

## Foundation Level Workplace Training Programmes

Anne Alkema

*Industry Training Federation, New Zealand*

**Abstract:** This paper outlines the scale of the adult literacy and numeracy issue in New Zealand and describes a policy intervention designed to upskill employees in workplaces to help resolve the issue for them. This is the Workplace Literacy and Numeracy (WLN) Fund, which enables around 7000 employees a year to complete a 25- to 80-hour learning programme, usually in their workplace and during work time. The paper also describes what happens in workplaces while programmes are underway, and the short-term wellbeing, social, and economic outcomes that occur for individual employees.

In this context, literacy and numeracy relates to the way in which adults use skills that involve reading, writing, speaking, listening, and mathematics in everyday life. It also includes digital skills in relation to how adults engage and interact with Information and Communication Technologies (ICT). These skills are those that individuals need for learning, life, and work in the 21st Century.

**Keywords:** adult literacy and numeracy, workplace-based learning, wellbeing, social and economic outcomes.

### Policy Issue: Skills in New Zealand

In the 2014 Survey of Adult Skills, part of the Programme for the International Assessment of Adult Competencies (PIAAC), New Zealand, ranks relatively highly. We are fourth in literacy; 13th in numeracy; and fifth in problem solving in technology-rich environments (Ministry of Education & Ministry of Business, Innovation & Employment, 2016). However, these rankings hide the fact that around a third of our working-age population (approximately 1.5 million people) has only skill Levels 1 and 2, as measured in this survey.

This means these people are able to, for example: read and understand short texts and make some inferences; conduct basic mathematical processes and interpret simple graphs; and are either not able to use computers or, where they can, they can cope with simple tasks and use minimal functions in generic computer programmes (Ministry of Education & Ministry of Business, Innovation & Employment, 2016). This is problematic for employment given that analysis of skills profiles conducted in Canada shows most jobs require Level 3 or higher skills, with virtually no jobs requiring only Level 1 skills. This is coupled with the fact that most of the new jobs created in the last 20 years require Level 3 skills (Lane & Murray, 2018).

Low literacy and numeracy skills impact people's work and life opportunities. Research shows those with lower skills: are less likely to be in employment and when employed to have lower wages; are less likely to own their own home; have poorer mental and physical health; and are less likely than their higher-skilled counterparts to participate in their communities and wider society (Bynner & Parsons, 2006; Schagen & Lawes, 2009; Murray & Shillington, 2012). In addition to poor outcomes for



individuals the Bynner and Parsons (2006) study also found intergenerational impacts, whereby, children whose parents were at the equivalent of Level 1 in OECD's international surveys were, "quite seriously disadvantaged and likely to fall behind their peers" (p. 31).

### **Policy Solution: The Workplace Literacy and Numeracy Fund**

New Zealand's Tertiary Education Commission (TEC) provides and administers the WLN Fund, the purposes of which are to increase the literacy and numeracy skills of lower-skilled employees and to contribute to productivity through the provision of programmes in a workplace context.<sup>1 2</sup> The Fund is divided into two strands. One strand (provider-led) directly funds tertiary education providers to market and deliver programmes in workplaces. The other (employer-led) is contestable funding that is applied for by employers who then generally contract an education provider to run programmes for their employees. Employees are eligible for funding if they have low or no qualifications, or low literacy and numeracy skills as measured against the Adult Learning Progressions.<sup>3</sup>

The ethos of the WLN fund is that programmes should focus on people development, where the approach aims to lead to the transformation of both employees and their workplaces. This happens through taking an expansive view of learning approaches that are, in the main, contextualised to the workplace and to the wider needs and interests of the employees. Albeit that the programmes are short courses, the approach is aligned to Fuller and Unwin's (2004) expansive/restrictive continuum, which is further explored in Ahlgren and Tett (n.d.) and Bryson, Pajo, Ward and Mallon (2006).

Policy interventions that reach lower-skilled employees in workplaces are important for reasons that include:

- the need to upskill workers throughout their working lives, particularly as the age of the working population increases
- the need to bring equity to training delivery so that lower-skilled workers have access to training in the way their counterparts with higher skills do
- the need to mitigate against the barriers (financial, time, opportunity cost) that lower-skilled workers face in accessing education outside of work (Martin, 2018).

New Zealand research (Benseman, 2014; Kerehoma, Alkema, Murray & Ripley, 2019) concurs with the above findings, especially in relation to Māori and Pacific people. It is difficult for many of these people to undertake learning programmes outside of work, given the access, time and cost implications. They are also often unlikely to want to participate, given the lack of confidence and the possible *whakamā* (shame) they feel in relation to attending programmes with people they don't know. Kerehoma et al, (2019) also identify that the *whānau*-like (family) environment of workplaces suits these employees:

The learning environment's pretty good. It's quite enjoyable. It's laid back. Everybody feels at ease to be able to talk in front of people. When we first came, everybody didn't really talk much, but now we're all jovial and just telling jokes and stuff like that. That's probably the main thing for the class. ... We joke about things, but it's good, because you're learning something. You're just continuously learning something... (Employee)<sup>4</sup>

Workplace training has advantages. [Company] is unique –there is huge support wrapped around the programme. The learning content is already there ... time sheets, workbook, survey

forms. It's hugely satisfying for them [employees] as they know that what they are doing is beneficial for their work. (Facilitator)

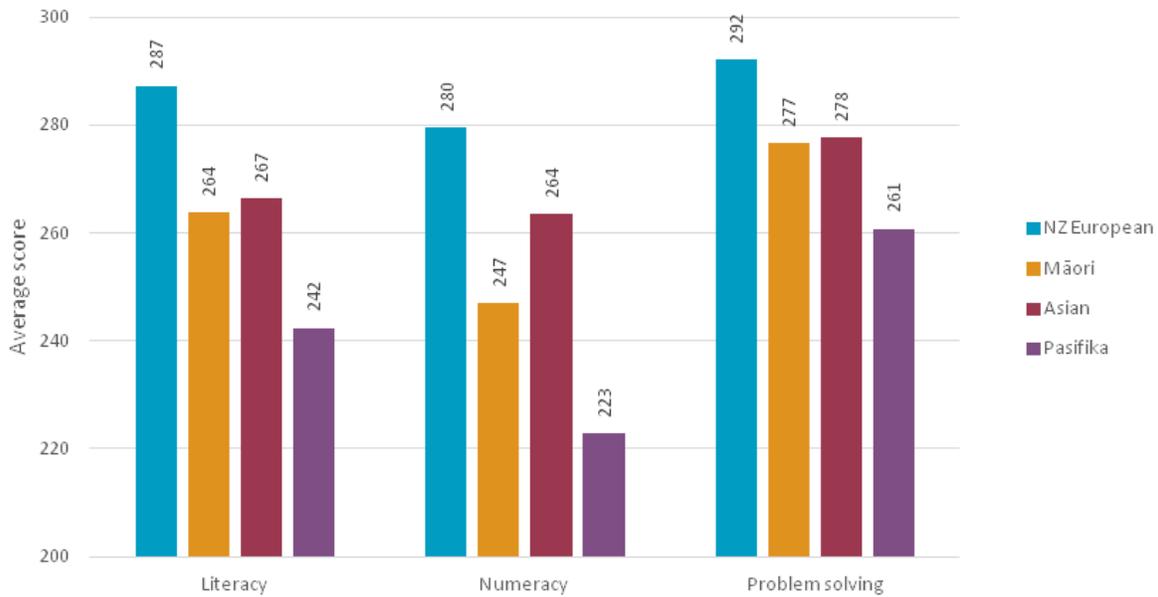
Evidence of the reach and impact of the WLN Fund has been gathered since 2014 (Alkema, 2015a; Alkema, 2016; Alkema, 2017; Skills Highway, 2018; Alkema & Murray, 2019). Over time, data have been gathered from a variety of sources outlined in Table 1 below. It includes data on just under 29,000 employees and from around 119 employers who have been funded through the employer-led strand. Data have also been taken from a research project completed late in 2019 (Kerehoma, et al, 2019). This project, co-funded by Ako Aotearoa, focused on how literacy and numeracy programmes in workplaces empower Māori and Pacific employees.

**Table 1: Data Sources**

<b>Report</b>	<b>Quantitative Demographic Data</b>	<b>Document Analysis</b>	<b>Other Data</b>
Alkema, 2015	2425	10 employer reports <sup>5</sup>	Survey with 15 education providers; interviews with eight stakeholders and eight employers; literature review; seven site case studies
Alkema, 2016	2099	30 employer reports	Literature review
Alkema, 2017	11,000	18 employer reports	Literature review
Skills Highway, 2018	6983	29 employer reports	Five site case studies
Alkema and Murray, 2019	6382	32 employer reports	Literature review; seven site case studies

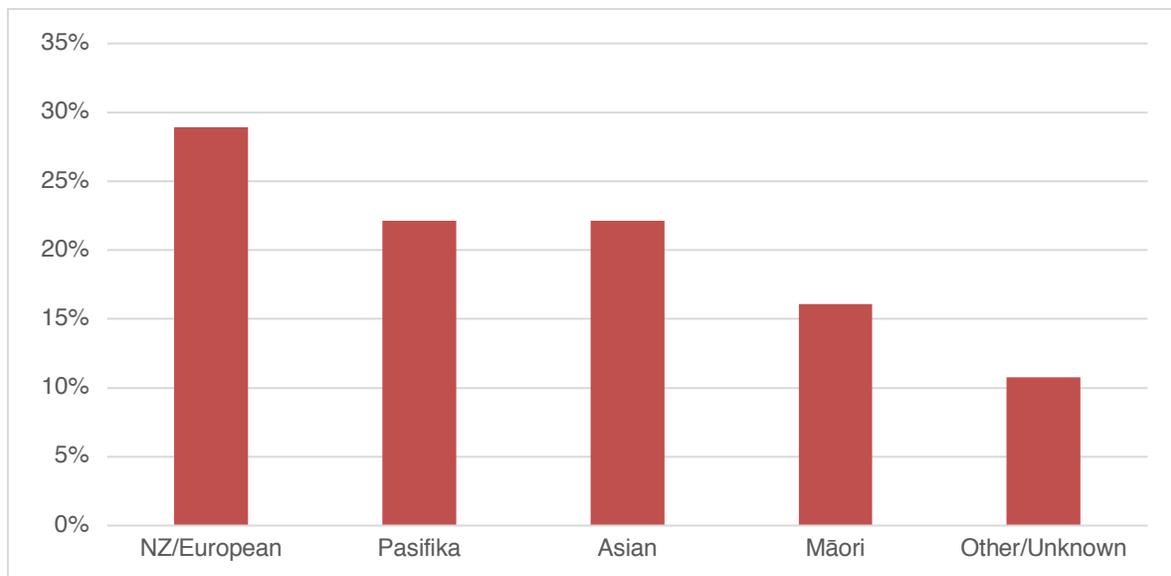
### **Reach of the WLN Fund**

Reports from the Organisation of Economic Cooperation and Development's (OECD) Survey of Adult Skills, part of the Programme for the International Assessment of Adult Competencies (PIAAC) show data from several perspectives, including ethnicity, gender, qualifications, and industry. These data are important for the New Zealand context as they indicate who the target audiences should be for funded programmes. The figure below shows New Zealand scores by ethnicity in 2014 and highlights that the average scores for Māori, Pasifika, and Asian populations sit at Level 2 and below for literacy and numeracy and Level 1 for problem-solving in technology rich environments (Ministry of Education & Ministry of Business, Innovation & Employment, 2016).



**Figure 1: New Zealand Adult Skills Results by Ethnicity.** Source: Ministry of Education & Ministry of Business, Innovation & Employment, 2016. p. 20.

The intent of the WLN fund is to reach those who have lower skills, and data collected from just under 29,000 employees show 60 percent of the fund is getting to the demographic groups with the lowest skills as shown in Figure 2 below. That around 40 percent of the fund reaches Māori and Pacific people is important in the New Zealand context. Both of these populations are set to grow considerably by 2038 and as workers they are “being pigeonholed into lower skilled occupations... [and this] presents socio-economic problems, with ethnic inequalities being perpetuated and exacerbated” (Kiernan, 2018).



**Figure 2: WLN Fund Reach by Ethnicity.**

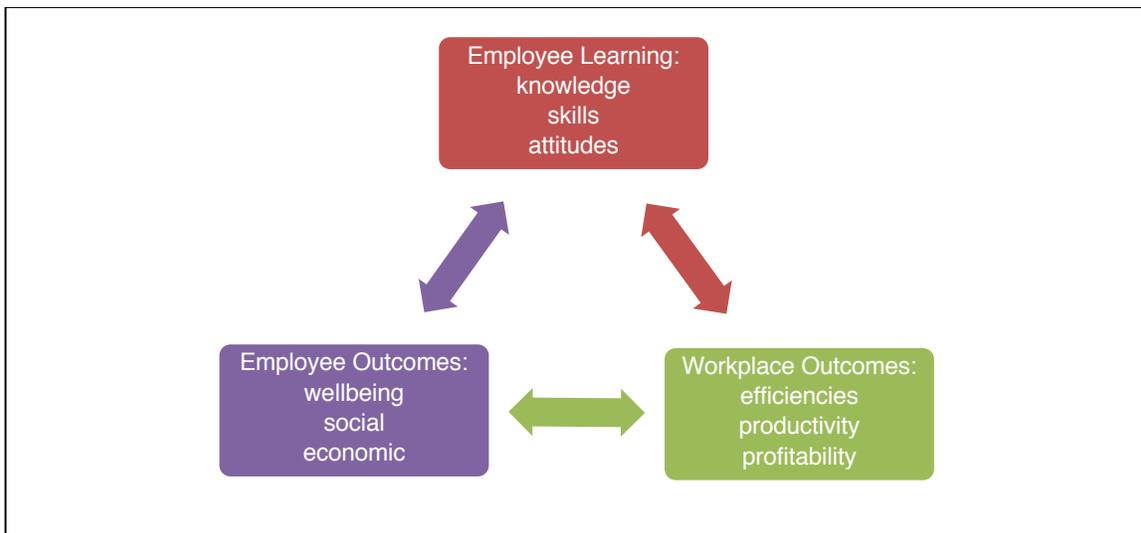
While the figure above shows the **reach** of both strands of the WLN fund, the **impact** is shown, in the main, by reports from 119 employers who have run programmes funded through the employer-led strand for over 6000 employees since 2014. These programmes have been run for 20 or more employees in workplaces.

### Impact of the Employer-Led Strand of the WLN Fund

Skills are a vital ingredient for economic success and individual and social well-being, now more than ever before as the Fourth Industrial Revolution gets into its stride and ageing populations and workforces become the new norm (Martin, 2018).

The analysis framework used for this paper is based on the Alkema and Murray (2019) report that built from Alkema and McDonald’s (2018) work describing the wellbeing, social and economic outcomes that can accrue to adults who undertake foundation level learning, including in workplaces. Here, the former determined that working and learning is an iterative process that impacts on individuals and their workplaces as shown in Figure 3.

However, there is a caveat in relation to these outcomes. Rather than being naturally occurring, they have dependencies. At the macro level these include government policy and resourcing along with the labour market demand for skills. At the meso level it is about families, communities, and workplaces providing the conditions and opportunities for continued skill development. At the micro level it is about individuals’ awareness, motivation, and disposition to take up learning opportunities (Alkema & McDonald, 2018).



**Figure 3: Iterative Learning and Outcomes in the Workplace.** Source: Alkema and Murray, 2019, p. 10.

Including wellbeing, social, and economic outcomes is important for gaining a wider understanding about what happens as a result of literacy and numeracy tuition. Expanding outcomes thinking is also timely in New Zealand given the New Zealand Treasury’s (2018) approach in relation to the Four Capitals that includes social and human capital, which incorporate aspects of wellbeing.<sup>6</sup> Alkema and Murray (2019, p. 8) cite the Treasury (2017) in relation to the importance of social capital which,

... has a large and well-evidenced impact on economic performance, democratic functioning, public safety, educational outcomes, labour market outcomes, and individual health and

wellbeing. The particular risk is that government agencies take it for granted because it is rarely measured. Potentially detrimental effects include increased income inequality, poverty, housing mobility and ownership rates, family and whānau wellbeing, institutional quality, educational outcomes and individual health and wellbeing.

The connection between literacy and numeracy and these outcomes is made in a number of research reports. Alkema and Murray (2019) cite analysis of the Adult Skills Survey data in Canada (Council of Ministers of Education, 2018) that reports on the connection between literacy and numeracy skills and social and civic outcomes. They also cite other research in the literacy and numeracy field that shows the links between literacy and numeracy and wider outcomes that improve the ways individuals participate at home, in their communities, and at work (Balatti, Black & Falk, 2007, 2009; Leach, Zepke, Haworth, Isaacs, & Nepia, 2009; Vorhaus, Litster, Frearson, & Johnson, 2011).

## **What Employees Learn**

Programmes are bespoke and tailored to the needs of companies and employees and the knowledge and skills they require to do their jobs and to participate more in their families and communities. This provides employees with the opportunity to engage in authentic learning experiences that have literacy and numeracy integrated into them. Examples of workplace content include health and safety policies and practices; problem-solving techniques; understanding Standard Operation Procedures (SOPs); and form filling. Over the last two to three years there has been an increase in the number of programmes with a digital literacy focus as firms digitise communication and reporting, for example, payslips, timesheets, job reporting, and health and safety reporting:

Making it relatable is so important. Most of the programmes we deliver are tailored to the needs of the company. So using their resources, like the Take Five or their health and safety reports or the forms they use, the health and safety vocab that's used on site. I think that's the difference, is that it's really tailored to what they do. It's relevant. (Programme Facilitator)

Given that this is a workplace literacy and numeracy fund there is an expectation that employees' literacy and numeracy proficiency will improve. This is tested at the start and end of programmes using the Literacy and Numeracy for Adults Assessment Tool (LNAAT). Collated data from the tool are not publicly available and not all employers report the results. Of those who do, the results show very few employees make a statistically significant gain. This is in keeping with Reder's (2009) findings where he found little connection between participation in adult education programmes and literacy and numeracy proficiency gain. However, what Reder found was an increase in engagement with literacy and numeracy practices and suggests that programmes would be better to measure practices than proficiency,

... program participation is directly related to changes in engagement in literacy practices. With many statistical controls in place, there were direct relationships between participation in adult education programs and increased engagement with literacy practices (e.g., reading). The sequence of observed changes makes it clear that programme participation influences practices ... Programs generate increased levels of engagement in literacy practices in the short term that lead to increased proficiency in the long term (Reder, 2013, pp. 19-20).

Further confirmation of Reder's work comes from the OECD (2013) who found that adults who practise their literacy skills nearly every day tend to score more highly than their counterparts regardless of education levels. However, one of the challenges is finding ways to measure practices

given they are dependent on, for example, purpose, context, complexity and frequency. In New Zealand, Whitton (2018) has developed a practice measures' tool and indicators. As there is no national data collation, it will not be possible to ascertain the extent of the tool's use but where it is used by individual education providers and/or employers there will be the opportunity for insight into practice engagement and growth.

Workplaces provide the context for literacy and numeracy practice as the learning is authentic and meaningful and can subsequently be used in a meaningful way (Coben & Alkema, 2017). Engagement with literacy practices is clearly seen in the reports where employers note, for example, an increase in employees speaking up at meetings, proactively participating in solving workplace problems, completing forms, and communicating within and between teams. It is also seen when employees talk about using their new practices in their home and community lives:

Many employees also expressed an understanding of the communication process ... This has helped change the workplace culture and created positive communications up and down the hierarchy. (Employer)

I'm struggling with the numbers and stuff like that. But when they start teaching us dividing stuff ... I start realising that's the reason they put me on this course ... I learn from the numbers and even like reading plans. (Employee)

Yeah, my reading and writing went up and I got a lot more confidence out of it. Then yeah, I was able to help at home too, with my daughter. ... I got a lot of satisfaction out of helping my daughter. (Employee)

## **Wellbeing Outcomes**

Alkema and McDonald (2018) describe wellbeing as how people think and feel about themselves and their lives. They aligned this with the New Zealand Treasury's thinking on "subjective wellbeing" (King, Huseynli, & MacGibbon, 2018). Included in their list of wellbeing outcomes, Alkema and McDonald (2018) built from Eldred, Ward, Dutton and Snowden (2004) and started with confidence and self-esteem. Then working from other literature, including, (Tett, Maclachlan, Hall, Edwards & Garside, 2006; Literacy Aotearoa, 2013; Gyarmati, Leckie, Dowie, Palameta, Hui, Dunn & Hébert, 2014; ACE Aotearoa, 2014; Alkema; 2015b; Schueler, Stanwick & Loveder, 2017) they developed seven wellbeing outcomes that can accrue to foundation level learners. These are: confidence, self-efficacy, independence, belonging, resilience, cultural identity, and self-determination.

In terms of wellbeing, over time employers have most often reported on increases in employees' confidence and self-esteem. Alkema and Murray (2019) state that while confidence is important in its own right in terms of the contribution it makes to how people feel about themselves, it is also important because of the connection between confidence and learning and between confidence and the actions and behaviours that occur when employees feel confident. This translates to employees feeling able to, for example, speak up at meetings, complete paperwork, and solve problems. Here they show they are willing to "give things a go" and to use skills they have not had the confidence to use previously:

There is improved confidence at toolbox meetings. ... Staff take time to listen to each other - hear each other out before speaking. The outcome has been increased respect for each other. (Employer)

In a word, confidence. This is what my people have taken from the course and with new-found confidence they are finding everything else coming easier. Like communication and even the way they articulate with one another. (Employer)

Once employees start to participate more in their workplaces and become more engaged, they start to feel more valued and listened to and in turn develop a more positive attitude to learning and work. This transformational process occurs as employees recover from the learning trauma inflicted by their schooling experiences, recognise they are not "dumb", and lose their anxiety around learning environments. This is especially the case for Māori and Pacific employees (Kerehoma et al, 2019).

Here the thinking aligns with Jarvis, (2010) who takes learning beyond the cognitive and incorporates elements of affective domains, experience, and social practice:

The combination of processes whereby the whole person – body (genetic, physical and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs, and senses) – is in a social situation and constructs an experience which is then transformed cognitively, emotively or practically (or through any combination) and integrated into the individual person's own biography resulting in a continually changing (or more experienced) person (2010, p. 39).

An employee in Kerehoma et al, (2019) talks about how he changed his thinking about learning and work and how the programme has made him more open and motivated to learn and develop new skills. It is a seemingly virtuous cycle of confidence building and practice as hearts and minds work together in social situations.

## **Social Outcomes**

As can be seen from the wellbeing outcomes described above, social outcomes occur in the form of increased work, community, and family participation and engagement. These outcomes are also found in other research. Here, Alkema and McDonald (2018) cite the work of Grotlüschen, Mallows, Reder, and Sabatine, (2016); Schueler et al, (2017); Tett et al, (2006); Vorhaus et al, (2011); and Windisch (2015), who report evidence of social impact. These researchers found evidence of,

...better communication; wider social networks that are linked with improved involvement and relationships with others (including family); higher levels of trust; participation in voluntary work and higher levels of civic engagement and political efficacy; reduction in social isolation; and improved behaviour at work. The researchers also acknowledge that it takes time for these outcomes to emerge (Alkema & McDonald, 2018, p. 21).

Across the years employers consistently report on the ways in which employees change the ways they think about their work and business once they have more understanding about how it operates. When employees are afforded opportunities, this can lead to greater engagement and participation. In workplaces this translates into ways of working that are more collaborative, involve more communication along with an openness to new ways of working. Alkema and Murray (2019, p. 12) report that employers say their employees, for example, "tolerate others better and are willing to be more collaborative; communicate better with others and are open to changed ways of working; speak up at team meetings, tool box meetings, health and safety meetings; and give better instructions."

Suddenly they're speaking up at meetings or putting their hands up and providing suggestions. Because these guys are finally understanding that their contribution to how we do things is really valuable. (Employer)

Important here is that employees need to be afforded the chance to use their skills. Such affordances, described by Vaughan, O’Neil and Cameron (2011), are the opportunities workplaces provide for employees to engage with learning and develop their skills. Here they follow Billett (2001) who sees affordances as key to allowing employees to develop as problem-solvers and active participants in their workplaces. Programmes help with this when they use authentic improvement problem-solving projects as a focus for teaching. This allows employees to undertake research and present cases for solving real workplace problems. An example here, cited in Alkema and Murray (2019), is the development of a “Visual Management System” for a building site:

This helped us with time management and planning ...It stops everyone coming and asking me questions all the time. ... It allows people to see what’s going on, as it provides a written record of what’s happening and increases communication. (Employee)

Social outcomes also spill over into family and community lives, whereby some employees’ engagement and participation grows:

I’ve taken away the communication, the solving of problems at home, which I wasn’t too great at. Things are at a point where it’s acceptable now. (Employee)

Things were good, but now they’re great. We’ve now got more understanding of each other. What I mean is now me and him can actually sit down and have a conversation, and work things out together. Before he would always just let me do it and I would just do it by myself. (Whānau)

Most definitely it’s been beneficial for my mother. Yeah, she’s very happy to have done the course ... she gives me full paragraphs about her day instead of saying just ‘good’. Yeah, I can tell by that that she has taken a lot from this opportunity that she’s been given. (Whānau)

Where programmes have included connections to local libraries there has been an uptake of use in employees’ own time for them and their families. In a few cases there are also examples of employees taking up volunteer activities:

[He] has become a young man who will ask about anything. He is now living independently. His confidence is up and he engages well in community activities, chatting easily and teaching others karate. He joined the local volunteer fire brigade and with support has successfully completed the paper-work side of things. (Employer)

What comes through from employers, and employees and their family members is the transformation that has taken place during the time programmes have been underway. Change has happened and the data available for this work does not allow for examination of the processes such as critical thinking and self-reflection by employees that have led to have led to this.

## **Economic Outcomes**

The Survey of Adult Skills (PIAAC) highlights the lower employment rates and income returns that those with lower literacy and numeracy skills have compared to their higher-skilled counterparts (Ministry of Education & Ministry of Business, Innovation & Employment, 2016). However, Alkema and McDonald (2018) report that while there is evidence of social and wellbeing outcomes from programmes such as those funded through the WLN fund, economic outcomes are more contested. Here, they report that Vorhaus et al, (2011), Reder, (2014), and Cerqua and Unwin, (2017) concluded that over time there were economic returns. These were more likely to accrue when learners were in longer programmes and were labour market dependent.

Given that WLN programmes run for between 25-80 hours, limited economic outcomes are expected for individuals. But employers do report that some employees take on increased responsibilities which has the potential to increase their wages. Some also progress to further study for qualifications which can also lead to higher pay rates. Turning up for work more often also leads to increased economic returns, especially for those working in contracted roles:

Seventy-five percent of the first group went on to Health and Wellbeing Level 2 ... [and] the good news is that some are discussing going on to Level 3 when we run it next year. It is a fantastic win for folk that were very reluctant to study to start with. (Employer)

Since the programme Melissa has been promoted. "I don't think I would have been a supervisor without the course. My old habits were, 'Don't ask, just do the bloody job'. I didn't know any other way." (Employee)

What also shows through in the data is the increase in employees' agency where they feel able to take control of their learning and determine pathways for themselves that they had not previously thought about. While they start with needing support to do this, their ability to make choices about what they do grows:

... and then halfway in the course then I see there's something in there that's really good for me ... From now on, I'm on other courses now. So next Monday I'm starting my level 2 of construction. Yeah, I look forward to learn more and see what the other things is good for me on that course. (Employee)

Participants have been taught how to use the [company] Online Learning Site. This site houses additional training modules ... The programme has given the staff the confidence to continue to upskill through independent learning on site. (Employer)

In addition, when financial literacy has been included in programmes there have been changes in employees' financial behaviours. The context for teaching this in programmes is often driven by getting employees to understand their payslips and associated budgeting. This then turns to supporting employees to do some longer-term planning so they have less anxiety around money and debt:

The outcomes mean staff are not asking for payday loans from the company as they are managing their income and know how to access support to better manage personal debt. It also means better outcomes for the family... (Employer)

By knowing the value of money, they understand the importance, not only to their personal lives, but also for the greater good of the company. Having their financial situations in order makes them feel more confident... they are happy to work, knowing the money they receive will pay bills and be used for saving. (Employer)

## **Workplace Outcomes**

While funding is provided for training there are costs incurred by employers as they free up staff from production lines and service delivery to attend programmes. The logistics of this, along with lost production are openly acknowledged by employers, most of whom, in spite of the challenges, see the value for companies of running programmes of this kind:

The programme is funded, but there are costs in terms of on-the-job productivity, managers' time, and resources like computers and meeting rooms. However, offering this opportunity also

shows people they are valued. I believe that we have a responsibility to support the holistic development of our people. And when we do we also benefit. Not only from more engaged and confident employees, but also from more actively contributing members of our community.

(Employer)

As shown above, wellbeing, social, and economic outcomes accrue to individuals who, in turn, contribute to outcomes for workplaces in terms of efficiencies, productivity, and profitability. Over the time period of the reports for this paper, there has been an increase in the number of employers who are using “hard metrics” to report improvements that have happened while programmes have been underway. These metrics have included, for example, absenteeism, wastage, improved service delivery times, and increases in production. But, it is worth noting that companies often have other initiatives underway, for example, lean manufacturing, that will also contribute to business improvements, so workplace outcomes cannot solely be attributed to workplace literacy and numeracy programmes.

However, in saying that, employers report several changes that happen during the time of these programmes. They have talked about how changes in employees’ knowledge, skills, and behaviours have led to improved outcomes for business. These include, for example: an increase in problem-solving skills that led to a decrease in production bottlenecks; the application of numeracy skills that results in higher accuracy counts and a reduction in dispatch errors; an increase in form filling by shop-floor staff, rather than leaving forms to be filled out by supervisors; the use of oral literacy skills that result in better communication with customers and a reduction in customer complaints. All of these contribute to increased efficiencies in the workplace:

A reduction in double handling by office staff shows a 25 percent drop in on-hand work volumes – so clients get a faster service. Equipment for clients with complex needs is being supplied 8-10 days faster. (Employer)

We had metrics for productivity and there has been an increase in batches right the first time by six percent; an increase in documents right the first time by 32 percent; a decrease in wastage by 34.1 percent; and an increase in the reporting of hazards by 16 percent. (Employer)

## **Conclusion**

Policy interventions that provide opportunities for learning in workplaces and access to training for lower-skilled workers are important for a number of reasons related to labour market skill needs, social equity, and productivity. Five years of evidence collected from programmes funded through the WLN fund shows outcomes for employees and their firms accrue during the time of these programmes.

These outcomes are not linear, rather they are iterative and interconnected, and emerge over time. The evidence shows that at the time of programmes employees start by learning new knowledge and skills, and when afforded opportunities to try them out, develop in confidence, which in turn leads to further skills development.

Getting programmes underway can be challenging as employers work through the logistics of scheduling, but the value for them comes when they see the impact it has on individual employees and the ways in which they work. They appreciate the greater levels of engagement and participation in work activities, which can lead to an improved culture in workplaces. They also appreciate the

increased efficiencies that occur when new skills are utilised in the workplace, which in turn has the potential to lead to increased profitability and productivity:

It's pretty dear to my heart our staff's welfare and it's been great to be able to give them an opportunity to lift their standards a little bit ... With confidence comes their ability to engage probably more effectively with either staff that they're giving directions to or staff they're taking directions from... Now they can engage with things [including] their partners at home... They can do things together ... Which is pretty cool. (Employer)

## Notes

1. From *Determination of design of Funding Mechanism: Literacy and numeracy provision*. Retrieved from <http://www.tec.govt.nz/assets/Funding-mechanisms/2017-Literacy-and-Numeracy-funding-mechanism.pdf>
2. Further information can be found at <https://www.tec.govt.nz/funding/funding-and-performance/funding/fund-finder/employer-led-workplace-literacy-and-numeracy-fund/>
3. These progressions provide a six-step framework of progress showing what adults “know and can do”. Steps on the framework are measured by the Literacy and Numeracy for Adults Assessment Tool (LNAAT). Further information on the progressions can be found at <https://ako.ac.nz/knowledge-centre/learning-progressions-for-adult-literacy/>; on LNAAT at <http://assessforadults.nzcer.org.nz/support/solutions/articles/4000121824-what-is-the-assessment-tool-lnaat-what-was-it-designed-to-do->; on LNAAT comparisons to PIAAC at <https://www.educationcounts.govt.nz/publications/80898/comparing-literacy-and-numeracy-scales-in-the-assessment-tool-and-survey-of-adult-skills>
4. Note: quotes from programme participants (employers, employees, facilitators, *whānau* (family) are not referenced. They come from a number of reports that have been written to inform this article, including, (Alkema, 2015a; Alkema, 2016; Alkema, 2017; Skills Highway, 2018; Alkema & Murray, 2019; Kerehoma et al, 2019).
5. The employer data dominate these findings as they are the sole providers of outcome data to the Tertiary Education Commission. New Zealand had a Learning Representatives Programme from 2005-2013. This funded the New Zealand Council of Trade Unions to advocate for and support lower-skilled workers in their industry training or workplace learning.
6. As this work takes place in the New Zealand context It uses the New Zealand Treasury's Living Standards Framework at <https://treasury.govt.nz/information-and-services/nz-economy/higher-living-standards/measuring-wellbeing-lsf-dashboard> rather than the United Nations Human Development Index.

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**Author:**

**Anne Alkema** is an independent researcher who undertook the research that forms the evidence for this article when working for the Industry Training Federation in New Zealand. Email: [anne.alkema3@gmail.com](mailto:anne.alkema3@gmail.com)

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