think that it is about getting practice on the job, and in terms of specific theories, "haven't used that s*** in years." In relation to problem-solving and calculations around, for example, areas, volumes, quantities, the newly qualified builder talked about, "There apps [on my phone] that can do that for you."

There are three points worth noting here about the learning materials that support apprentices' knowledge and skill development.

- Firstly staff from national office report that it is not compulsory for apprentices to use the learning materials. Where the optimum trainer-apprentice relationship is working, the best learning happens without need to reference technical materials for most aspects of the apprenticeship. In practice the resources are used as a touch-point for employers, apprentices, and TAs to assist with clarification and information apprentices need to know.
- Secondly the BCITO has developed new materials that are, "Far more stripped back and tightly aligned to the qualification's content than the traditional box of books." This approach has been taken in light of feedback from employers and apprentices who thought that "everything had to be worked through" and resulted in some apprentices feeling overwhelmed with what they had to do.
- Thirdly, apprentices do not complete bookwork in the traditional sense of writing answers and submitting them for assessment. Rather they use the technical information in the learning materials to background and inform conversations they have with TAs. There is no written work involved with assessments.

Given the dispersed nature of the BCITO workforce across 21 operational sites, resources are also developed to support TAs in their roles along with guides for assessment teams.[13] The TA thinks guidance like this is important as it ensures consistency of approaches across the country. Currently one of the challenges for the BCITO in relation to consistency is the growth in the number of TAs (a 40 percent increase in numbers) to cope with the increasing number of apprentices. The BCITO looks to recruit TAs from the building industry which means that these people need to be upskilled in their roles as educators, coaches and mentors – for employers and apprentices.

Delivery of ODL on building sites

The struggle with bookwork which apprentices often have to undertake in their own time is not confined to the building sector. It is an industry training issue across the board.[14] The BCITO is aware of this and uses a 'high-touch' model to support apprentices and direct them to information that is relevant to what they are doing on-the-job. This comes in the form of TAs, who are variously described by interviewees as, a lynchpin, pivotal, a real good guy.

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[13] Assessment teams comprise of the employer (trainer/evaluator), training advisor/assessor, moderator, and apprentice. Further information about this can be found in: Vaughan, K., Gardiner, B., & Eyre, J. (2012). *A transformational system for on-job assessment in the building and construction Industries.* Wellington: Ako Aotearoa.

[14] Alkema, A., McDonald, H., & Murray, N. (2016). *Learning, life and work: Understanding non-completion of industry training qualifications.* Wellington: Ako Aotearoa.

> TAs are passionate and good role models. They have a good yarn. They are there for the kids and want them to achieve. They are always there at the end of the phone. (Employer One)

The TA is the intermediary or the interface between the BCITO learning materials, the apprentice, and the employer. TAs have roles as guides and assessors and also take on the pastoral care should the need arise. The approach is variously described by interviewees as, "personalised, individualised, holistic, high-touch". Each TA runs around 90 trainees whom they visit on-site four times a year.

A TA's visit takes the form of a conversation with the apprentice and the employer and also involves a 'walk-around' where the apprentice shows the TA what they are working on, and also provides evidence, e.g., photos, sketches, diaries, of what they have completed since the last visit. The conversation and observation are the assessment and enable the apprentice to show and talk about what they know and can-do and this is subsequently verified by the employer. As such, it is more resource intensive than assessment through the submission of written assessments.

The newly qualified builder talked about the three-monthly visits and their purpose. From his perspective the visits were to:

> Catch up on what I was doing, what I had done and we went through the units that I'd been set to do on the last visit. He quizzed me about the units and picked my brain. The hardest thing about it was trying to put it into words. [TA] would use big words. And he knew that, so he would get me to describe things in my own words.

Here, the advantage for the apprentice was that he could talk about what he was doing or about to do. He thinks the oral approach to assessment, rather than written assessment was hugely beneficial for him. The BCITO refer to this as a professional conversation[15] that can be for formative (performed as a casual chat) or summative assessment purposes. It is flexible, integrated, and linked to the work apprentices are doing.

> We chat before the official assessment. Build relationships. … We work out the best way for the official assessment… we also coach and mentor the employer – so they are aware of the assessment. (TA)

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[15] Examples of professional conversations can be found in: Vaughan, K., Kear, A., & MacKenzie, H. (2014). Mate, you should know this! Re-negotiating practice after a critical incident in the assessment of on-job learning. In *Vocations and Learning: Studies in Vocational and Professional Education.* Vol 7(3).; Alkema, A., & McDonald, H. (2017). *PRACTICE EXAMPLE 1 (BCITO) | Principles of On-Job Assessment for Industry Training.* Wellington: Ako Aotearoa.

The TA does not act alone in the assessment process. Here they are part of a team[16] that also includes the employer and a moderator.[17] One interviewee talked about this as an assessment team where everyone is an active player in the process – the employer, apprentice, TA, and moderator who, together, create a learning outcome. Here they encourage reflective practice on the part of the apprentice so they describe and explain what they have done. This is what the apprentice is talking about when he comments that the TA – "picked my brain."

Using this approach takes time and means the learning is individualised to each apprentice in their workplace. Apprentices have the opportunity to talk about what they are doing/have done. They provide evidence which is then verified by the employer. The combination of the apprentice's explanation and employer verification is important as photos alone cannot be viewed as evidence. As an interviewee says, "A photo is just information. It is not evidence until there is discussion, description, explanation of what was done."

Qualifying as a builder is not the end point. The BCITO and employers are also looking to grow builders within the trade. The TA and operational manager talked about this in relation to a new qualification that takes builders on to supervisory roles. Employer Two talks about his newly qualified builder as a leader of the future and about how he wants him to go on to own his own business. He is guiding and mentoring him to do this by providing him the opportunity to practise and develop relationships with clients, sub-contractors, and suppliers.

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[16] Each team comprises an apprentice (learner), a training advisor (assessor), an employer (trainer and evaluator) and a moderator. The assessment team concept repositions everyone's roles in relation to the key purpose of promoting learning through assessment … The team is designed to place the learner at the centre of assessment activity and underline the importance of everyone's contribution to the promotion of learning through assessment. So, … employers are still part of the assessment process through their role as the trainer and provider of formative assessment (feedback), and as an evaluator of evidence that is gathered by, or described by, the apprentice. The team approach also means that moderators are now collaborators rather than people who exist only to "check up on" assessors or assessment results. (Vaughan, Gardiner, & Eyre, 2012, p. 6).

[17] Moderators offer support to the assessor in a number of ways. They provide advice around managing relationships with apprentices and employers, gathering of evidence, and the use of assessment tools. In a more formal moderation role, Training Plans and assessment judgements are reviewed.

Moderators sometimes accompany training advisors as they visit apprentices in a practice known informally as "the ride–along". Moderators observe, and sometimes participate in, the assessment activities. They are then in a position to provide analysis and advice to assessors about better preparing learners for assessment, techniques that improve the validity of questioning, and better tools for observing and acknowledging learner progress (Vaughan, Gardiner, & Eyre, 2012, p. 8).

Barriers and enablers for ODL on building sites

The key enablers are the motivation and enthusiasm of all the players, along with the opportunities for apprentices to practise and grow their competence. Employers describe their apprentices as needing to be, "keen, enthusiastic, and hard working." Growing their competence and skills takes time. While the building qualification is not time bound, BCITO staff think, "Four years is a good marker," especially for those new to the trade. Employer Two was adamant about the time factor. "It used to be 8000 hours to be qualified – it is the only way. I wouldn't let someone finish in two years. They need to be able to do things over and over."

The BCITO sees relationships as key to the delivery model. Here it is the relationship between the TA, employer and apprentice. Relationships are built up over time. The TA talks about the importance of knowing about employers' businesses, regardless of whether they are large or small and that this is achieved by going on site. Employer Two appreciates having the same TA for his newly signed-up apprentice as for his recently qualified one as there is an existing relationship to build from.

The employers also see their role as important in the development of apprentices, especially in the development of the skills on the job. Both of them acknowledged that employers need to be interested and involved in the process. Employer One describes himself as "passionate" and that it is about more than just getting the job done. Employer Two joked about his OCD (obsessive compulsive disorder) and his drive for perfection on the job that leads to his staff learning to do things properly. His newly qualified builder appreciates this! Employer Two's drive to take on apprentices comes from wanting to give opportunities to those who show they are keen and enthusiastic and might not get a chance to get into a trade. "I was given a chance. I have worked with great guys and it is about giving back to others."

Another enabler, and one not articulated by all of the interviewees as it is possibly just taken for granted, is the 'learning on the job' aspect. Here it is full-time, experiential and situational learning, that utilises skills throughout the time of the apprenticeship. It is 'learning about and learning through' work, learning that is real, "Just in time and on time."

While time, motivation, interest, and relationships act as enablers the bookwork acts as a barrier. In the main apprentices work through this in their own time and both the employers and the newly qualified builder talk about the issues there are with this – in terms of the time it takes and the relevance of some of the theory to building practice. The BCITO look to mitigate this by chunking the theory/modules into three-month bites that are applicable to what is happening on the building site. And, as described above, the BCITO has recently changed the approach and reduced the amount of resources apprentices receive.

Of note here is the seeming separation that the employers and the newly qualified builder have between the theory/knowledge as presented in the books and the actual work. While the BCITO see it as seamless as a result of the professional conversations and the deliberate connection of theory to practice, the reality for those on the building sites differs.

Another barrier is the scope of work available to apprentices that connects the theory to the practice. Employer One was concerned about this in terms of the division he is seeing in the industry in terms of apprentices training in, for example, just new builds, or renovations, or in the commercial sector. In turn this means they may not be able to apply all the theory that is called for as part of the qualification. However, Employer Two did not agree with this thinking and felt that given the mix of residential building his business was involved with that his apprentices had the variety of work required to complete their apprenticeships. A potential remedy for this, being piloted by the BCITO in collaboration with the New Zealand Qualifications Authority (NZQA) and the Tertiary Education Commission (TEC), is the use of micro–credentials. These will allow apprentices to build a portfolio of specialist skills sets that are acknowledge by certificates of achievement.[18]

The Value of ODL and workplace learning

The BCITO model has the employer as the main trainer of apprentices, with support from the BCITO in terms of learning materials and advisory support. While it is resource intensive given the individualised support provided to apprentices, the overall price is cheaper (to government) than models of delivery used through polytechnics. Recent work by the Industry Training Federation[19] reports,

> Industry training as currently structured is by some margin the most efficient mode of tertiary education for the taxpayer – with a $1m investment in industry training yielding approximately 300 qualifications, compared to the 50 achieved for the same investment in ITP learners (p.9).[20]

However, being sold as 'a cheaper' model is a double-edged sword as it has the potential to devalue the way the apprenticeship model is thought about. One interviewee notes that instead of being sold as the cheaper way to go, the apprenticeship model needs to be seen from, "The historic perspective and as a prestige pathway."

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[18] See http://www.scoop.co.nz/stories/BU1808/S00032/bcito-thrilled-with-nzqas-recognition-of-micro-credentials.htm; and https://www.stuff.co.nz/national/education/109497958/nzqa-wants-to-make-microcredentials-official-what-are-these-nanodegrees-worth

[19] Industry Training Federation. (2019). *Submission on the reform of vocational education.* Wellington: Author.

[20] Further information on costs can be found at https://app.powerbi.com/view?r=eyJrIjoiZDFkNjY0OGEtMDdiNC00YmExLWFhOTQtZjc3ZGZhOTVhNWMyIiwidCI6ImRhYTIwNzExLWFmZTktNDY4Yi04ZGZkLTM5ZTY0MDg1ZjBkNSJ9

Price however, is also in the eye of the beholder. Employer One sees it as a reasonably expensive model given the sign-up fee and ongoing yearly fees which he pays for his apprentices. While some apprentices are paid training wages, those involved with the operational side of the BCITO say this is not the case for all employers, especially in the current tight labour market in New Zealand.

For the apprentices the opportunity to earn and learn, without taking on student loans is undoubtedly beneficial. Work undertaken by the Scarlatti, a management and consultancy firm, on the incomes of university graduates in comparison to those who had undertaken apprenticeships found that up until the age of 30 those who qualified as apprentices were earning more than the graduates.

> After age 30, university graduates begin to earn more than apprentices, however when considering cumulative income apprentices have higher net worth into their late thirties. This is without considering student loans, which averaged $30,000 for our 2003 cohort.[21]

However, value is about more than price and cost. The value to building apprentices and their employers is the learning, coaching and mentoring support provided by the BCITO. While it is resource-intensive, all of those interviewed talk about the value of the interactions and the relationships that are developed. It is also a two-way street as the TAs, who have ongoing interaction and engagement with employers and apprentices, are directly exposed to industry and its skills needs and demands. This translates to the workplace being a learning and working environment. One interviewee notes that, "Other models don't do this."

Conclusion

Those interviewed for this case study have independently conveyed their view on the ODL and workplace learning model used by the BCITO. In terms of consensus the following points are made.

- At the national level qualifications are industry driven and are adapted at the local level to meet the skill needs of apprentices and the skill demands of their employers.
- The theory as it presented in the learning materials "bookwork" is challenging. But the learning of it coincides, for the most part, with the practical skills that are being learnt on the job. It best suits those who are motivated, determined, and who are able to and have the time to do the reading.
- The BCITO has recently developed new learning materials which should make it easier for apprentices and is also moving to have materials online.
- All parties place considerable importance on the interaction and relationships between the TA, employer, and apprentice.

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[21] Further information can be found at http://www.sweetanalytics.co.nz/2-general/32-income-outcomes

- The high-touch model means there is flexibility in the approach in that adjustments are made according to what the apprentice is working on.
- The high-touch model also incorporates coaching and mentoring for both apprentices and their employers.
- The use of professional conversations provides the opportunity for authentic and valid assessments whereby apprentices describe, explain and show what they have done in a real-world setting.

All of these points align to the research mentioned at the start of this case study.

Appendix Two: Encouraging, Supporting, and Motivating Trainees: Careerforce Case Study
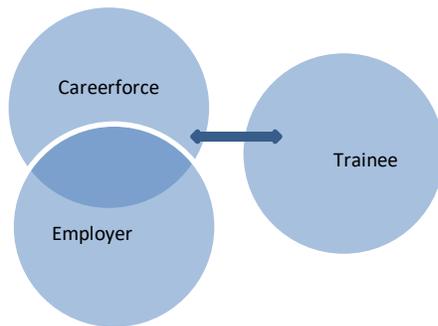
This is one of three case studies that look at workplace learning plus open and distance learning (ODL). It has been commissioned by the Commonwealth of Learning. This study tells a story of distance and workplace learning from the perspectives of: a Careerforce resource developer, Careerforce workplace advisors (2), two workplaces, and a learning mentor in one of these workplaces. It is a snapshot of Careerforce's practice. The case study is based around level 2 and 3 qualifications in the health and wellbeing sectors. This qualification is achieved through full-time or part-time work, supported by Careerforce learning guides, and employers and their staff who are working the health and wellbeing sectors.

Background

Over the past few years New Zealand's tertiary education system has been in a state of disruption as we have: worked through a qualification review process to reduce the plethora of qualifications available; developed qualifications that take a holistic approach to describe graduate profiles and focus on outcomes required by learners/apprentices to perform in workplaces; and worked towards ODL models of delivery that encompass and embrace technology. New Zealand has also undertaken several research projects that have explored success factors related to workplace-based learning (on-job) being combined ODL (off-job).[22]

Careerforce, "Supports workplace-based training, enabling employees to achieve nationally recognised qualifications, and deliver superior outcomes across the health and wellbeing sector."[23] The organisation supports workers who are training in a range of health and wellbeing sectors, for example, aged care, disability, healthcare services, mental health and addiction, social services, and youth work. These services are delivered in community settings, including people's homes and in care facilities. Careerforce also supports those working in the cleaning industry and urban pest control to undertake qualifications.

In 2018 there were just over 19,000 trainees enrolled with Careerforce, around 2000 of whom are apprentices. In recent years there has been considerable growth, as shown by

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[22] These are documented in the bibliography of the thematic report.

[23] For further information see https://www.careerforce.org.nz/

the number of trainees and the number of worksites (1782) with whom Careerforce now works.[24]

A body of research commissioned by Ako Aotearoa has looked at success factors related to workplace learning. A summary of this research shows that it is about collaboration and partnership that sees learners/apprentices, employers, and tertiary educators working together. Each of these players has their own role to perform. For example:

- trainees/apprentices need to be motivated, reflective and able to transfer theory into practice. They need to be supported to learn through learning resources and materials; have opportunities to practise in real world settings; and have support and mentoring
- employers need to take structured approaches to training, support and mentoring and supervision; provide opportunities for learners/apprentices to practise and transfer theory into practice
- tertiary education providers need to work in collaboration with trainees/apprentices and employers; provide resources and learning materials, along with authentic, valid and reliable assessments; and provide learning and pastoral support.[25]

The combination of ODL and workplace learning provides the opportunity for what Kolb calls, "a holistic integrative perspective on learning that combines experience, perception, cognition, and behaviour" (1984, p. 21).[26] Here the cognitive is dealt with through the resources and learning materials which are in turn used by the trainees and transferred into experiences and behaviours in the workplace. In the case of Careerforce, it is a two-way street as trainees also take their practice to the theory.

Design and Development

Careerforce developed a strategy for eLearning in 2010 and since that time has been working towards a fully digital approach to the supply of learning guides and assessment materials. Aka Toi (vine of knowledge) is the online learning and assessment platform and trainees need to be enrolled to access it. It is designed as the one-stop shop for learning and assessment resources and since a revamp in 2018 there has been an increase in usage. Open access to paper-based, printable resources (learning guides and assessment

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[24] Careerforce. (2019). *2018 Annual Report*: Wellington: Author.

[25] Alkema, A., & McDonald, H. (2014). *Learning in and for work: Highlights from Ako Aotearoa research.* Wellington: Ako Aotearoa.

[26] Kolb, D. (1984) *Experiential learning. Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

materials) is also available through the Careerforce library, although there may be restrictions on this in the future.[27]

Careerforce takes a top-down and bottom-up approach to inform programme development and learning and assessment resources. Business development consultants engage at the strategic with the sectors and Product Managers find out the skills and knowledge needs. While front-line staff, workplace advisors who work directly with employers, find out their requirements and take iterative feedback on what is working/not working.

> I am a conduit - the eyes, ears, and face for Careerforce and work directly with employers. (Workplace Advisor)

From this, learning and assessment resources are created by Product Developers. The move to digital development using Rise 360 in Articulate 360 gives Careerforce Product Developers the capacity to produce learning materials that provide trainees with both the basics they need for their qualifications along with options to explore areas where they need more information, "We have sections with more resources, links and videos." It also means some of the assessment for level 2 and 3 qualifications is now completed online through multi-choice questions or written answers.

Delivery of ODL in workplaces

Careerforce operates an employer-led model whereby employers are responsible for the training infrastructure and the systems they put in place to help and assess trainees. They are supported to do this by 14 workplace advisors who operate in three teams across New Zealand. Employers determine the length and timing of the visits from advisors.

> These can be monthly, every eight or 12 weeks for 30 minutes to an hour. With small sites I have collaborative visits [get people together from across sites]. … Training can be challenging for employers. Business as usual is dynamic and training needs to be prioritised alongside other areas, for example, health and safety and the day-to-day business. The sector is also under resourced. (Workplace Advisor)

With the employer-led model, trainees at levels 2 and 3 have no direct contact with Careerforce staff. Rather they are supported through their qualifications by their employers who set in place different types of enabling mechanisms so trainees can complete qualifications. The workplaces in this case study use two different approaches – a learning mentor[28] and nurse educator. The former works in a community care facility with around 250-300 staff who support people with disabilities to live in the community. The latter has a dedicated role, two days a week, in a care facility with around 90 staff.

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[27] See https://library.careerforce.org.nz/

[28] A full description of the approach used can be found at the end of this case study.

Both approaches provide opportunities for trainees to meet in groups in or outside of paid work time where they discuss what they are learning for their qualifications and what they are doing at work. The learning mentor describes this worked when she was a trainee.

> Here we would go through the material, brainstorm, talk about experiences. It was good because if you didn't recognise something you'd done or your own examples -this was triggered by the experiences of others. Everyone is different. It was a good way of getting together. I really enjoyed it. It also meeting kept me motivated to get the work done. (Learning Mentor)

The nurse educator sees her conversations classes in the same light. She meets with groups of five-six caregivers on a fortnightly basis. Where trainees are uncomfortable with talking in a group situations she provides 1:1 sessions with them.

> There is real value in the face-to-face sessions with trainees every two weeks. … I try to keep everyone on the same page so we can have discussions, but they have different learning needs … the advantages of the approach are that you can check in with people and they are kept up to pace. I have also given trainees my email, phone number, and they can drop by and ask questions. No one does – so now I ring them, ask if they are at home, ask what questions they are up to. Some have five kids at home, it is difficult. (Nurse educator)

The nurse educator also observes how the caregivers are working with residents.

> I butt in sometimes to tell them what they are doing is wrong, show them the right way. Or I can say, "Yay, you've been listening to me. Great work!" (Nurse educator)

Trainees access the learning guides and assessment materials online. They do this either in their own homes or at work, with the latter being the most common option. Here most trainees and some employers still prefer to download materials and use them as paper-based resources.

There are expectations around the duration and pace of progress through the qualification and the resources are designed so trainees can prepare and move to assessment when they are ready. The assessment process includes trainees showing their competence through theory assessments and performing several practical tasks. Readiness is determined by conversations trainees have with their supervisors or observers who are in the role of verifying what trainees can do. This process involves ticking off a check list and supporting this with additional comments. These sheets are then sent to the workplace assessor. "It is the comments the assessor is interested in and can contact the observer if they are not clear about anything." The assessor also marks the theory assessment and together with the practical observation, the results are then uploaded to the Careerforce Learning Management System.

Enablers and barriers for ODL in the health care sector

The enablers in the Careerforce model operate across the system. The move to an online platform happened through support within the organisation for this approach. This was an initially driven by the then Chief Executive who recognised the need to have qualified staff in the sector and to do there was a need to go to scale using technology. "There was a need to get materials out quickly and efficiently." The approach was also supported by the unions who were looking to get more people qualified so they could get paid more.

From a learning materials perspective the enabler is the connection between these materials and what people are doing at work. Here Careerforce designs and delivers online learning guides and employers then personalise these to trainees' roles.

> The knowledge and theory answer the who and why of working. They give opportunities for further conversations. (Workplace Advisor)

> We look to make the qualification align to work. [Level 2] is aligned to our induction programme – put it into our own language, documents, policies and procedures. (Employer)

> The content is generic and they have to contextualise it to their workplace policies and procedures, for example, personal and ethical behaviour in the various sectors – disability, aged-care, community. (Workplace Advisor)

At the workplace level the enabler is both the interaction employers have with Careerforce and the training structures in workplaces. Here there are roles for trainers, assessors and observers. Support mechanisms through in-house workplace educators and mentors is as one of the keys to success. Working together these contribute to successful outcomes for trainees.

> The organisations that encourage training have a structure within the workplace that is important for making it work. You need to have go-to people – and not just one person. You need assessors and observers to get training and assessment done, and also moderation gets done for quality assurance. Time during work for training is also needed. People are too busy outside of work to do this. (Workplace Advisor)

The support systems described above are also enablers as they use a socio-constructivist approach whereby trainees can make meaning of the materials, their job tasks and practices through discussions with others – peers and a mentor or educator.

> Shared experiences allow learning. Getting work assessed in-house – can also highlight practice and experiences (good and bad). (Employer)

> It does help them – as otherwise they are out in the wilderness on their own and it gets too hard. Some are not independent learners. (Nurse Educator)

As with the other ODL and workplace training cases, the trainees act as their own enabler, "They need to be disciplined and motivated". The Learning Mentor in this study is an

example of this. She continues to study for roles within the organisation. While she is enabled by her own interest in and passion for learning she is also enabled by the way she engages with the work and her workplace.

> I love the work, the organisation, the philosophy, the opportunity to grow. I can go in lots of different directions. People's engagement with learning is recognised – talked about a lot. The training augments the role and makes it more interesting. It adds value to the work. (Learning Mentor)

In terms of barriers the key ones spoken about related to the capacity and capability trainees have to access learning materials online (at home or work) and their confidence to learn with this mode. While digital literacy is an issue, so too are the more traditional skills of reading and writing. Some of the trainees in levels 2 and 3 qualifications, may not have had much previous education and/or they have English as an additional language and struggle to read and understand the materials and write appropriate answers.

> In terms of technology – there is some resistance. Some don't have computers. Computer literacy is an issue. They can use their mobiles, facebook etcetera, but don't seem to be able to translate this to new systems at work. They put up walls. It could be a defence mechanism. I think they're scared. It's change and some people don't go well with change. (Employer)

The Value of ODL and workplace learning

The value of the approach can be seen from several perspectives. For Careerforce, while they describe the development of online materials as 'costly', the value comes in the reach they get and the ability they have to respond quickly to changes in the sector. Responsiveness is partly driven off the direct relationships Workplace Advisors have with employers. This engagement means Careerforce stays in touch with industry and sector knowledge and skills needs.

> We can go to scale, at pace, with nimbleness and responsiveness … and be relevant, more up-to-date. We can change quickly when, for example the World Health Organisation makes changes to the way things are done. (Resource Developer)

While the digital development has increased the scope of what is developed for trainees, it also provides opportunities for some economies of scale where, for example, Reusable Learning Objects (RLOs) can be used in different contexts. For example, RLOs on handwashing can be used in different ways with trainees in the cleaning sector as compared to those in sectors caring for people.

Having a national body responsible for qualifications and programme development also means consistency within and across workplaces.

The overall benefit is that the approach creates consistency in and across workplaces in New Zealand. We get industry feedback so can adapt. We can make things happen really quickly. It gives mobility [for trainees] between workplaces - and the same level of service to all. (Workplace Advisor)

Everybody is on the same page [through the learning resources]. If we want to see improvements in ways of working it is through getting information, knowledge and knowing why they are doing what they do. All this informs practice. People do – then reflect. (Workplace Advisor)

While there is a cost to employers, many of whom pay for the qualifications and many of whom give paid time to staff for learning, the value for them is seen in several ways. They are viewed as organisations that value and support learning and have qualified workforces. Where they have support mechanisms in place, the trainees complete qualifications more quickly and are more engaged in the work they do. It is a transparent way of showing others, for example auditors and potential residents/clients and their families that staff have the requisite knowledge and skills to perform their roles.

We have an achievement board in the reception area and the employer delights in showing the relatives of residents how well-trained the staff are. (Nurse Educator)

The value for trainees in workplaces means they can earn while they learn. For the level 2 qualification they are getting formal recognition for what they are doing. "They get badges and certificates". In turn completed qualifications bring an increase in pay in the health and wellbeing sector, along with portability and mobility. While these are extrinsic rewards there is growing sense of being valued and respected as members of the wider health team along with a sense of achievement for individuals. For some the level 2 certificate is the start of their learning path.

Those who have had a good training experience are keen to move through the pathways in order to work with those with more complex needs and support the wider health team. [29] With level 2 most get there, they are meant to be successful. Keeping them active with the qualification can be challenging, so infrastructure is the key. (Workplace Advisor)

Conclusion

Those interviewed for this case study have independently conveyed their view on the ODL and workplace learning model used by Careerforce. In terms of consensus the following points are made.

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[29] For more information see http://www.workforceinaction.org.nz/wp-content/uploads/2019/04/Kaiawhina-Health-and-Disability-Workforce-Pathway.pdf

- At the national level qualifications are industry driven and generic learning guides are adapted to the policies and procedures used in workplaces.
- The employer-led model means autonomy for employers while at the same providing consistency to training across the country.
- Employers are responsible for the training and assessment of trainees.
- The relationships Careerforce staff have with employers is important for maintaining close connections with industry and its knowledge and skill needs.
- The theory as it is presented in the learning materials can be challenging, as can be the online delivery for some. However, the connection to the knowledge and skills on the job means a there is two-way interaction between theory and on-job practice.
- The approach appears to work best when there is an in-house training infrastructure that provides support mechanisms for trainees – mentors and dedicated educators.
- There is value to level 2 trainees being recognised and credentialled for the work they are doing.

All of these points align to the research mentioned at the start of this case study.

Learning Mentors: Supporting Trainees in the Workplace

This story provides an example of a support mechanism used in one of the workplaces in this study. The Learning Mentor programme is not a Careerforce initiative. Rather it is used to support staff to achieve their Careerforce qualifications.

Community Connections is a not-for-profit organisation providing health care and social services to people with disabilities who live independently in their own homes or in residential supported living houses. The organisation has around 400 clients who are supported by between 250-300 staff. These staff provide services that enable people to have good lives and feel connected to their communities.

Community Connections works with the Industry Training Organisation, Careerforce, who arrange for staff to undertake vocational qualifications from Levels 2-4. Having a skilled and qualified workforce is important to the organisation because it enables them to deliver a high-quality service to their clients. Matt Sang, the Community and Safe Practice Manager, says this is important as one of Community Connections' aims is to get their clients to live as independently as possible. It is also important in an environment of choice, whereby the clients can choose their healthcare provider.

Gaining qualifications is also important from their staff's perspective. Here both Matt and Wendy, a Learning Mentor, see qualifications as being a way of formally recognising staff for what they do. It also enables staff to talk about their experiences and learn from them.

"It validates what they are doing and builds confidence and self-esteem," says Wendy. "It's great when they discover new things."

It is the system that Community Connections has set up with Learning Mentors that enables this direct connection with trainees who are not left on their own to deal with their open and distance learning (ODL) materials. The Learning Mentor system has been running for the last five years and Matt sees it as a way of helping trainees get through their qualifications more quickly and making it easier for trainees to connect theory to practice. "Providing mentoring can help people keep on track and motivated."

Community Connections set up the mentoring system to help staff get straight into qualifications. The approach supports staff as they go through the orientation and induction process and learning about the company policies and procedures is part of the qualification. Learning Mentors meet with trainees, on average, on a fortnightly basis.

 Wendy is a Learning Mentor who has worked her way through qualifications as a support worker, through to higher level qualifications that help her in her mentoring role. She is currently working on her Level 4 apprenticeship in Health and Wellbeing. She took on her role as a Learning Mentor as it provides her with the opportunity to help others with learning. In practice this means she meets with new trainees and supports them to engage with the learning materials and identifies any issues that might get in the way of their learning, for example, their literacy and numeracy skills.

For Wendy the value of the role is that it is a way of checking in with trainees, looking at the extent to which what they are doing is right, validating them when they are doing things right, and supporting them to be more familiar with the organisation. She also talks with trainees about doing their best but acknowledges that all of this is possible without doing qualifications. However, working through a qualification enables conversations whereby she is, "Constantly checking in with trainees and getting examples of what they are doing. It helps them not to get complacent and keeps them fresh. It's a good way of having conversations and analysing what could be done better." Learning Mentors help trainees to make connections between the ODL materials and what they are doing in their everyday work. They help connect the theory / knowledge to practice, while providing the space for trainees to reflect on what they are doing with clients each day that they support them.

From the Community Connections perspective the Learning Mentor role helps trainees to complete their qualifications more quickly. As Matt comments, "It keeps people on track and motivated." In turn, Matt sees the Learning Mentors as enthusing trainees about learning and they are then able to transfer this enthusiasm to their work with clients.

While trainees value the role of Learning Mentors to help them through qualifications they are also respected within the Community Connections. As Matt notes, "They are respected

by staff and management, and it also provides the mentors with the opportunity to take on extra responsibility, develop new skills, and possible seek new career pathways."

The success of the Learning Mentor programme can be determined by the completion rates of qualifications and Matt commented that there has been quicker qualification completion. There has also been a lower staff turn-over, but this is not necessarily attributable to the Learning Mentor programme.

Matt and Wendy agree that shared experiences allow learning and this is the power of the Learning Mentor role that has been set up at Community Connections. They support the idea that ODL is not an individual journey, rather it is a collective and constructivist journey that enables staff to complete qualifications and become practitioners who are able to support clients to develop to their full potential.

Appendix Three: Enabling Career Development: Open Polytechnic Case Study
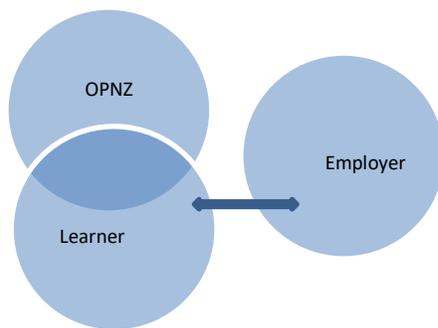
This is one of three case studies that look at workplace learning combined with open and distance learning (ODL). It has been commissioned by the Commonwealth of Learning. This study tells a story of distance learning from four different perspectives: an education designer; a programme manager; an academic staff member who facilitates learning; and a learner. It tells the story of their journey in the field of qualifications in adult learning and teaching. This encompasses 5 qualifications and as such is at the top end of what is considered Technical and Vocational Education (TVET) in New Zealand. Programmes for some of these qualifications are delivered fees-free to learners. The programmes are delivered to a range of learners that varies from those who are training apprentices and trainees in workplaces and those teaching in vocational face-to-face roles in tertiary education organisations.

Background

The Open Polytechnic of New Zealand (Open Polytechnic) has been New Zealand's national specialist open and distance technical institute for over 70 years. It provides ODL opportunities to around 30,000 learners each year. It works from the premise that ODL's purpose is to "remove barriers and increase access to education" and "to provide flexible learning opportunities for a diverse range of people seeking an alternative to campus based study" (Open Polytechnic of New Zealand, 2018, p. 28).[30] Over 70 percent of the learners are in employment and the Open Polytechnic wants to support them as they look to achieve their career goals. A learner's journey at the end of this case study highlights how this works in practice.

Over the past few years New Zealand's tertiary education system has been in a state of disruption as we have: worked through a qualification review process to reduce the plethora of qualifications available; developed qualifications that take a holistic approach to describe graduate profiles and focus on outcomes required by learners to perform in workplaces; and worked towards ODL models of delivery that encompass and embrace technology. New Zealand has also undertaken a number of research projects that have explored success factors related to workplace-based learning (on-job) being combined with ODL (off-job).[31]

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[30] Open Polytechnic of New Zealand. (2018). *Make your move: Annual report 2017.* Wellington: Open Polytechnic of New Zealand.

[31] This will be further described in the full report/thematic analysis.

A body of research commissioned by Ako Aotearoa has looked at success factors related to workplace learning. A summary of this research shows that it is about collaboration and partnership that sees learners, employers, and tertiary educators working together. Each of these players has their own role to perform. For example:

- learners need to be motivated, reflective and able to transfer theory into practice. They need to be supported to learn through learning resources and materials; opportunities to practise in real world settings; support and mentoring
- employers need to take structured approaches to training, support and mentoring and supervision; provide opportunities for trainees to practise and transfer theory into practice
- tertiary education providers need to work in collaboration with learners and employers; provide resources and learning materials, along with authentic, valid and reliable assessments; provide learning and pastoral support.[32]

The combination of ODL and workplace learning provides the opportunity for what Kolb calls, "a holistic integrative perspective on learning that combines experience, perception, cognition, and behaviour" (1984, p. 21).[33] Here the cognitive is dealt with through the resources and learning materials which is in turn used by the learner (and in some cases the employer) and transferred into experiences and behaviours in the workplace.

Design and Development

Adult education qualifications are intended for those working in teaching and support positions in tertiary education - in formal, community and voluntary settings, and in industry training. These qualifications provide an opportunity for those who have subject matter expertise in their own vocational disciplines to develop the skills and knowledge required to teach and assess adult learners.

At the system level programmes start with the development of qualifications and these are developed based on industry skill need and outcomes statements for the qualifications that are set down by the New Zealand Qualifications Authority.[34] Getting the views of industry means engaging with those working in the industry and having their input into programme development. Here the Open Polytechnic was fortunate to have the programme manager on the panel for the national Mandatory Review of Qualifications (MRoQ) for adult

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[32] Alkema, A., & McDonald, H. (2014). *Learning in and for work: Highlights from Ako Aotearoa research.* Wellington: Ako Aotearoa.

[33] Kolb, D. (1984) *Experiential learning. Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

[34] Further information about the New Zealand Qualifications Framework (NZQF) can be accessed at https://www.nzqa.govt.nz/assets/Studying-in-NZ/New-Zealand-Qualification-Framework/requirements-nzqf.pdf

education qualifications in 2016. This meant she participated in the review process that took in the views of a range of stakeholders working at the national level in the sector. From this review the qualifications were developed and the Open Polytechnic has since redeveloped all its programmes based on these new qualifications.

The next step is designing programmes to achieve the national qualifications. At the Open Polytechnic, this process can take up to a year. The education designer talks about the need to make the case for programmes and then using the expertise of education design architects, subject matter experts, writers, assessment experts, multi-media experts, and reviewers (including cultural reviewers).

> Programmes are built around graduate profiles… [but] what it comes down to is the quality of the writer. [X] is magic. She had taught the courses, knew the stuff, and had really good ideas to put into it. (Education Designer)

Delivery

The resources and learning materials are important as this is the front face for the learners in ODL models. Here the Open Polytechnic uses the digital platform, iQualify.[35] Launched in 2015 it is described by the programme manager as,

> an engaging tool, it uses multimedia, print online, quizzes, comment boxes, practice assessments. It also has the facility to bring in really useful and relevant resources from other sites. We use a huge amount from Ako Aotearoa… Technology brings the materials to life. (Programme Manager)

The learner concurs with this thinking. Here she actively engages with the learning through the resources that are available, although she acknowledges that you need good literacy levels to be able to do this. Along with the reading materials she responds to the formative activities that are part of the modules of learning. She also tries to participate in the communities of other learners.

> We do have online communities with others – but you need chat and questions to get this working. It can make you feel like you are in a class but not. I chat with others and the tutor. We are given scenarios, for example, "What do you think Toby should do?" And then we all

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[35] Open Polytechnic of New Zealand. (2015). *Open Polytechnic launches innovative online learning platform.* Media Release. Accessed 24 April, 2019 at https://openpolytechnic.ac.nz/about-us/news-publications-and-research/news/open-polytechnic-launches-innovative-online-learning-platform/

put forward solutions. In terms of participation it comes down to the content. If it is worth a mark, everyone talks. But if it is not worth anything, then they are not interested… Engagement drops off once people have what they want. It's hard. (Learner)

The point about drop-off in engagement in online communities was also made by the Academic Staff member. While the Open Polytechnic has adapted the chats so they are now threaded, the chat is asynchronous, "It can fall a bit flat if no one comments on a post."

> Also, students are squeezing study into their lives … they might start with gusto to posts, but this can decline over time for some. Deadlines loom, but adult students are also balancing family and work pressures so it is not uncommon that their focus can be about meeting assignment deadlines. (Academic Facilitator)

Assessment also happens online. For the adult teaching programme, it takes the form of short answer and essay assignments that are uploaded to iQualify and directed to a marker. It also includes assessments of how learners apply their knowledge in the workplace. This is done through tasks that are completed in the workplace – e.g., the development of lesson plans and the delivery of these lessons that are evaluated by students and verified by the employer and sent in for assessment. This approach actively includes the employer in the teaching and learning process in that they are invited to moderate, comment on, and critique their learner's practice. It supports the idea of the triangle in workplace learning that includes learner, employer, and tertiary education provider.

In addition to the Open Polytechnic providing resources and assessments online, they also provide a range of support for learners. This extends beyond academic support to include technical, learning, and pastoral support through personalised emails to learners – this can be viewed as "supply" support and takes the form of what they should be looking for or noticing in the materials and what relates to the assignment. The Academic Staff member said this contact is important as it can help to motivate students.

> There is value in a tutor who sends out weekly announcements. Learners get the sense that there is someone there – they get guidance, and there is real value in this. Every week there is a reminder that someone is there. (Academic Staff)

Along with "supply support" there is also "demand" support whereby students make contact with the Open Polytechnic in relation to learning and other support.

> Contact with learners is by phone, email and iQualify. There is a lot a of email traffic. Students mainly ask about assessments and sometimes the course material or readings. They also contact us about extensions, but these are dealt with by the Student Learning Supporter, who is the person who helps them with non-academic related matters. (Academic Staff Member)

The learner in the case study sees the personal contact as being pivotal to her success. Here she talks about her facilitator as, "Believing in me when I didn't have hope for myself – she believed I could."

Open Polytechnic staff see the approach and the materials as successful in engaging and retaining learners, although their completion rates are not yet as high as they would like them to be. However, those interviewed note that completion also needs to be seen in the light of the fact that the majority of students are undertaking study around work and other commitments in their lives. They also note there has been an increase in completion since they went digital, and that the new modular approach with defined timeframes could also be a contributing factor. The learner in this case study is hugely engaged, but admits to being extremely motivated and has developed her skills as a self-directed learner. In turn this has driven her to complete a number of qualifications.

Barriers and enablers for ODL

Enablers need to be considered in the light of both what helps the organistion to deliver ODL along with what helps the uptake of programmes. From an organsiational perspective those who were interviewed thought it starts with getting stakeholder input, having academics specialists, and developers who have been adult educators. Collectively this adds up to a "rigorous, group design process". Other enablers have been alluded to above in terms of good design of learning materials along with the provision of them on a digital platform that can be accessed via the devices that learners have. The learners (and their employers) also want material that is relevant and applicable to their workplaces. In addition the learners need to have the support from the Open Polytechnic and employers. In their own right they need to be (intrinsically or extrinsically) motivated; literate (in both a traditional and digital sense), confident, independent and self-directed.

> Despite support being available for online learners this method of delivery can be challenging for someone who hasn't had positive prior experiences at education. However, it suits people who are able to study more independently and who enjoy the flexibility that on line learning offers. (Academic Staff Member)

The barriers to successful ODL happen across the different levels of the system. Firstly, from the Open Polytechnic perspective, while technology provides some solutions in terms of reaching workplace learners and providing interactive learning opportunities, it also comes with technical issues at times, "we have to constantly check for broken links". There are also access issues for learners, for example, while materials are accessible through smart phones and tablets, these are described as "not being ideal". Some learners don't have internet access at their homes, but some are able to use their local libraries for this. Also there are learners who enrol and say they, "Don't know how to use Word or submit in Word."

The learner concurs with this thinking. She admitted that she couldn't afford the "zip-dee-doo-dah tech stuff". She talks about having a computer breakdown and no access to a printer. However, she got around this by going to the library to access a printer when she needed to. She also has access to technical support through the Open Polytechnic and the willingness to keep asking questions about, "How to open things? How does this work?"

Another barrier mentioned by the learner is the "one-size fits all" approach in the learning materials, but this is overcome by the various support mechanisms in place at the Open Polytechnic and the connections that learners can make with others in their workplaces.

For the Education Designer, the main barrier was that the ODL format does not allow for peer-to-peer learning that exists when learners have face-to-face discussions in a traditional classroom environment, even though the opportunity for online chat is provided. She comments that peer-to-peer learning is invaluable as they learn from each other, and give each other feedback which can result in shifts in thinking and practice. Neither does the approach allow for co-construction /co-creation of teaching and learning, as the same online learning programme is prescribed for all learners. This thinking is in keeping with the point of view of the Academic Staff Member who talks about the importance of relationships, not only peer-to-peer, but also the relationship between tutor and learner and the importance of this to all learners, and specifically to Māori and Pasifika learners.

The Value of ODL

The value of ODL needs to be thought about in a number of ways. Those interviewed are clear that the design and development of courses was costly – from a price and time perspective.

> The cost is in the development – the upfront cost is huge. We have a whole development team, have a budget and need to work out how to get costs back over time – over five-ten years. Development teams include project managers, writers, reviewers, development and design teams. Sometimes there are seven to eight people. So a high cost for this. (Programme Manager)

But value needs to be considered in other ways. Firstly, in terms of reach, which translates to being able to teach at scale. Here it is possible to get to "hundreds in one space [the online environment]". The Academic Staff member talks about this when she talks about having 100 students in each of the four blocks she runs. Reach like this means that meeting the skill demands of the sector can happen more quickly than it would in a class-room based environment.

Reach extends to those in large cities and rural communities where travel is an issue. It also means reaching those aged 35 plus who have family and work commitments.

> It would take me 45 minutes to drive into [X] and then park in the CBD. Then I couldn't do it in the timeframe and couldn't afford the pre-school fees [for my child]. It is cheaper online and free at home. (Learner)

For employers and learners value also extends to being able to study what is relevant for current roles. In the case of adult teaching qualifications study brings new knowledge and skills about teaching practice that benefits individuals and organisations.

> In terms of the difference it makes to workplace practice, we've had good feedback from students. The value for them is they had not been aware of the historical and political background of education in New Zealand and the extent to which provision is socially constructed. It is challenging for some to understand this. (Academic Staff Member)

While the value is about the "now" it is also about the future. ODL allows individual learners to prepare for future careers, even when they don't have the support of their current employers. This was important for the learner in this case study.

> Study is relevant and timely. I can prepare myself ahead of time for possible other jobs – preparing myself for the future. There are always new courses. The cool thing is that [while] my manager doesn't support PD on the [work] website as there is no money for it, I can do what I want to do. (Learner)

The learner also sees the value of education more broadly and talks about it, not only from the career perspective she describes above, but as family transformation. As a result of having access to education she has been able to go on to higher paying roles and in turn buy her own house – something she had not dreamed of being able to do.

> Learning is deeper for me. When my whole world fell apart, study was the key. It gave me stability ... If you have qualifications you have expertise and transferable skills ... If I didn't study I wouldn't be where I am now. (Learner)

The value to Open Polytechnic also comes in the form of their reputation. This can be measured in terms of the numbers who study with them and the feedback they get from their students about the extent to which they are meeting their needs. However, they are also aware that in relation to the adult teaching qualifications they would like to have more connection with employers to ascertain the extent to which learners' teaching practice has changed.

Conclusion

Those interviewed for this case study have independently conveyed their view on ODL as it is delivered in the adult teaching qualification run at the Open Polytechnic. In terms of consensus the following points are made:

- it takes time to design and develop programmes and there is a substantial upfront cost for this
- technology provides the opportunity for learners to engage interactively with resources, assessments, and other learners
- support needs to be provided - academic, pastoral and technical
- ODL suits learners who are motivated, independent and self-directed and who have access to technology
- the value of ODL comes from: its scale, reach and accessibility; its immediate application to learners' work; and the scope it provides for learners to prepare themselves for future careers while still working.

All of these points align to the research mentioned at the start of this case study.

A Learner's Story: Learning has changed my life – it has apprenticed me.

Anna's open and distance learning journey has taken her to where she is now – a confident and articulate practitioner, doing a job she never dreamed would be for her. This journey started while Anna was at home with a small child and she started on adult teaching qualifications. It has continued as she has gone ahead with work as an adult educator and subsequently carried on with further qualifications in this field. The driving force for starting the journey was her desire for "a new life and a good income".

Most of Anna's study in this field has been online, supplemented with some paper-based materials. To start with she found the distance approach challenging, but is now, "A huge fan. I tell everyone to study this way. It's great because it is flexible, real time." However, Anna also stresses the need for direct and online contact with a tutor, "You need communications with a tutor. This doesn't have to happen right now, but the next day and the next month – it comes down to the tutor."

Anna also connects with other learners. As part of the courses Anna has studied there is the facility for online communities where learners can ask questions and chat with others. "This can make you feel like you are in a class, but not. You can chat with others and the tutor." The chat can be led by the tutor who may, for example, pose a scenario to which learners can respond. Anna notes that people are more likely to participate when it is for summative assessment. "In terms of participation, it comes down to content. And if it is worth a mark, everyone talks. But if it is not worth anything, they are not interested. Also engagement drops off once people have what they want. It is hard."

Distance learning assessment for Anna happens in two ways. Formative assessment occurs through engagement with online activities, for example after reading resources there are opportunities for multi-choice activities, short paragraphs, and quizzes. Summative assessment happens through submitting written work online and through practical

activities from the workplace where Anna gathers evidence of her work, has it verified by a supervisor before submitting it for assessment.

Anna thinks there are a number of factors associated with her success. Firstly, her motivation and determination to succeed, "I'm well-disciplined. I have my study days and I tell people you can't talk to me until after three o'clock. Not everyone shares my passion to know and understand. I want to be able to do really well – learn and support others."

The next key to success for Anna is her tutor and the relationship she has developed with her. "Mentally she believed in me when I didn't have hope for myself – she believed I could [succeed]. She has changed my life." Along with the tutor having belief in Anna goes the practical aspects of being there to answer questions and challenges related to the learning and assessment. Anna's current employer is not involved with her learning.

Underpinning the learning approach, the resources are also key. Here Anna talks about the importance of good design, "It's not just about powerpoints," the importance of bite size chunks and relevant material. She stresses the importance of having both subject matter experts and e-learning facilitators so that the learning resources suit the digital environment.

However there are barriers to distance learning. Anna talks about the need to have good literacy levels in order to be able to cope with the reading materials. She also comments on the need to have access to technology and admits that while she doesn't have the "cool stuff" technology wise she manages, including using her local library when she needs to print materials.

The overall benefits and the value to Anna of being able to undertake distance learning are immense. From a practical perspective it would take her around 45 minutes to drive to the closest tertiary institution and then pay to park. Associated with this are the costs for child-care. Value has also come from some of her study being fees-free. "It's cheaper online and free [to stay] at home and study."

Value does not only come in the form of cost savings, it also comes from being able to do what is timely and relevant to the work Anna is currently doing. It also enables her to prepare herself for future work by taking courses that are not on offer through the professional learning available at her work.

Anna admits that sometimes distance learning can be lonely – but the benefits outweigh this. In terms of getting qualifications, "It gives stability. If you have quals you have expertise, transferable skills. Study brings about family transformation. It has transformed my little family. I never dreamed of this life. I have a house, a great job and I'm still studying. If I didn't study I wouldn't be where I am now."

As Anna's story shows she is committed, determined, and motivated. The distance learning approach has worked for her. And it has not just been about getting qualifications. As she puts it, "It is not about getting from the start to the finish, it is about the journey."

Appendix Four: Research Approach

The framework for this research was the explanatory case study approach (Yin, 2009; 2014). This was taken to explore "why" and "how" questions and to allow for explanation and description based on different perspectives and interpretations of the tertiary education organisations, employers, learners and trainees/apprentices (Merriam 1998; Yin, 2009; 2014). At the same time the case study approach also provided the opportunity to gather examples that readers of the research can use to transfer to their contexts and their practice.

Gathering the different perspectives allowed for an exploration of the ODL and workplace training system in the case study organisations. This had the benefit of being able to explore what, how, and why at each level, along with the barriers and enablers, and the value that the combination of workplace-based learning and ODL brings to each of these groups.

The cases for this research were:

- Open Polytechnic New Zealand where the case focused on a Level 5 qualification in adult teaching. There were four interviewees: the programme manager, education designer, academic staff member, and a learner

- BCITO where the case focused on a level 4 qualification in carpentry. There were seven interviewees: two national office staff, two operational staff, two employers and a newly qualified builder

- Careerforce where the case focused on level 2 and 3 qualifications in health and wellbeing. There were six interviewees: a resource developer, workplace advisors (2); an employer, and workplace learning support staff (2)

A purposive (convenience) sampling approach was used as the Commonwealth of Learning wished to get cases that showed different approaches to ODL and workplace learning (Cohen et al., 2000; Bamberger; Rugh and Mabry, 2006) with cases from each sector being selected on the basis that they are willing to participate and in a position to answer the research questions (Yin, 2014).

Rapid Literature Review

The research started with a rapid review of literature. This will be used to inform the development of research tools. It will also be used to cross check the findings of the thematic analysis.

Data Collection

Qualitative data were collected through semi-structured interviews that allowed for in-depth exploration of why and how ODL and workplace learning approaches work. It also allowed for wide ranging discussions on the 'value' of this approach to explore beyond cost-benefit in monetary terms and incorporated broader concepts that look more generally at the merit, worth and significance of the ODL approach for each of the interviewees in the cases (King, 2017).

Interviews took place by phone (7) and face-to-face (10). The semi-structured approach provided the opportunity for flexibility in the interviews and allowed participants to talk about issues, interests, beliefs, motives and explanations that are of interest to them (Cohen et al., 2000).

Data Analysis

Given the small size of this study the analysis started at the individual case level using a grounded theory approach (Corbin and Strauss, 2007). This was followed by cross-case analysis using Charmaz's (2006) constant comparative approach to grounded theory. This approach meant looking across the cases (learners and trainees/apprentices, employers, staff working for education providers) to identify commonalities and differences. Using this approach meant the findings emerge from the perceptions and experiences of those who have told their stories.

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