THE EXPRESSION, EXPERIENCE AND TRANSCENDENCE OF LOW SKILLS IN AOTEAROA NEW ZEALAND



ADULT LITERACY AND NUMERACY
INTERVENTION LANDSCAPE IN AOTEAROA
NEW ZEALAND

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ABOUT THIS RESEARCH PROGRAMME

Over 1.3 million adult New Zealanders live with low literacy and/or numeracy (L+N) skills, with a strong over-representation of Māori and Pacific peoples. This has significant economic and social costs, including increased risk of unemployment and poverty, detrimental effects on physical and mental well-being, and decreased social and political attachment.

This programme applies a mixed-method approach to the following research aims: to build a detailed population-wide picture of those with low L+N skills; analyse their life-course pathways and effectiveness of interventions with respect to a range of economic and social outcomes; forecast future changes in population skill level; and develop an understanding of the barriers and enablers that build resilience to risk, along with pathway to transcend low skills.

For further information about our programme and other outputs, see: www.workresearch.aut.ac.nz/low-skills

ABOUT THIS PAPER

This working paper describes the L+N intervention landscape in Aotearoa ascertained from discussions with key stakeholders in the sector. These discussions were focused on identifying key aspects of the L+N intervention landscape including high-level government policy and strategy, specific provider and referral pathways, and the type of individuals for whom L+N learning is designed.

Insights from these discussions reinforce the known complexity of the L+N field that, in part, stems from the heterogeneity of the adults who are classified or identified as having L+N needs and the different learning environments these learners can be directed to. A learner-centered theoretical framework was created. Attention was also given to the work of Māori scholars to address the need to envisage the L+N intervention landscape in culturally responsive ways.

The inclusion of insights from multiple providers, government ministries and departments, and other service providers in this ecological conceptualisation, contributes to the richness of this landscape, and is represented in the report through the development of an infographic.

DISCLAIMER

The views expressed are those of the authors and do not necessarily reflect the views of the organisations involved.

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1 Introduction

Findings from the Programme for the International Assessment of Adult Competencies (PIAAC) (Round 1, Cycle 2), demonstrate that over 1.3 million Aotearoa New Zealand adults live with low literacy and/or numeracy (L+N) skills, with Māori and Pasifika¹ peoples over-represented in this group (OECD, 2016). The economic and social cost from having this proportion of adults with low L+N skills in Aotearoa New Zealand is estimated at \$3 billion per year (Cree et al., 2012). For example, low L+N skills are linked to an increased risk of unemployment and poverty, detrimental effects on physical and mental wellbeing, and decreased social attachment (Vorhaus, 2009; Hanushek et al., 2015).

Despite individuals with low L+N skills having the most to gain from support in skill development (Satherley, 2018), past research suggests that they are the least likely to participate in programmes or have access to opportunities to up-skill in the labour market (Nilsson & Rubenson, 2014; Piercy & Steele, 2016). Furthermore, although surveys such as the PIAAC have served to progress the identification of the variation in L+N skill levels within populations, literature regarding longitudinal trajectories of this population, the impact of policy interventions, and forecasts of future L+N levels is scarcer.

Research in L+N interventions tends to focus on short-term improvements in skills post-intervention, usually measured in relation to employment and education outcomes (Reder, 2014). Such research is often limited to those who participate in some form of policy intervention that is classified specifically as an L+N programme. As such, the impact of the (much) wider range of programmes that embed L+N skills is less understood. As a small part of a much larger project, this paper attempts to construct an over-arching picture of the adult L+N intervention landscape and provide a theoretical frame through which these interventions can be understood. It further assists by identifying what can and cannot be measured through administrative data and therefore the difficulty in accurately measuring outcomes from these interventions in traditional ways.

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¹ In NZ, the terms Pacific and Pasifika refer to Polynesians whose culture, language, heritage, and ethnicity originate from the islands of Samoa, Tonga, Niue, Cook Islands, Fiji, Tokelau, and Tuvalu. While there are many similarities between the Pacific Island nations, there are also distinctive differences and nuances that set them apart, such as the levels of acculturation, migratory patterns, and citizenship (Cochrane et al., 2020, p. 24). In this report Pasifika is used as a pan-Pacific term to refer to these communities collectively, while Pacific communities will be used to reflect the multiple and different groups that also need to be acknowledged.

This larger programme of work aims to fill some of these gaps using rich administrative data sourced from Statistics New Zealand's Integrated Data Infrastructure (IDI) to examine the numerous direct and indirect outcomes of interventions, as well as different life-course pathways, that include and go beyond L+N skills. This quantitative research will be supplemented with qualitative work that explores cultural context, value systems, enablers, and barriers to transcending low L+N skills. In addition, the qualitative work will focus on L+N as social practice, which is, the ways people use L+N in the relational activities of their everyday lives that matter to them.

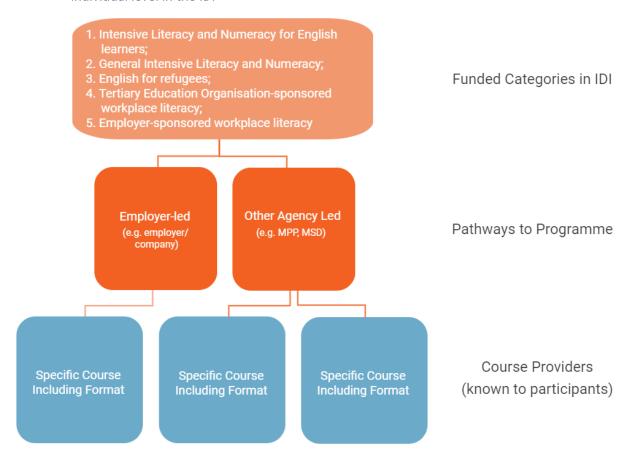
While this programme of work is focused on adults who have been classified as having low L+N skills through PIACC proficiency scores, the limitations of these measurement tools, as well as impacts from the unique lived experiences of individuals through childhood, adolescence and adulthood, are equally important factors to consider. The first working paper of this project examined conceptual and definitional issues, as well as relevant aspects of the Aotearoa New Zealand context, in order to provide a high-level overview of the existing evidence. It discussed what is meant by 'skill' and 'competency', how these terms are associated with L+N, and how the OECD's PIAAC defines and measures L+N skills. The paper also provided an overview of the existing evidence on trends in Aotearoa New Zealand's L+N skills levels and patterns and the links between skills and economic outcomes and wellbeing. This work also highlighted the structural inequalities Māori and Pasifika peoples experience due to colonisation and its impact within the education system and labour market (Cochrane et al., 2020). In order to offer greater insight into the landscape of L+N skills in Aotearoa New Zealand, this paper looks more deeply into the context of policy interventions which are targeted at improving the L+N skills of adults.

The current paper was created based on the following assumptions, that (a) information about policy interventions aimed at increasing L+N skills levels in Aotearoa New Zealand, including information about their participants, would be readily available; and (b) there would be a clear and transparent framework around which a large number of policy and community institutions would: assess the need for; design, implement and evaluate; and track the progress of such policy interventions. Based on these two assumptions, a model of investigation was established. We began this process by tracking funding steams, and pathways that result in participants taking up specific programmes as illustrated in Figure 1.

The information used to develop our investigative model was based on the different datasets available in the IDI (over 70 administrative datasets plus a few additional from private providers and NGOs). This starting point was the basis for the discussion questions used when talking to the numerous stakeholders in funding, providing pathways onto the programmes and provision of the programmes.

The questions used to guide these discussions, in conjunction with Figure 1 are provided in appendix A and the stakeholders who participated in these meetings in appendix B.

Figure 1. Funding landscape of adult L+N programmes in Aotearoa New Zealand recorded at the individual level in the IDI



From discussions with stakeholders (members of the advisory group for the wider L+N skills project and their industry contacts illustrated in appendix C), it became clear that there is no unified L+N policy intervention landscape for Aotearoa New Zealand. These discussions also highlighted the need for further research in order to more clearly conceptualise pathways for improving L+N skills and/or achieving positive life outcomes as measured over longer time frames and wider measures than have been used previously.

The current paper presents insights regarding the L+N landscape in Aotearoa New Zealand and areas needing further research that were ascertained from these discussions. The L+N landscape encompasses the identification of high-level government policy and strategy, specific provider and referral pathways, and the type of individuals for whom L+N learning is designed. This landscape reflects the complexity of the L+N field that, in part, stems from the heterogeneity of the adults who are classified or identified as having L+N needs and the different environments and whānau (family)

situations that may enable them or inhibit their ability to transcend the negative impacts of their perceived low skills levels.

Importantly, these discussions highlighted the need to place the individual learners at the centre of this landscape. In order to do this, we developed an ecological model of the expression, experience and transcendence of L+N learning that incorporates the relationships between the individual learner able to access L+N programmes, their whānau and communities. The inclusion of insights from multiple providers, government ministries and departments, and other service providers in this ecological conceptualisation, contributes to the richness of this landscape. The aim of this investigation and model development is to contribute to the goal of improving the long-term wellbeing outcomes of L+N learning provision at the individual, whānau and community level.

Section 2 of this paper explains the current understanding of L+N skills held within the wider project, followed by an explanation of our discussions. Section 3 elaborates on the relevant theory used to develop a new learner-centred structure influenced by bioecological models. Section 4 presents this learner-centred structure. Section 5 discusses the policy implications discerned from our discussions. Section 6 provides a brief conclusion outlining where we think the next steps should be in establishing the L+N intervention landscape.

2 Advisory group and stakeholder discussions

This section begins by explaining the Aotearoa New Zealand adult L+N skill environment. This has been explained in far more detail in Cochrane et al. (2020), thus only a summary is provided here. We then describe the meetings with project stakeholders and their contacts and summarise the key insights that we drew from these discussions.

As described in Cochrane et al. (2020), Aotearoa New Zealand's current L+N landscape has been influenced by a number of high-level strategy documents published in the period spanning the early 2000s to now. These policy documents include: responding to and adapting the OECD's skills programmes, such as, the Definition and Selection of Competencies (DeSeCo) (2002); and those shaped by the Adult Literacy Strategy (ALS) (2001), and successive iterations of the Tertiary Education Strategy (TES) (2002; 2010; 2020). An area of debate and tension reflected in these documents has been the economic and social imperatives of learning and which should have prominence. Over time, both the TES and L+N learning operational policy practices have increasingly focused on the economic imperatives for learning.

Another point of tension is the need to acknowledge obligations under Te Tiriti o Waitangi and incorporate Te Ao Māori (the Māori worldview) into L+N strategies and their implementation. Work has been undertaken to provide insights from Māori stakeholders beginning with the response to the ALS by Te Puni Kōkiri (TPK), *Te Kawai Ora: Reading the world, reading the word, being the world* (2001). Responses to later versions of the TES and the short-lived 2008 New Zealand Skills Strategy were *He kai kei aku ringa: The Crown-Māori Economic Growth Partnership* (Māori Economic Development Panel, 2013) and *Haea te pū ata: A national strategy for Māori adult literacy and numeracy 2016-2020 (and beyond)* (2020) developed by the New Zealand Council for Education Research. These documents illustrate concerted effort on the part of stakeholders to identify and meet the particular L+N needs of Māori and Pasifika in culturally appropriate ways. It is important to note that the current ALS has expired and this lacuna in policy development has not yet been addressed.

L+N learning is provided through a range of organisations (please note this is discussed further in this document in Section 3). Key tertiary education organisations (TEOs) identified in Cochrane et al. (2020) include the compulsory sector (High schools and Wharekura); Whare Wānanga; as well as Polytechnics, Institutes of Technology (ITPs) and Industry Training Organisations (ITOs) (currently being merged into Te Pūkenga); and Private Training Establishments. According to the 2019 budget, public funds for L+N provision include:

- i. Adult and Community Education (ACE) in Communities;
- ii. ACE Emergency Management Pool;
- iii. ACE in ITPs and Wānanga;
- iv. ACE in Schools;
- v. ACE Search and Rescue;
- vi. Adult Literacy Educator Fund;
- vii. Gateway;
- viii. Industry Training Fund;
- ix. Intensive L+N (ILN);
- x. ILN English for Speakers of Other Languages;
- xi. ILN Refugee English Fund;
- xii. Student Achievement Component (SAC) at level 3 and above;
- xiii. SAC at levels 1 and 2;
- xiv. S. 321 grants for School of Dance and School of Drama;
- xv. Youth Guarantee; and
- xvi. Workplace Literacy and Numeracy Fund (TEO/Employer-led).

Based on discussions with personnel from the Ministry of Education (MoE) (see appendix B) ii, v, and xiv were excluded from our discussions due to their relatively weak focus on foundation L+N and their very limited target participants.

2.1 Stakeholders

The wider project that this current paper is part of has an advisory group that includes relevant stakeholders to the L+N sector in Aotearoa New Zealand. The wider research team meets with this advisory group at least once a year. One of the roles of the advisory group is to provide policy-based and applied information, while another is to provide oversight and guidance. Thus, the advisory group is key to ensuring that the project delivers outcomes that are end-user focused and have the potential to inform policy and practice in the L+N field (see appendix C).

As mentioned earlier, we assumed that: (a) information about policy interventions aimed at increasing L+N skills levels in Aotearoa New Zealand, including information about their participants, would be readily available; and (b) there would be a clear and transparent framework around which a large number of policy and community institutions would: assess the need for; design, implement and evaluate; and track the progress of such policy interventions. After a number of searches for such information, we realised we could not locate it easily. Given the lack of literature on the overarching L+N intervention landscape and the necessity of insights into these topics to the wider project, we reached out to key members of our advisory group for this information.

Based on the assumptions that led to the creation of Figure 1, we wanted to access information on funding, pathways, and providers, specifically. We also sought to gain further insight into the current L+N interventions that are likely to be significant to the qualitative and quantitative branches of the wider project. While advisory group members cover all of these categories for example: funding (government bodies); pathways (different government bodies and NGOs) and providers (REAP, Literacy Aotearoa and other providers), we were particularly interested in the Intensive L+N (ILN) programmes so also asked L+N literacy experts (from the Tertiary Education Commission (TEC) and SkillsNZ) for advice on additional providers to include. Further suggestions on who to speak to next were also made incidentally during the meetings, thus the range of providers expanded accordingly until there was uniformity in the information we were given.

We met with policy officials from the MoE, Ministry of Pacific Peoples (MPP), Ministry of Social Development (MSD), TPK, TEC, and Treasury to gain insight on funding, pathways and programmes. The providers of ILN learning that we met with included Education Unlimited (not-for-profit), Edvance, English Language Partners (PTE), Literacy Aotearoa and REAP, all of which are long-term providers of literacy education in the community. We also met with providers that embed L+N into their SAC funded programmes, such as Te Whare Wānanga o Aotearoa and Tai Poutini Polytechnic, as well as key consultants and L+N researchers.

The meetings were held between September 2020 and June 2021, see appendix B for a summary of these meetings. The meetings facilitated discussions framed by consideration on the hierarchal structure of central government funding, referral organisations, provider groups and individuals with low L+N skills, and whānau and communities, as illustrated in Figure 1. The structure in Figure 1 was used to highlight the interactions between: those organisations; the requirements and constraints of such a system; and, the individuals, whānau and communities targeted by different policy interventions that include L+N learning provision.

2.2 Learners, pathways, providers and programmes

The discussion held with stakeholders were framed around the hierarchical funding structure provided in Figure 1 yet the common theme that came out of all of these meetings was the focus on the learner. Therefore, this section outlines inverts figure 1 to focus first on what we were able to find out about learners (those who engage in L+N learning) including: how learners access or are guided to L+N learning; the providers of L+N learning; and finally, how these programmes are funded. It is important to acknowledge that information on learners is scarce within administrative data sources available in the IDI. As such, these discussions reinforced the importance of the quantitative and qualitative parts of the wider project to the L+N stakeholders that we spoke with.

2.2.1 Learners

Learners are diverse, with a majority self-selecting into L+N programmes. Their focus may be on ILN learning, delivered through a provider or in the workplace and designed to improve their skills levels and enable them to access further training at (foundation) levels 1 and 2 in the New Zealand Qualifications Framework (NZQF), or so they feel more comfortable and confident in their workplace. Learners' focus might also be on community programmes, where L+N learning is embedded and incidental to their learning goals. Learners may also be compelled to participate in programmes as part of maintaining access to social services or as part of an immigration pathway. Finally, L+N learners could also be progressing to higher qualifications, shifting from full-time foundation learning at levels 1 and 2 to certificate qualifications at levels 3 and 4 in the NZQF. With this heterogeneity as a starting point the complexity of the L+N landscape immediately becomes apparent and is further complicated by the range of programmes.

2.2.2 Programmes

The types of programmes that provide L+N learning are as diverse as the learners who participate in them. Indeed, when we asked providers if they offered intensive L+N and embedded L+N, such as healthy cooking on a budget or Driver licence courses, the answer was invariably yes. And yes was also the answer to: do you offer your programmes online, in small groups or to individuals, in family/whānau, iwi-based settings? We also asked if there were consistent titles used for these programmes and the answer was no, as most programmes are tailored to purchasing clients (employers/government agencies) as well as learner preferences. This is because at the core of these programmes is the need to attract learners who, aside from migrants and beneficiaries, are not compelled to engage in L+N learning. In accordance with this trend, the names of L+N programmes are

designed to attract learners from all walks of life by, for example, illustrating the usefulness of the programme to their everyday lives.

The titles also rarely directly reference L+N terms in order to avoid deficit messaging. This highlighted to us that it is important to remove the stigma around the need to re-engage in education and training, particularly when the need to re-engage with education as an adult has arisen from traumatic experiences during childhood and adolescence in the compulsory system. This reinforced the need to reframe this discussion around the learner first and foremost. The names of programmes are also influenced by the funding streams. For example, the names of programmes in the Employer-led fund for ILN learning are often branded by the company and to the context in which the company requires L+N skills development.

Given the plethora of names, range of qualification levels, and degrees of formality with which these programmes are offered it is impossible to categorise L+N by the names of these programmes. In order to make sense of the L+N intervention landscape one alternative is to consider L+N programmes in terms of provider type and the funding streams providers access/apply to attract learners and forge partnerships with other stakeholders such as employers and charitable organisations. In the remainder of this section, we describe the different providers of L+N learning and the funding streams that they draw on to shed light on programme availability and type.

2.2.3 Providers

Early in our discussions, a letter from the Literacy, Language and Numeracy Community of Practice (LLN CoP) to the TEC was shared with us. The letter outlined some key recommendations of importance including the encouraging the government to commit to the United Nations Sustainable Development Goal 4.6² and develop L+N policy at the level of the Tertiary Education Strategy with an implementation plan. The group also made specific operational recommendations including that Ako Aotearoa should extend their role in the field of L+N and that NZIST³ should have a L+N vision for L+N support for students and professional development and learning in L+N for staff.

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² Target 4.6 is "Universal literacy and numeracy: By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy" (https://sdg4education2030.org/the-goal).

³ NZIST stands for the New Zealand Institute of Skills and Technology which is the central organisation for all Polytechnics, Institutes of Technology and, in time, will also absorb some ITO functions. It is more commonly referred to as Te Pūkenga.

The LLN CoP is a support network for providers with the capacity for research and strategic initiatives and was located at the Industry Training Federation (ITF) until it was dis-established. The LLN CoP is currently hosted by Ako Aotearoa. Members of this group include staff from Ako Aotearoa, and a range of TEOs including:

- Wānanga;
- ITPs (now regional subsidiaries within Te Pūkenga);
- Interim ITOs; and
- PTEs.

There are also consultants and community organisations that work alongside these TEOs to provide L+N learning. Schools, particularly High schools, are also an important location for adult and community education. However, we will first explain the above four provider groups in more detail.

Wānanga offer qualifications that span the full range of the NZQF from levels 1 to 10, while ITPs offer qualifications from levels 3 to 7, and in some cases at levels 8 and 9. The focus of interim ITOs is on qualifications at levels 3 and 4, although they are involved in, and arrange training at levels 1 and 2 as well. PTEs and community organisations focus on offering qualifications and programmes at levels 1 and 2 although some PTEs may offer higher level programmes (more similar to ITPs) but those offerings are not the focus of this work. Even when the focus is limited to these foundation levels it may not always be L+N learning. For example, the Youth Guarantee Fund that is targeted at Youth Not in Employment Education and Training (Y-NEET) operates at the foundation levels and facilitates programmes delivered primarily by PTEs that may or may not include L+N learning.

It is important to note that there are also providers that may or may not see themselves as L+N learning providers, or even as TEOs. These types of providers are embedded in social policy programmes aimed at social inclusion and with a focus on employment and capability building (also a key L+N policy intervention focus). One important policy example, that we learned of through our discussions, is the Tupu Aotearoa programme funded and organised by the MPP. This programme, like Whānau Ora, is a connecting service that helps people locate providers that offer support to gain employment or provide learning opportunities (or do both) (MPP, n.d.a). Some of these providers are known TEOs, such as Literacy Aotearoa, however most are Charitable Trusts.

Such services, which are targeted at employment or further learning, are also an important part of Whānau Ora and regional MSD case management services. However, given that these programmes operate and are funded on a regional- or established-need basis, information is scarce about the

providers and specific services offered. What is clear is that case managers have the capacity to refer individuals to L+N programmes but there is no over-arching national policy on how this is implemented. Instead, it appears that individual case managers have a great deal of flexibility and often build on their own community knowledge and engagement to assist their clients.

MPP also offers Taloa Science, Technology, Engineering and Maths (STEM) funding that is targeted towards the formal compulsory education and young students and therefore not really the focus of this project. However, the fund has three streams, two of which are focused on community located delivery which is whānau-oriented. The Kenese Fund, for example, delivers STEM content to students and their parents. Given the community focus of this funding, programmes like these may increase whānau L+N and why they have been included here. MPP also funds language acquisition for different Island nations, which is an important wellbeing initiative for diaspora communities such as Pasifika. For example, language acquisition serves as culture preservation and, of greater note to this project, L+N learning may also be embedded in language programmes and assist the wider whānau.

What these organisations in the LLN CoP, and those located in communities illustrate is the **depth** and **breadth** of L+N programme provision in Aotearoa New Zealand. The depth stems from the location of L+N learning, as it is embedded in qualifications and accredited units implemented by a diverse range of organisations, and across all levels of the NZQF. There is also provision of L+N below NZQF level 1. These types of programmes tend to be aligned with Intensive or specialised L+N learning, and are wideranging in terms of style of teaching, course length, and location. As such, provision of this type of L+N programme connects to the breadth whereby programmes are run through communities including where tutors visit peoples' homes.

2.2.4 Funding

As illustrated above, L+N is funded at multiple levels through multiple providers. As a guide, ILN learning is offered at or below the foundation levels, while embedded L+N learning is offered at levels 1 to 4. The type of L+N required varies between different types of TEOs, but all TEOs, including universities, need to make a commitment to embedding L+N learning in their programmes. The provision of L+N learning below the level of the NZQF is funded primarily through the ACE fund and the ILN fund. L+N at levels 1-4 on the NZQF are funded through SAC funding including the Industry Training fund.

The ACE fund is very broad and can be accessed by Schools, Wānanga, ITPs, PTEs, and community organisations. Historically, this fund was also accessed by the university sector and covered a very wide range of courses. However, since policy changes occurring in 2009 and onwards, the ACE fund was

substantially cut. Significantly for this report, organisations that wish to access the ACE fund now need to explicitly demonstrate that embedded L+N learning is present.

The specialised ILN fund includes the:

- Intensive literacy and numeracy fund; and
- Workplace Literacy and Numeracy (WLN) fund.

The WLN fund has TEO-led and Employer-Led funding streams. It was suggested to us that, rather than Employer-led, Employer-sponsored is a more accurate label as it is often the case that the applications are made by TEOs working alongside employers to access this fund.

ILN is also funded through the specialised English for Speakers of Other Languages (ESOL) fund which includes the:

- ILN ESOL fund; and
- ILN Refugee English fund.

Additional funds that contribute to ESOL include the: (1) Immigration Levy; and (2) Pre-purchased English Language Tuition (previously known as English for Migrants).

The provision of NZQF-based L+N learning is funded by either the SAC fund or ITF and is tied to enrolment numbers and the achievement of outcomes for learners such as moving into employment or further study post-qualification completion. These funds are also used for micro-credentials, an international trend in the use of short, highly relevant courses, not only designed to upskill, but to signal to employers what skills have been gained from the programme.

In relation to funding, it is important to note that courses funded at level 4 and below tend to be framed as L+N programmes simply due to the type of organisation accessing the funding, rather than the nature of what is being provided. For example, interim ITOs are also engaged in delivering training related to: Emergency Management and Search and Rescue that is not foundation-based learning. The tendency to assume that the level of a qualification also denotes the level of L+N learning is part of what makes the sector challenging to characterise clearly and fully.

Funded places in these programmes are only available to residents, although non-residents may participate if they use private funding to afford a place. For example, English Language Partners make a point of using charitable funding to allow asylum seekers to complete ESOL courses. Upon receiving this information, it became clear to us that the programmes and places that offer L+N learning extend beyond what is publicly funded.

2.2.5 Literacy and Numeracy for Adults Assessment Tool (LNAAT)

It is also important to note that students need to take the Literacy and Numeracy for Adults Assessment Tool (LNAAT) as part of accessing publicly funded programmes (except for ACE-funded programmes). Students sit the test initially as part of determining eligibility/suitability for funded places on L+N programmes (other criteria also apply such as prior qualifications/enrolment in programmes). The LNAAT may also be used to measure progress so students sit the test at the conclusion of the programme and sometimes during. Use of the test is widespread as the test is part of the publicly funded industry training programmes, such as apprenticeships, but the way it is used varies greatly across providers: the extremes are those who use it to access the funding versus those who have championed it since its development and have integrated into their practice to measure need, delivery and outcome.

2.3 Fragmented knowledge

2.3.1 Siloed research and policy development

As previously mentioned, research is being conducted in the field of adult L+N learning provision. This research is supported by organisations such as Ako Aotearoa and historically by the ITF, and driven by key policy levers such as ILN funds and the requirement to embed L+N learning in formal qualifications. Organisations with capacity, such as Literacy Aotearoa, Te Whare Wānanga o Aotearoa, and Edvance, also conduct research (for example, commentary on policy) to inform operational practice. Such research tends to focus on specific initiatives within L+N learning, thus there is no document that provides a thorough and detailed overview of L+N learning provision for adults in Aotearoa New Zealand. Our stakeholders made it clear that the creation of a document investigating the L+N landscape in-depth would be welcome and very helpful. As highlighted in section 2.2.3 the LLN CoP is also keen for a new tertiary L+N strategy to be developed. TEC is currently working on mapping L+N as a precursor to developing policy for the L+N field but this work has not yet been published.

The TEC is an important funder of intensive and embedded L+N learning and, accordingly, holds a wealth of information on the L+N learning sector. However, ACE funded programmes, SAC funded programmes (foundation levels in industry training and other TEOs) embed L+N learning to different degrees and in different ways.

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⁴ The previous strategy expire in 2017.

Another level of variation stems from MSD, TPK, and MPP, all of which provide funding to organisations for programmes that incorporate aspects of embedded L+N learning. These programmes are located in broader fields of policy work, for example, they are sometimes developed in isolation from other agencies, which can create barriers to the identification and tracking of L+N learning provision. Further difficulties in compiling information are due to variations in practice at a regional level, and often even at an individual case manager level.

2.3.2 Data: Ad hoc, unavailable or unused

Although pathways to L+N learning vary, what is universal is that the processes that facilitate enrolment in programmes outside specific TEC funds are informal and often not recorded systematically. Even if they are, that information is not always available to public sector organisations in a useable form, and is not recorded in any linked administrative datasets within the IDI.

Programmes that are characterised and funded as part of the ILN fund are not marketed as dedicated L+N learning due to either the need to illustrate relevance or partnership arrangements with external organisations in the community, MSD or businesses. An additional challenge in terms of information collection is due to the embedded nature of L+N learning itself. Many programmes are identified as having a L+N component, however this is often only one feature of the programme. Due to the stigma of having low L+N skills, the L+N learning component is also often not advertised. Because of these factors, L+N learning provision is, in some ways, invisible as a specific field of practice.

While research is available on LNAAT, the literature consists mostly of commentary or is practice/instruction-oriented. However, the LNAAT test results are available within the IDI from 2008 and it was made clear to us that the lack of analysis using this data is a source of frustration among L+N learning providers that they wish could be addressed.

The LNAAT is a challenging policy lever to analyse because its use is inconsistent. This inconsistency stems from a dichotomy of advocacy and support from some L+N providers and strong opposition from others. As such, many organisations have their own tests that they use to assess learners' progression. Usage of the LNAAT is often dictated by the staff within specific providers or funding streams with LNAAT usage requirements. Given this inconsistency, it is difficult to assess the value of the LNAAT data to understanding the overall adult L+N landscape.

2.4 Challenges

2.4.1 COVID Response

The impact of COVID was brought into the discussion at both the provider and policy levels. From a policy perspective, the impact of COVID is ongoing as data are still being collected and as with other forms of information still tend to be siloed into specific government bodies. A short-term impact of COVID was that TEOs and community organisations had to transition L+N learning programmes to online platforms. Many organisations and their tutors were able to thrive in the online environment, and the provision of digital L+N learning alongside the specified programmes opened up new understandings and opportunities for learners. One heart-warming example is learners discovering that they could also use platforms like Zoom to talk to family located overseas.

However, some organisations were not able to keep their programmes going during the Alert Level lockdown and restrictions which spanned 25 March to 7 June 2020.⁵ At Alert Level 4, only essential workers (such as healthcare providers) were able to work, while others had to isolate in their homes, and these restrictions were in place from 25 March to 26 April. Alert Level 3 ran from April 27 to May 12 and allowed in-person groups of up to 10, but only for weddings and funerals/tangihanga, and travel between specific regions. Education was still to be delivered at home for children and, accordingly, providers across the board closed campuses. It was not untill Alert Level 2 (13 May to 7 June) was reached that campuses and schools could re-open under specific guidelines. The transition to fully online education delivery was not a change that all TEOs had the capacity to make. Furthermore, as with the compulsory sector, learners often did not have access to devices or to high-speed internet. In other cases, the nature of the programmes, such as WLN being provided in workplaces, meant that some programmes were still not able to be delivered. The need for programmes to be deferred was also understandable as L+N learning is often provided in person and either one-on-one or in very small groups. This kind of high-touch and close quarters learning environment was not possible to run under the Levels 3 and 4 restrictions.

2.4.2 Funding compliance and policy restrictions

Organisations that provide L+N learning seek funding on an annual basis and often in a piecemeal way.

TEOs and community organisations work hard to attract learners and access new funding streams.

However, different funding streams have varying requirements in terms of programme structure in

⁵ https://covid19.govt.nz/alert-levels-and-updates/history-of-the-covid-19-alert-system/

order to meet particular policy goals. Similarly, individual learners have different goals and preferences which affect the programmes in which they choose to participate. Therefore, in order to access new funding and attract learners, individual L+N learning providers offer a wide range of programmes. The implications of providers offering a wide range of programmes are: (a) data collection is difficult; and (b) research that uses the funding stream/provider as a starting point comes with challenges in characterising and accounting for the myriad of programmes and types of participants.

Constraints imposed by funding requirements, such as the use of LNAAT and specified learning hours, also create challenges for the providers and learners. For instance, specified learning hours create barriers for learners as they are often unable to complete programmes that interfere with their work and family responsibilities. While the WLN effectively removes this barrier, given that L+N programmes offered in the workplace are often run once, the capacity for this programme's effectiveness is limited. This is because the completion of only one programme may not ensure that a learner's need for L+N learning is met sufficiently (and it is often the case that it is not). ILN takes a long time and learners would benefit from access to multiple in-house and workplace-based L+N programmes because: (a) it takes time to build the confidence to seek out higher level programmes and, more significantly; (b) higher-level programmes come with a high opportunity cost. For example, higher-level programmes often require that L+N learning be completed during personal or work time which restricts full-time employment. Such an arrangement may not be possible depending on job type or whānau income levels — the latter issue is particularly pronounced for Māori and Pasifika who are employed in secondary industries that tend to be lower paid and also over-represented in low L+N (Cochrane et al., 2020).

An additional issue of interest is the evolving policy and practice discussion around micro-credentials.⁶ Although a unit standard in the NZQF, in and of itself, could be seen as a micro-credential, TEOs delivering L+N learning are beginning to express a preference for using non-accredited (but still quality assured) micro-credentials, (for example Edubits offered by Otago Polytechnic). Please note that NZQA is also able to and has approved micro-credentials. The benefit to learners, and employers, is that they gain a small but coherent specific qualification that requires less time and financial investment than certificate level programmes. Micro-credentials are offered at all levels of the NZQF, and by all TEOs including universities.

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⁶ See TEC for more details: https://www.tec.govt.nz/funding/funding-and-performance/investment/planguidance/micro-credentials/

2.4.3 Cultural concerns/Learner-centredness

Important challenges that were posed to us during our discussions related to both the wider project and the adult L+N landscape in Aotearoa New Zealand. One challenge, from key staff at MSD, was the need to avoid using correlations to make causal inferences when using quantitative data from the IDI. MoE staff pushed us to move away from a systems- and funding stream-focused understanding in favour of an approach that is more focused on learners and providers (a bioecological approach). As the discussions progressed, it also became clear that this learner-centred model needs additional dimensions that capture Māori and Pasifika values and world views. As such it is important that the model we develop incorporates Te Ao Māori and the work that the MPP is doing in their development of wellbeing indicators that are relevant to Pacific communities in Aotearoa New Zealand (MPP, 2020). The following section describes the theories used to develop a learner-centred structure that also incorporates indigenous responses and usage of these models to begin introducing Te Ao Māori.

3 Theoretical framework

There are three distinct threads of literature that form the theoretical framework for the adult L+N landscape. In what follows, we first explain the importance of context or environment to adult development through Bronfenbrenner's (1974) bioecological model. Then, we discuss the possible applications of Sen's (1985) capability model. Finally, we outline the concept of social exclusion and its relationship to the onion diagram (Burchardt, Le Grand, & Piachaud, 2002). The purpose of these theories is to help us understand and provide context to individual life course experiences that may have contributed to having low L+N skills as an adult. Each theory will be discussed in turn before we integrate the theories to develop an infographic in Section 4.

3.1 Bioecological theories of learning

The ecological approach is used in a range of fields in order to "understand and interpret the functioning of individuals and families in terms of their relationships with the wider community, and the cultural and socio-economic context in which the individual and family are located" (Harris & White, 2018a). The origins of this approach stem from Bronfenbrenner's (1974) study of children and the five interlocking ecological levels that comprise "social ecology—the wider physical and social environment in which children are reared" (Harris & White, 2018b, para.1).

Bronfenbrenner's (1974) bioecological systems model originated in the field of child development. However, Bronfenbrenner also applied this model to human development within the context of the adult life course (Hoare, 2008). The conceptual framework of the adult L+N field is that adult status is the result of a previous life course that recognises the dynamic interactions between children and their environments. Childhood environments contain a broad range of influences, from immediate family to the wider society, which are complex in and of themselves and because they change over time. Bronfenbrenner's (1974) bioecological systems model acknowledges interactions between environment and context to illustrate the range of influences that shape the development of L+N skills over the life course.

Contemporary understandings of adults in the field of literacy can be summarised as: adults are chronologically mature, dynamic and adaptive human beings (Hoare, 2008). Adult learners are recognised as participating in post-school/post-childhood literacy learning for a range of reasons which

include: (a) personal desires related to aspirations for self or family; (b) a self-identified need in order to manage life; and (c) a perceived or real compulsion, for example, in order to access social services (Furness & Hunter, 2019). The bioecological systems model illuminates the potential difficulties or limited freedoms, and how they might interplay, as adults negotiate these decision-making processes. The bioecological approach also offers us a way forward in developing our own formative learner-centred model, both literally and figuratively, as Bronfenbrenner's (1974) model is a design that can be used to place the individual at the centre of a circular diagram (see Figure 2).

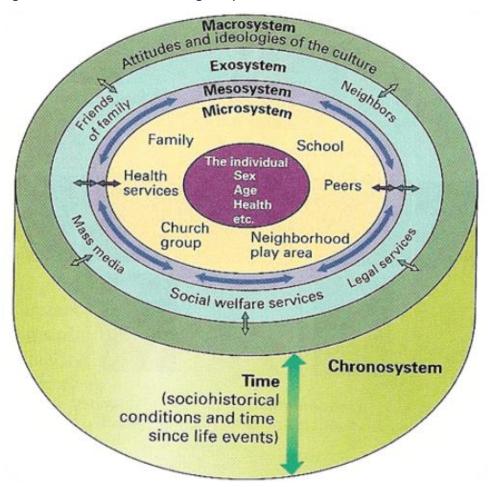


Figure 2. Bronfenbrenner's ecological systems model

Note: Figure sourced from: Santrock, J. W. (2008). Essentials of life-span development. New York, NY: McGraw Hill Higher Education.

Being culturally responsive within our model is central to the aims of the wider project. As such, we also note Māori educators' uses of and perspectives on Bronfenbrenner's (1974) bioecological systems model. We highlight these conceptualisations to illustrate the ethnocentric nature of many familiar theories, and draw attention to more inclusive framings. Bronfenbrenner's (1974) bioecological model is recognised as not dissimilar to Makereti's (1938) absorbing communities theory, in which the

individual, who prioritises others before self, is absorbed in the whānau; and, in turn, the whānau is absorbed in the hapū (subtribe); and the hapū in the iwi (tribe) (Macfarlane, 2000). Royal-Tangaere's (1997) description of Māori human development learning theory demonstrates how Māori theories can be explained using Bronfenbrenner's (1974) ecological terms. However, these terms are not used in isolation. Rather, they are coupled with relevant learning theories, such as Vygotsky's (1978) notion of scaffolding and Brunner's (1983) language acquisition support system, in a distinctively Māori way. These, and other uniquely Māori approaches such as tuakana-teina (also see Alkema et al., 2019), are addressed in Royal-Tangaere's (1997) Poutama model based on the woven lattice pattern.

Pere's (1997) wheke model of the developing child in a kōhanga reo (kindergarten) also uses the concentric circles associated with Bronfenbrenner (1974), but in Māori terms, to depict how the child will interact with the spiritual world, the people, the land and the environment (Stucki, 2010). Waller (2016) used the concentric circles and micro-, meso- and macro-characterisation of the levels in Bronfenbrenner's (1974) bioecological model to highlight how kura (Māori language immersion school) graduates, as individuals, were located in the nested layers of whānau, hapū and iwi. We share this research to illustrate that while Bronfenbrenner's (1974) bioecological model is applicable in many ways, ultimately, his theory is "not consistent with traditional indigenous epistemologies, which do not separate human beings from the natural world or spiritual domains" (Manning, 2017, p. 152).

Bronfenbrenner's (1974) model has also been utilised by literacy researchers, though to a far lesser degree than educators. We argue that the bioecological model's emphasis on the roles of personal characteristics, proximal processes, contextual systems, and historical time, has strong explanatory power in the area of literacy and provides a useful framework for open-ended qualitative research on individuals' life course trajectories. For example, this approach prompts questions such as: do barriers experienced early in life cast a long shadow over new opportunities offered as an adult and, if so, how can these be overcome? Sen's (1985) ideas on human capability offer policy makers a philosophy and framework of ideas that offer ways to emphasise the freedom and flourishing needed to achieve wellbeing throughout the life course. Accordingly, we now consider Sen's human capability approach.

3.2 Capability approach

Sen's (1985) capability approach has risen to prominence in welfare and development economics and influenced the development of a range of tools that measure wellbeing and inequality. The capability approach has shifted to the measurement of quality of life and wellbeing and away from satisfaction and utility measures (Blackburn, 2016). Key to Sen's (1985) approach is an emphasis on individual's agency and a redesignation of the role of the state. The state should enable individuals to live the life they choose, rather than impose values in a centralised or paternalistic way (Blackburn, 2016; Korsgaard, 1993). In essence the approach "emphasizes individuals' freedom to live the life that they choose according to their values" (Rogers et al., 2013). The emphasis Sen (1985) places on the consideration of barriers to freedom aligns with the way the onion diagram draws attention to the enablers and constraints that operate at different levels of environmental influence on individuals (Burchardt et al., 2002). The capability approach also aligns with the concept of social exclusion, in that it seeks to highlight what is unobserved in measures of unemployment and other such economic indicators (Gaertner, 1993).

Capabilities are the ability to achieve or the potential to achieve what Sen (1985) calls functioning wellbeing which includes wellbeing freedom, wellbeing achievement, agency freedom, and agency achievement (Korsgaard, 1993). These capabilities are essential for individuals to thrive in life and are realised within political and social systems (Blackburn, 2016; Rogers et al., 2013). Rogers et al. (2013) add to this, stating that Sen's expansive ideas have been operationalised and further clarified by the work of Nussbaum (2011) who has sought to establish specific criteria for measurement that informs the Human Development Index.

While it was not Sen's intention to develop a narrow concept, much of the discussion on the capabilities approach has been within Eurocentric frameworks that continue to emphasise ability and potential at an individual level (Yap & Yu, 2016). This individualistic focus contrasts with the collectivist values in Te Ao Māori, however, the focus on agency and substantive freedom is shared between the two concepts. As such, it is useful to examine how the capability approach has been used by Māori researchers. For example, Bockstael and Watene (2016) note that the people- and freedom-centredness of the capability approach aligns with indigenous peoples' aspirations for self-determination.

Examples of use of the capability approach in Aotearoa New Zealand include, Te Puni Kōkiri's Māori Potential Approach (Barcham, 2012; Te Puni Kōkiri, 2007) and the significant Whānau Ora policy (Taskforce on Whānau Centred Initiatives, 2010). Furthermore, Kawharu and Watene (2015) and

Watene (2016) explored the capabilities approach as a way of developing a wellbeing framework relevant for Māori (sources cited in Bockstael & Watene, 2016). However, limitations were noted. For example, Nussbaum's (2011) list of capabilities is seen as unhelpful as indigenous values are not included. In particular, Māori values regarding nature (whakapapa) and the linking of the individual with the broader collective are lacking in the literature according to indigenous scholars (Watene, 2016; Yap & Yu, 2016). These absences are contrary to Māori views on and requirements for wellbeing and development, whereby individual, whānau and hapū wellbeing, connection to eponymous ancestors, and connection to and health of ancestral lands, are all interlinked (Te Whāiti et al, 1997).

The values outlined in the previous paragraph are central to a Māori perspective of what matters in adult L+N learning, both in terms of pedagogy and outcomes (Hutchings et al., 2013; Potter et al., 2011). Research has highlighted elements of L+N learning that Māori participants value because they are culturally significant, relevant to their everyday lives, and could contribute to whānau, hapū and community aspirations, which are intertwined with their own (see for example He whānau mātau, he whānau ora: Māori adult literacy and whānau transformation, Potter et al., 2011). Other research has explored ways to systematically identify and record a wider range of gains from participation in L+N learning than the traditional focus on technical skills, enabling Māori specific values to be at the forefront (Hutchings et al., 2012). Meeting Māori expectations in L+N policy and implementation (e.g. the nature and purposes of programme provision) is equivalent to Sen's notion of having the freedom to live the life you choose according to your values (Rogers et al, 2013).

Pasifika is a pan-Pacific term used by government agencies and academics to refer to the people, cultures, and language of Pacific groups including: Sāmoa, Tonga, the Cook Islands, Niue, Tokelau, Tuvalu, and other smaller Pacific nations – who are now living in New Zealand (Cochrane et al., 2020; MoE, n.d.). These indigenous and colonised nation states have different languages, values and cultural beliefs. However, the values discussed in the previous section are consistent with a number of indigenous belief systems that focus on sovereignty, and the interconnectedness between land and people (Grande, 2008). Other patterns of values that overlap are respect for elders and a deep love and sense of responsibility to family in the broader whānau sense of the word (Grande, 2008; Luaupepe & Sauni, 2014). As such we can also attest that Pasifika groups also seek out L+N policies and programmes that are shaped around their communities needs and cultural values (MPP, 2018).

In addition to the need to create policy with Māori and Pasifika values, community aspiration and goals in mind, it is also important that policy address the barriers to freedom and wellbeing. In section 1 and

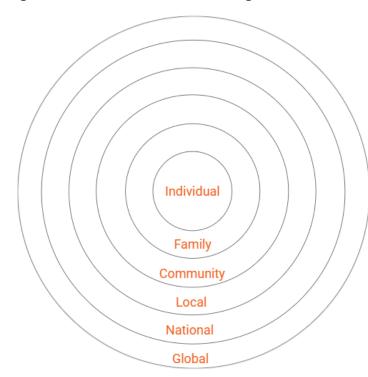
section 2 of this paper we alluded to the impact of colonisation and historical policies on the formation of barriers to learning during all stages of life, specifically for Māori and Pasifika peoples (also see Cochrane, 2020). Other equally significant barriers to the acquisition of L+N skills throughout the life course include: lack of access to resources; poverty or social exclusion. It is important to note that these barriers are inter-connected and often reinforcing but cannot be mapped in any one-to-one way. For example, burdens that result from poverty limit learners' capacity to engage in formal learning environments due to the mental toll due to lack of time and financial resources, potentially leading to social exclusion, the measurement of which is the subject of the next section.

3.3 Social Exclusion

The concept of social exclusion extends the traditional measurement of poverty beyond income level and resources at the individual or family level to include disadvantage across multiple dimensions. For example, the concept of social exclusion considers the level of resources held at the community level and measures factors that prevent participation and access to those resources in society such as "discrimination, chronic ill-health, geographic location and cultural identification" (Burchardt et al., 2002, p.6). In this sense social exclusion's corollary, *inclusion*, as a lynchpin of the third way ideological approach, is a form of social justice focused on substantive equality (Powell, 2003; Cheyne, et al., 2008). Social exclusion is also a widened conceptualisation of poverty that focuses on agency and highlights how non-participation in L+N programmes stems "from constraint rather than choice" (Burchardt et al., 2002, p.6).

Burchardt et al. (2002), in their consideration of how poverty can be reconceptualised as social exclusion, developed an onion diagram to illustrate the different enablers and constraints within which individuals are located (Figure 3).

Figure 3. The Onion model for measuring social exclusion



Individual: e.g. age, gender, race, disability, preference, beliefs and values

Family: e.g. partnership, children, caring responsibilities

Community: e.g. social and physical environment, schools, health and social services

Local: e.g. labour market, transport

National: e.g. cultural influences, social security, legislative framework

Global: e.g. international trade, migration, climate change

Note: Sourced from: Burchardt, T., Le Grand, J., & Piachaud, D. (2002). Introduction. In J. Hills, J. Le Grand & D. Piachaud (Eds.), *Understanding Social Exclusion*. Oxford University Press.

Significantly for the aims of this paper, the onion diagram builds on both Bronfenbrenner's (1974) ecological approach in that the levels influence each other in both directions, and Sen's (1985) capability approach to make it more amenable to policy intervention measurement and evaluation. For example, Burchardt et al. (2002) argue that communities are influenced by individuals and families, while at the same time individuals and families are influenced by factors at the local, national and global levels similar to Bronfenbrenner's meso-levels. Equally, each level can offer enablers to positive or substantive freedom while simultaneously posing constraints to participation. These enablers and constraints also relate to Sen's (1985) capability approach in that enablers and the removal of constraints is required for inclusion, freedom and flourishing. This addition provides the foundation of a suggested learner centered model of L+N in Aotearoa New Zealand today.

4 Discussion

The purpose of this part of the report is to think through the theories in section 3 in order begin considering the visualisation of a learner-centered depiction of the L+N intervention landscape. The development of this visual resource will form the basis of an infographic (Figure 4) that will be used as a basis for further consultation with the advisory committee and other stakeholders.

Bronfenbrenner's (1974) bioecological approach, which incorporates a circular layered design (see Figure 2) is reflected in the onion diagram that Burchardt et al. (2002) to discuss social exclusion (see Figure 3). The connections between the two designs are also that they draw attention to the importance of context that shapes individuals' lives, as well as the dynamic environment in which individuals enact their life. The onion diagram characterises different layers of the environment we live in, starting with the individual, then family, community, local, national and global. Significantly for the depiction of the individual's life course, the onion diagram also highlights how, at each of these levels (individual, family, community, local, national and global) exist characteristics that enable or constrain an individual's capacity to participate or be socially included. In this sense the onion diagram facilitates a consideration not just of the L+N landscape but the power relations and interlocking systems of inequity that individuals experience that contribute to their need to engage in adult L+N learning opportunities. By considering the two models together we can address the critique that Bronfenbrenner's (1974) bioecological approach does not address the way power relations play out in the development of people's identity and life course pathway.

The enablers and constraints that can be visualised at different levels of the onion diagram also connect to Sen's (1985) capability approach in terms of substantive freedom. By drawing attention to enablers that can be strengthened and constraints that once seen can be addressed by policy the wellbeing of individuals can be enhanced. In order to think through and make more visible potential enablers and constraints, Burchardt et al. (2002) identify potentially relevant characteristics, institutions and structures at each of the onion diagram levels: individual, family, community, local, national and global. It is worth considering these relevant elements at each level in light of the wider L+N project and the insights gained from the discussions in this report.

At the individual level Burchardt et al. (2002) provide the examples of age, gender, race, disability, preferences, beliefs, and values. We know from the results of the PIACC survey and the development of a demographic profile from those results that race plays a significant role in the acquisition of L+N

skills evident, for example, in the over-representation of Māori and Pasifika in the lower proficiency levels of the survey (Erwin et al., 2020; OECD, 2016). As such, it is important to acknowledge the role that colonisation and racism play in the different pathways that individuals negotiate and struggle through when seeking to acquire L+N skills as children and adults. Colonisation is impactful in that Māori and Pasifika are more likely engaged in education processes shaped by the dominant group rather than education processes shaped by indigenous values. Once in the labour market Māori and Pasifika are also more likely to be employed low skilled sectors where access further education and training is limited (Cochrane et al., 2020).

These trends in education and the labour market indicate that the category of race as per Burchardt's et al., (2002) individual level characteristic example may act as a constraint in the acquisition of L+N skills. However, indigenous identities, culture and language are a source of strength for individuals, whanau and communities (Leaupepe & Sauni, 2014; Waller, 2016). Therefore, Burchardt's example of race could also be positioned as an enabler as per the research outlined in section 3.2 where the most relevant L+N programmes for Māori are those that reflect their cultural values. In relation to these values, it is important to note that individual, whānau and hapū wellbeing, connection to eponymous ancestors, and connection to and health of ancestral lands, are all interlinked. These connections highlight a limitation of the more Western presentation in the onion diagram of the individual as being separate from the family and community contexts in which they are located. In order to ensure that our model encompasses indigenous values, it is therefore important to see the boundaries between individuals and communities as partial and permeable.

The correlations from the 2016 PIACC findings also indicate that age, social background, education levels and gender are variables that may have a much greater impact on L+N skill acquisition for Māori and Pasifika (OECD, 2016). This illustrates that while race and racialised practices are important to note, so too is the interplay of characteristics that are more likely to be present in the lives of those identified as having lower proficiency scores in PIACC. In terms of the onion diagram examples, these findings also illustrate that age, social background and gender in addition to race are examples of characteristics that can act as constraints at the level of the individual.

While the family level should be conceptualised as interconnected with the individual, it is still worthwhile considering the examples provided in the onion diagram: partnership, children, caring responsibilities. Family is an important location of freedom and flourishing as support from family members is often key to achieving success in the pursuit of education qualifications. However, the level

of caring responsibilities that women in particular have to deal with in relation to intergenerational family structures and community level duties can mean that family acts as a constraint. For example, we were told that the 150 learning hours can be very onerous and as a result the students may not be able to complete the programme. The greater the level of caring responsibilities an individual has within their family and community the more likely it is that they will struggle to find the time to complete assigned tasks. These types of caring responsibilities are likely to have a greater impact for Māori and Pasifika due values that emphasise the duty to respect and care for elders and younger children in families, duties that are assigned to both genders (Leaupepe & Sauni, 2014).

When the economic downturn of the 1980s occurred many Māori and Pasifika men became unemployed (Cochrane et al., 2020). At this time women were entering the labour market in higher numbers so it is possible that Māori and Pasifika women became the main income earner in their immediate household. Working full-time is another time constraint on an individual's capacity to participate in L+N learning effectively, but is significantly more of a constraint for women who also have more caring responsibilities. However, if the workplace is prepared for you to engage in the L+N learning at work and during work time, essentially being paid to learn, then the constraints of time and caring responsibilities are removed. As such the Employer-led ILN is an enabling policy and programme, particularly for Māori and Pasifika.

In the onion diagram at the community level the examples given included the social and physical environment, schools, health and social services. Communities are the neighbourhood that people live in and the more amenities provided the more enablers available. Living rurally can mean a lack of access to local amenities but specialised providers like REAP were created to provide L+N in a way that addresses the challenges a rural locale entail. Furthermore, iwi-led strategies and Whānau ora programmes have meant that rural marae are a source of support and a location for learning for isolated communities. REAP and these types of funding arrangements through government agencies and education funds illustrate how policy can help to overcome potential constraints like rural isolation.

Constraints can still be experienced though even in amenity rich communities as the provision of social services is not always experienced in consistent ways. For example, research by Gray and Crichton-Hill (2019) outlines how Māori and Pasifika women have felt alienated and discriminated against when seeking help for income support. This example illustrates the way constraints may emerge from policies purported to be enabling including institutionalised racism at the community level of social service provision, such as income support, health services and social housing.

At the local level, labour market and transport are mentioned as examples in relation to the onion diagram (Burchardt et al., 2002) and these factors can definitely act as enablers and constraints. We have already established that different work roles and income levels play a significant role in the enabling or constraining access to L+N learning opportunities and are consistent with Sen's focus on resources. While in-home teaching is possible, it is not always easy or the best option for learning. Also, in order to progress from ACE level courses to those on the Framework at levels 1 to 4 may mean that learners have to engage in on-campus learning, which becomes more possible when transport is both cost and time effective.

There are also marked differences in labour market participation and options regionally, as well as in relation to age and ethnicity. Therefore, while the employer-led ILN programmes may offer a high level of barrier removal, it is important to acknowledge that many who need assistance in acquiring L+N skills are unemployed. The Youth Guarantee is an important policy focused on foundation level learning designed for NEET youth. Therefore, TEO-led L+N skills provision is just as in important in regions like Northland that have high unemployment. However, it should be noted that TEOs may need to engage in much higher levels of pastoral care than traditionally associated with self-directed adult learning. Additional support, such as providing local transport, is needed in order to remove constraints to participation that flow through from the individual and their location in relation to social exclusion and/or family and community cares and responsibilities.

At the national level cultural influences, social security and legislative frameworks are identified, while at the global level international trade, migration and climate change are offered as examples. We can of course add the COVID 19 pandemic to this list. At this macro level of the onion diagram, key enablers are the acknowledgement to develop L+N practices that are removed from the binary illiterate/literate emphasis and are focused on social practices that have meaning to the everyday life of learners. This view of L+N is explored further in another paper from this wider project that looks at engagement, proficiency and practice (Reder, 2020). Importantly, a national tertiary level L+N strategy would be an important enabler to translating these ideas to a range of policy contexts.

A tension highlighted earlier in this paper is between what should be emphasised more, economic or social outcomes from L+N policy interventions. This international debate acts to enable and constrain different types of decision-making at a policy level, which in turn influences the level of funding available and what it can be used for. There are also subsequent influences on L+N pedagogies which open up or close down learning experiences for individuals. Therefore, it is important to note how

enablers and constraints revealed through these macro level actions are experienced within the levels of individuals, whānau and community as described in the onion diagram.

4.1 Infographic

The purpose of our L+N intervention landscape infographic is to capture the different institutions, interactions, policies, processes and practices involved in the L+N intervention landscape but to do so by first placing the learner at the centre.

Local National Policy, funding and pathways Home, work, chu National policies are marae, and pro Individual campus experienced locally and individually. hānau Global Decision-making at a policy level, influences the level of funding and what it can be used for. This influences L+N teaching and opens or closes learning experiences for individuals.

Figure 4. Intervention landscape infographic

At the centre of the concentric circles is the individual, who, in relation to indigenous values should not be seen as completely separate from whānau (family) and community levels. The koru also signals the locations where individuals may engage in L+N – their home/workplace, the community (church or marae), and in provider campuses.

Although the pathways that individuals follow are set in some ways by national policies they are experienced locally and individually. This connection, as well as the boundary crossing between local and national layers is captured through the arrows that move around the layers. A second set of arrows moves from this outer layer inward to illustrate the impact of these wider macro concerns on the individual, whānau and community levels. The arrows that move between these layers face both directions to highlight how enablers and constraints to participation in L+N are located in each layer of the diagram.

At the same time individuals and their communities are a unit partly separated from the local, national and global storms. The strength of these proximal relationships can act as both a protective shield or a transmitter of these more distal influences. Thus, any policy that builds on the strengths and enablers embedded in these proximal communities will better aid the learner at the centre to engage, participate and succeed on their own terms with the wider world. These measures of success may well be longer-term and beyond narrow labour market and income measures traditionally used.

5 Policy Implications

It is clear from our discussions that the different parts of the L+N landscape are disconnected. Sector stakeholders and policy officials managing the different funds for L+N programmes would benefit from greater levels of clarity and interaction with each other. Any contribution that the wider project can make to fulfil this need, particularly from a learner perspective, would be extremely helpful. Staff from TEC are currently working on meeting this important need and are seeking to form a descriptive document that reflects the provision of L+N learning at a higher level.

It is also evident that few evaluations of L+N policy interventions at the individual level have been undertaken. Prior evaluations have tended to measure the short-run outcomes, namely employment outcomes of L+N programme participation. Such a narrow measurement of L+N programme impacts fails to recognise the possible long-run benefits such as: further skill acquisition; or greater social inclusion and participation, not to mention inter-generational benefits. While most evaluations do not capture these broader outcomes, evidence of learners' experience of them can be found in reports by the NZCER in collaboration with Literacy Aotearoa (Hutchings et al, 2013; Potter et al, 2013) and other accounts (e.g. Benseman & Sutton, 2005; Furness, 2013; Furness & Hunter, 2019; Kempton, 2005; May et al, 2004). Measurement of a wider range of outcomes spanning a longer period post L+N programme completion is possible using the IDI, provided that the appropriate intervention enrolment, retention and completion data are recorded. The IDI can link this data to health, justice, education and benefit receipt information in addition to employment measures to provide a more comprehensive picture of the L+N landscape in Aotearoa New Zealand although still limited to formal interactions with institutions.

Lastly, protocol in accessing funding and funding compliance favour input measures rather than holistic, learner-centred outcome measures. These restrictions to L+N learning access need to be addressed as barriers that can cause further social exclusion for individuals, particularly those who are often the target of such programmes yet are excluded due to such administrative requirements.

These policy implications will be further developed in the wider project as the limits of the IDI data, the qualitative findings of enablers and constraints to developing L+N skills, and identifying earlier intervention points on the life trajectory are established.

6 Conclusion and next steps

What we have learnt from our discussions is that the landscape of L+N learning is complex due to L+N programmes being provided in a range of ways, at a range of levels and in a range of locations through a range of providers. Several factors contribute to its murkiness, for example, an emphasis on embedded L+N from policymakers competing with the need to alleviate stigma and create pull factors for learners who have been scarred by the compulsory education system. As such, it is vital that we address the gaps in our understanding as best we can.

It is important to continue to draw attention to and advocate for an approach to policy development in L+N learning provision that is learner centred, relevant to adults and culturally appropriate. In particular, it is important that L+N learning provision gives full consideration to the multiple burdens that adults carry.

In order to address the fragmented knowledge theme (section 2.3), we recommend that a second report be completed reviewing of extant literature. Aspects of our qualitative research could inform the gaps in operational knowledge, particularly in relation to the process of referrals to education and training with embedded L+N learning by MSD case managers and Whānau Ora navigators. As such, the landscape of L+N learning provision will be updated as findings from the qualitative research become available. We also recommend that the LNAAT data in the IDI be considered in order to determine if the data is a useable source of information for the wider project. In consultation with relevant groups we will also continue to refine the development of visual resources designed to capture the complexity, depth and breadth of the L+N intervention landscape.

7 List of Acronyms

Adult and Community Education	ACE
Adult Literacy Strategy	ALS
English for Speakers of Other Languages	ESOL
Industry Training Organisations	ITOs
Integrated Data Infrastructure	IDI
Institutes of Technology	ITPs
Intensive L+N	ILN
Industry Training Federation	ITF
Literacy and Numeracy for Adults Assessment Tool	LNAAT
Literacy and/or numeracy	L+N
Ministry of Education	MoE
Ministry of Pacific Peoples	MPP
Ministry of Social Development	MSD
New Zealand Institute of Skills and Technology	NZIST
New Zealand Qualifications Authority	NZQA
New Zealand Qualifications Framework	NZQF
Non-governmental organisations	NGO
Not in Employment Education and Training	NEET
Private Training Establishments	PTE
Programme for the International Assessment of Adult Competencies	PIAAC
Definition and Selection of Competencies	DeSeCo
Science, Technology, Engineering and Maths	STEM
Student Achievement Component	SAC
TEC's Literacy, Language and Numeracy Community of Practice	LLN CoP
Tertiary Education Commission	TEC
Tertiary Education Organisation	TEO
Tertiary Education Strategy	TES
Te Puni Kōkiri	TPK
Workplace Literacy and Numeracy	WLN

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Appendix A: Discussion questions

A.1 Providers

Key questions:

- a. Types of courses that should be included (range from **Intensive** L+N learning to life skills courses where L+N learning is **embedded** e.g. healthy cooking on a budget or Drivers licence courses, or is incidental)
- b. Names of courses that would likely be recognised by participants
- c. Who are the major players 'on the ground'? (those at our meetings are largely umbrella organisations)
- d. How do people get on to your courses?
- e. Where do your enrolments come from? Do you tap into a referral system or have links with particular services or organisations that refer learners to you?
- f. How they are offered (e.g. online, small group, individual, family/whānau, iwi-based etc.)?
- g. What happened to courses during COVID, any useful 'pivots'?
- h. Funding source/category SAC
- i. Goal of course/programme
- j. How LNAAT fits, is used/not used?

A.2 Pathways/Referral services

Key questions:

- a. How does your organisation refer people to L+N (or foundation skills, or basic skills or life skills) programmes?
- b. What providers/courses are people referred to?
- c. Is there an organisational priority list for type of intervention/provider (e.g. Air NZ has lengthy document on upgrade priorities)?
- d. What triggers referral?
- e. Are there limits on referral, incentives to participate in a programme if offered?
- f. Are you aware of how the LNAAT fits, is used/not used in these courses?

- g. Are you aware of any trends emerging from the provision of L+N training due to the impact of the COVID Lockdown and movements between levels 1, 2 and 3?
- h. What kinds of impact if any is the restructuring of the ITOs and the Polytechnics (RoVE) having on the way you connect people with L+N courses?

A.3 Funders

Key questions:

- a. We would like to better understand the interventions recorded in IDI are these high-level categories that group together a number of different more specific courses such as those announced in the budget and listed below?
- b. How do these high-level categories/groups fit with the 16 types listed in the budget announcement 2019? (also listed at end of this document for convenience)
- c. What reporting requirements are there if funding received?
- d. Where/how is this information recorded/reported? Is there a database system(s) internal to organisations or is it given to agencies? What parts of the reporting information are included in IDI?
- e. Any efficacy measures?
- f. What role do you think the LNAAT and the steps of progression should play in the provision of L+N?
- g. Is there any recent research you have been engaged in that we should be including in our project?
- h. What are the key trends emerging from the provision of L+N education/programmes due to the impact of the COVID Lockdown and movements between levels 1, 2 and 3?
- i. What kinds of impact is the restructuring of the ITOs and the Polytechnics (RoVE) having on the provision of L+N courses?

Appendix B: Schedule of meetings

B.1 Intervention landscape discussions

Table B 1. Intervention landscape meetings by date

Meeting type	Date	Organisation(s)
Provider	21/9/20	On task limited;
		Consultant (TEC);
		REAP
Provider	23/9/20	Literacy Aotearoa
Pathways	14/10/20	MSD (soveral divisions).
Patriways	14/10/20	MSD (several divisions);
Funder	F /11/20	MSD/Auckland University
Funder	5/11/20	MoE;
		TEC; Treasury
Provider	4/11/20	Education Unlimited
Provider	4/11/20	Education onlimited
Provider	20/11/20	Te Whare Wānanga Aotearoa
Provider	3/12/20	Tai Poutini Polytechnic;
		Edvance
Provider	10/12/20	English Language Partners
Pathways/funding	17/3/21	TPK;
Patriways/Turiumg	17/3/21	MPP
Funding	26/3/21	TEC
runung	20/3/21	TEC
Follow-up meeting	21/4/21	TEC
-		
Follow-up systems meeting	22/6/21	TEC

Appendix C: Project advisory group and staekholders

