

Improving Learning

Public Enquiry: Adult literacy and its importance

Australian Government Standing Committee on Employment, Education and Training

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COMPANY INFORMATION

COMPANY The Australian Council for Educational Research Limited (ACER)

ABN 19 004 398 145

COMPANY ADDRESS 19 Prospect Hill Road
Camberwell, Victoria 3124
Australia

WEBSITE www.acer.org

TELEPHONE +61 3 9277 5555

FAX +61 3 9277 5500

CONTACT PERSON Professor Geoff Masters, AO

EMAIL ADDRESS Geoff.Masters@acer.org

**AUTHORISED REPRESENTATIVE
FOR THIS SUBMISSION:**

Professor Geoff Masters
Chief Executive Officer
The Australian Council for Educational Research Ltd

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Executive Summary

The Australian Council for Educational Research (ACER) is pleased to submit this response to the Standing Committee on Employment, Education and Training's Public Inquiry: *Adult literacy and its importance*.

Background

There is widespread acknowledgement that the skills and knowledge adults now need to succeed in work, life, and citizenship have dramatically changed in the 21st century, often driven by technological advances. 21st century skill requirements are more demanding, requiring more critical, reflective reasoning skills, and the ability to interpret and understand a broader range of texts and materials, and increasingly the new skills interact with the digital world and technology.

Furthermore, the capacity to make considered decisions requires good foundational literacy and numeracy skills – whether they be on the spot decisions at a workplace or when out shopping; following written instructions about a medical or health matter; making decisions about financial matters, or understanding the implications of gambling.

Insights from research

The first four Terms of Reference in the inquiry all relate to the topic of 'what we know' about adult literacy and numeracy. The ability to answer and respond to these issues depends on having access to a set of data about adults' skills and abilities in literacy, numeracy and problem-solving skills across Australia. Australia has access to such data through its participation in international assessments of adult skills, and has done so since 1996 – the most recent being the OECD's Programme for International Assessment of Adult Competencies (PIAAC) which was conducted in Australia in 2011/12 (Cycle 2 of PIAAC is planned to be conducted in 2022).

Australia's results, no matter how you read them, demonstrate unequivocally that a significant number of people aged from 15 to 74 years old in Australia do not have access to sufficient foundation skills in reading and numeracy to be able to cope equitably with life and work in the 21st century (OECD, 2017).

However, there is extensive evidence-based research emanating from the data of the value of having higher Language, Literacy and Numeracy (LLN) skills—**our society values these skills and rewards them**. The evidence shows that investing in improving the LLN skills of the population has economic benefits for the nation – including by GDP and productivity. Conversely, low levels of LLN skills have a negative impact on an individual's social and economic future.

Research has shown that improving LLN can change patterns, especially within disadvantaged populations. For example:

- Intergenerational literacy is strongly linked, and improving foundation skills in both parents and children can reverse intergenerational patterns of low achievement.
- For disengaged adults with low levels of literacy and numeracy, there is evidence of a strong connection between *participation* in literacy and numeracy programs and changes in literacy and numeracy *practices* that can in turn lead to increased *proficiency* levels over time.

However, for some communities in Australia, substantially more work is needed to understand performance and improve learning. Specifically, there is a scandalous lack of current evidence-based information about the levels of literacy and numeracy among Indigenous adults. The continuing poor results in literacy and numeracy of Indigenous school children, evidenced in NAPLAN, strongly imply that adult literacy and numeracy are

almost certainly at least as far behind the attainment of the non-Indigenous population – but without good data, this remains speculation.

The future

The availability, impact and effectiveness of adult literacy and numeracy educational programs depends significantly on the capability of the existing VET and LLN workforce to implement effective adult literacy and numeracy educational programs, and the range and type of these programs.

ACER presents a number of recommendations at the end of this executive summary and in conclusion to our submission. These recommendations are underpinned by a range of key ideas and principles set out below and detailed within this submission:

- Literacy and numeracy provision in the workplace can benefit both employees and employers, and research indicates that literacy and numeracy provision associated with vocational and workplace training is best delivered within the context of that training wherever possible.
- Attention to LLN issues is not just the responsibility of a few specialist teachers.
- Taking a holistic approach to LLN can assist high competency completion rates, learner engagement and employer satisfaction.
- Adult and community education (ACE) literacy programs are often successful because they can build literacy skills through informal learning and can be based around local, personal and community-based real life activities.
- Supporting schools to improve literacy, numeracy and digital literacy is important. Particularly for schools and their communities in remote areas of Australia.
- Family literacy programs have never been well promoted or used in Australia, but there is international evidence of their value.
- Success in improving LLN across the population relies on a strong and well equipped LLN teaching and training workforce.

ACER Recommendations to the Inquiry

ACER's recommendations are summarised here and further detailed in Section 6 of our submission.

1. It is critical that **Australia participates fully in the second cycle of PIAAC** in order to see and review how Australian adults have performed in relation to adult literacy, numeracy and problem solving. This allows research to be undertaken based around the factors set out in the Terms of Reference of this Parliamentary Inquiry, and provides the evidence to reflect on the results from both a policy level in relation to adult education, but also in relation to how school education is preparing young people for the world as adults.
2. **Australia needs to explicitly target and prioritise numeracy** by: a) upskilling and training many more personnel involved in providing VET training in numeracy; b) targeting adult numeracy and maths programs to women – not only learners and workers, but also educators; and c) conducting research, to monitor and understand much more about the teaching and learning of numeracy.
3. **Implement the recommendations of the numerous existing National Reviews** into VET in Australia, and **review and revise the National Foundation Skills Strategy**. Recent reviews include the Joyce review, the Shergold review and the Productivity Commission 2020 report. All have highlighted the need to explicitly target and support the improvement of adult and youth language, literacy, numeracy and digital literacy (LLND) skills and abilities across Australia. Furthermore, components of

the 2012 National Foundation Skills Strategy are still relevant today and could be updated and funded to improve outcomes.

4. **Implement policy and program recommendations from the OECD PIIAC reports.** Including the report in 2013 and the 2017 '*Building Skills for All in Australia*' report.
5. **Implement a range of stand-alone, informal learning and integrated LLND focussed programs** for a range of learner cohorts in a revised National Foundation Skills Strategy.
6. **Establish ongoing, funded professional learning programs** under the National Foundation Skills Strategy that offers career pathways for adult LLND teachers and trainers in order to refresh and expand the depth and breadth of the adult LLND workforce. These should be built on recent programs for teaching in adult education (TAE80113 and TAE80213).

1. The Australian Council for Educational Research Limited

The Australian Council for Educational Research (ACER) is pleased to submit this response to the Standing Committee on Employment, Education and Training's Public Inquiry: *Adult literacy and its importance*.

ACER's mission is to create and promote research-based knowledge, products and services that can be used to improve learning across the life span. ACER is one of the world's leading educational research centres. Our goal is to support learners, learning professionals, learning institutions and the development of a learning society through our work. ACER has built a strong reputation as a provider of reliable support and expertise to education policymakers and professional practitioners since it was established in 1930. ACER has a particular specialisation in assessment, including the development and implementation of large-scale national and international assessment projects

As an independent, non-for-profit, non-government organisation, ACER generates its entire income through contracted research and development projects, and through developing and distributing products and services, with operating surplus directed back into research and development. ACER has experienced significant growth in recent years and now has more than 400 staff located in Melbourne, Sydney, Brisbane, Perth, Adelaide, London, Dubai, New Delhi, Kuala Lumpur and Jakarta. ACER works with schools, education departments, ministries of education, further and higher education institutions, donor organisations, non-government organisations, industry and other types of organisations around the world.

ACER is known for our high quality work in helping to shape strategic decision-making to improve learning across the life span. We have decades of experience in the collection, analysis, interpretation and use of reliable data and a history of proven delivery of:

- International Assessment Frameworks;
- International and National Assessments;
- Large Scale Surveys across the globe.

ACER has been involved at an international level in the development and implementation of adult literacy and numeracy surveys and assessments such as the International Adult Literacy Survey (IALS), the Adult Literacy and Life Skills Survey (ALLS) and more recently the Programme for International Assessment of Adult Competencies (PIAAC). ACER has also been actively involved in the development of adult literacy and numeracy assessments, curriculum and professional learning programs across Australia.

ACER is therefore well placed to respond to the Standing Committee on Employment, Education and Training's Public Inquiry: *Adult literacy and its importance*.

2. Background

2.1 Adult literacy, numeracy and problem-solving skills in Australia in the 21st century

There is acknowledgement across sectors—education, government and business—that the skills and knowledge adults now need to succeed in work, life, and citizenship have dramatically changed in the 21st century, often driven by technological advances. 21st century skill requirements are more demanding, requiring more critical, reflective reasoning skills and the ability to interpret and understand a broader range of texts and materials, and increasingly the new skills interact with the digital world and technology (e.g., see Binkley et al., 2012; Foundation for Young Australians, 2017; Griffin, et al., 2012; Partnership for 21st Century Skills, 2016; Pellegrino, et al., 2012). For many Australians the literacy they were taught in school is not enough to keep up with changes in the society we now live in. Technological changes have affected workplaces and government services and place higher demands on an adult’s capacity to read, process and communicate information and critically understand and interpret data in its many forms.

This OECD summary describes how:

The technological revolution that began in the last decades of the 20th century has affected nearly every aspect of life in the 21st: from how we “talk” with our family and friends, to how we shop, to how and where we work. New means of communication and types of services have changed the way individuals interact with governments, service suppliers and each other. These social and economic transformations have, in turn, changed the demand for skills as well. While there are many factors responsible for these changes ... technological developments, particularly information and communications technologies ... have profoundly altered what are considered to be the “key information-processing skills” that individuals need as economies and societies evolve in the 21st century. [...]

With manufacturing and other low-skill tasks in the services sector becoming increasingly automated, the need for routine cognitive and craft skills is declining, while the demand for information-processing skills and other high-level cognitive and interpersonal skills is growing. In addition to mastering occupation-specific skills, workers in the 21st century must also have a stock of information-processing skills, including literacy, numeracy and problem solving, and “generic” skills, such as interpersonal communication, self-management, and the ability to learn, to help them weather the uncertainties of a rapidly changing labour market. (OECD, 2013c, p.46).

This was the basis on which the Federal Government in Australia developed its National Foundation Skills Strategy (SCOTESE, 2012), which similarly stated:

The importance of strong foundation skills in a modern, knowledge-based society is well established. These skills underpin workforce participation, productivity and social inclusion. People with higher LLN skills are more likely to be employed, participate in their community, experience better health and engage in further training. Research also shows employability skills are critically important to people gaining employment and remaining employed. The link between numeracy, literacy and problem solving skills and the central use of technology in contemporary communication means that foundation skills are increasingly important for effective participation in modern workplaces and contemporary life.

A move away from low-skilled work to greater knowledge-based work has increased the need for workers with good LLN skills. As modern workplaces become increasingly complex and supporting technologies evolve, there are rising expectations around acceptable levels of foundation skills. The need for individuals to continually build and adapt their foundation skills for new contexts, technologies and purposes means that these skills extend beyond the entry-level skills required to obtain employment and enter the workforce. Foundation skills exist across a continuum of levels and

affect an individual's ability to progress through a career, change career paths, participate in education and training and engage with their community. (p. 2)

The National Foundation Skills Strategy for Adults (NFSS) provided a blueprint for action to develop the foundation skills of the Australian adult population. Supporting the NFSS, there was an NFSS Project that ran from 2013 to 2015, but was then discontinued.

In more recent national reviews and reports related to Vocational Education and Training (VET) in Australia, such as the Joyce review (Joyce, 2019), the Shergold review (Shergold, 2020) and the Productivity Commission 2020 report: the *National Agreement for Skills and Workforce Development Review*, all expressed the same views and were consistent in their statements and recommendations about the critical and fundamental importance of addressing literacy, numeracy (and digital literacy) skills of our young people and adults as we move further into the 21st century.

In the international arena, Australia is a signatory to the United Nations' 17 Sustainable Development Goals for 2030 (SDG 2030), amongst which is goal 4.6, focussing on literacy and numeracy of young people and adults:

By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy'

Accordingly, Australia will be called upon to report on indicator 4.6.1:

'the proportion of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex'.

3. Terms of Reference 1 to 4: Research about adult literacy and numeracy

The first four Terms of reference in the inquiry all relate to the issue of research about adult literacy and numeracy:

1. The relationship between adult literacy, numeracy and problem-solving skills and socio-demographic characteristics, particularly migrant status, First Nations status and individuals living in households that have experienced intergenerational unemployment;
2. The effect that literacy and numeracy skills have on an individual's labour force participation and wages;
3. Links between literacy and social outcomes such as health, poverty, ability to care for other family members and participation in civic life;
4. The relationship between parents' literacy skills and their children's education and literacy skill development from birth to post-secondary education.

The ability to answer and respond to these issues depends on having access to a set of data about adults' skills and abilities in literacy, numeracy and problem-solving skills across Australia. Australia has access to such data through its participation in international assessments of adult skills, and has done so since 1996. These surveys have evolved from the International Adult Literacy Survey (IALS) conducted in 1996, to the Adult Literacy and Life Skills Survey (ALLS) in 2006 through to the Programme for International Assessment of Adult Competencies (PIAAC) which was conducted in Australia in 2011/12. Planning is currently underway for Cycle 2 of PIAAC, to be conducted in 2022 (or later due to the impact of COVID-19). PIAAC is conducted under the auspices of the OECD.

PIAAC is an international survey of adult skills that covers reading literacy, numeracy and problem solving of 16- to 65-year-old adults. The Australian Bureau of Statistics (ABS) conducts these household surveys in Australia. PIAAC survey instruments are administered to a random representative sample across Australia **excluding remote Indigenous adults and incarcerated adults**. In the 2012 PIAAC, Australia oversampled to include a younger cohort (15 year-olds) and an older cohort (66-74) compared with the minimum international requirements. The oversampling also enabled state and territory performance to be compared. In the 2012 delivery of PIAAC the assessment was able to be completed using pen and paper **or** computer.

Note: It should be noted that ACER was aware that initially Australia did not agree to participate in Cycle 2 of PIAAC, but belatedly agreed to join. ACER also understands that for this second cycle of PIAAC Australia will not be oversampling as in previous cycles and hence will not be able to report at the state and territory level.

3.1 Research about adult literacy and numeracy skills and background factors

One key and unique feature of these adult surveys is that participants answer a significant number of background questions (close to 300) which, together with the assessment of respondents' cognitive skills, provide the potential for rich analysis. These background questions cover a wide range of socio-demographic questions, and questions about skills use and practices, which can be correlated with the cognitive skills assessed. The skills use and practice questions attempt to find information about how people use their literacy and numeracy skills, both in everyday life and at work.

There is now extensive evidence based on research emanating from the data from the background questionnaire and the skill performance in the ALLS and PIAAC surveys (and earlier international and national surveys) of the value of having higher Language, Literacy and Numeracy (LLN) skills—our society values these skills and rewards them. This includes research about the impact on the economy and productivity and on a

country's GDP, indicating that investing in improving the LLN skills of the population has economic benefits for the nation. Low levels of LLN skills have a negative impact on an individual's social and economic future (e.g., see OECD 2012, 2013a, 2013b, 2016, 2017).

The ALLS and PIAAC data and results gained considerable attention across Australia. This is evidenced in part by:

- The Industry Skills Councils report, *No More Excuses-An Industry Response to the Language, Literacy and Numeracy Challenge* from April 2011
- The Skills Australia report, *Skills for Prosperity- A Roadmap for Vocational Education and Training*, from May 2011
- The research and reports by the Australian Industry Group released since 2008, including the *National Workforce Literacy Project: Report on Employers' Views on Workplace Literacy and Numeracy Skills*. These reports have been regularly updated and all highlight the significant issues that industry has identified with regard to the low levels of literacy and numeracy skills in the workforce (e.g., see AiGroup 2008, 2012, 2015 & 2016)
- The three recent national reports into vocational education and training in Australia, including VET delivered in schools, which all highlighted how LLN (and digital literacy) skills were critical foundational skills that needed addressing (Joyce, 2019; Productivity Commission, 2020; Shergold, 2020)
- The National Foundation Skills Strategy for Adults (NFSS), which set out a plan for action to develop the foundation skills of the Australian adult population (SCOTese, 2012).

3.2 OECD Country Report

In September 2017, the OECD released a targeted country report on Australia's performance in PIAAC, *Building Skills for All in Australia: Policy Insights from the Survey of Adult Skills* (OECD, 2017). This closer examination of Australia's performance revealed a number of key challenges facing Australia. The report summarised these as follows.

- Numeracy represents a particular challenge in Australia.
- Signs of poor numeracy performance can be traced back to initial schooling.
- Women have weaker numeracy skills than men.
- There is a relatively large gap between the most proficient and least proficient adults in literacy and in numeracy.
- Many well-educated adults have low literacy and/or numeracy skills.
- Young women in Australia are much more likely than young men to not be in employment, education or training (NEET). (OECD, 2017, p. 9)

This report concluded:

Taken together, although Australia's average results are not poor, the challenges presented by adults with low basic skills may lead to Australia being left behind in terms of innovation and economic growth by countries that have been more successfully investing in the skills of all their people. (OECD, 2017, p. 9)

3.3 Australia's performance in PIAAC

There are five levels of proficiency described in PIAAC, although Level 1 has been broken into a below Level 1 and a Level 1, given the high numbers of adults performing at Level 1. Appendix A includes some of the descriptions of what each level means in literacy and numeracy.

Figure 1 below shows the distribution of Australia’s performance across the different levels defined for PIAAC 2012 for both Literacy (Reading) and Numeracy.

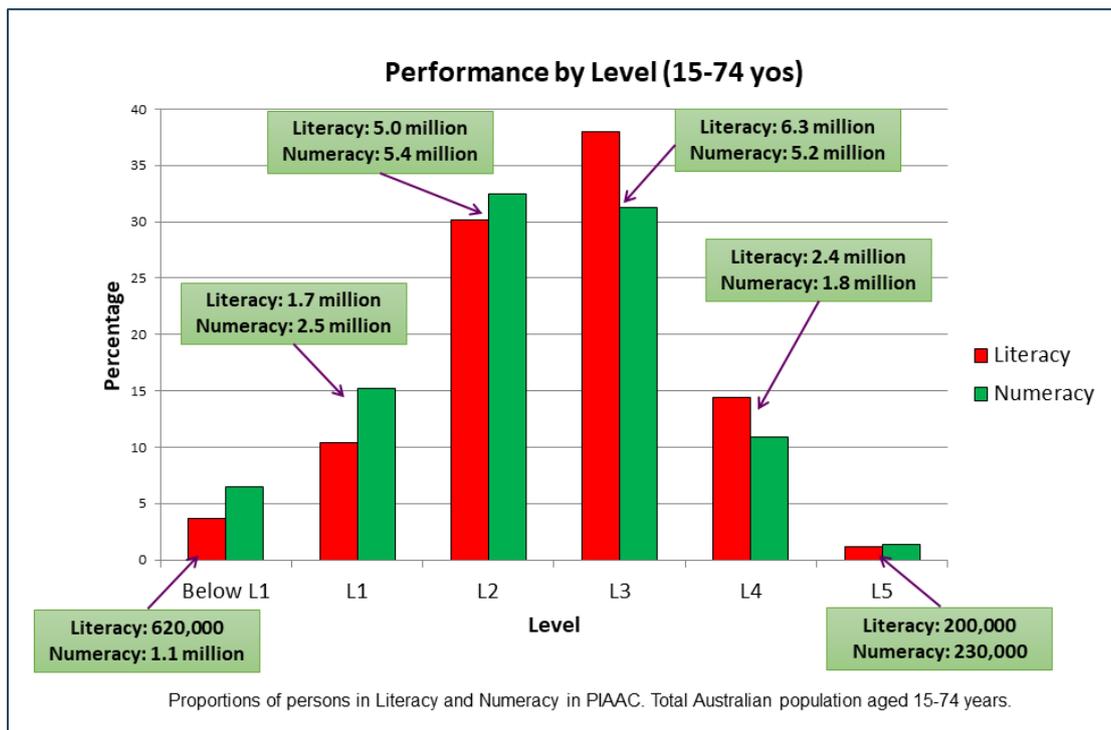


Figure 1 Proportions of persons in Numeracy in PIAAC 2012. Total Australian population aged 15-74 years

In relation to the first three Terms of Reference, *Appendix A* summarises and provides some of the available data in relation to some of the key socio-demographic characteristics. Below is a summary of some of the key outcomes.

Literacy and numeracy proficiency significantly increases from age 15 with the peak in performance being in the early 30s. From that age onwards, performance declines. Some age characteristics include:

- younger learners can have lower LLN skills than older learners
- the peak in performance is from the mid-20s into the 30s
- older adults, especially from age 55 onwards, have significantly lower level skills.

The improvements in literacy and numeracy proficiency observed for each additional year of age between 15 and 30 can be linked to the fact that significant proportions of young people continue in education or training until their mid- to late 20s. In other words, participation in education and training after the age of 15 continues to add value to their LLN proficiency.

The decline in proficiency in adults over 35 suggests that there is a range factors and processes involved in maintaining adults’ levels of skills. Indeed, even when educational attainment is accounted for, older cohorts score progressively lower, on average, than younger cohorts. There is the argument, “if you don’t use it, you lose it”.

In relation to gender and age, there is a decline in performance starting a little earlier for females but starting from a higher performance level than for males in the younger age groups; and whilst there is a similar pattern for numeracy, there is a significantly more consistent male-female difference across all age groups, in favour of males. Indeed, 49.4% of males are at Level 2 or below, with 59.0% of females at Level 2 or below, a difference of almost ten percentage points.

In relation to employment status, even for Australian adults who are employed the proportions performing at the lower levels are still quite significant: 38.8% in literacy are at Level 2 or below and 48.9% for numeracy. This data is also broken down by industry and occupation (ABS, 2013).

In terms of socio-economic background, the pattern that emerges from the PIAAC survey is very clear and in line with the findings of previous surveys: adults from socio-economically advantaged backgrounds have higher scores on average than those from disadvantaged backgrounds. The effect of socio-economic background on education trajectories and the development of literacy and numeracy skills is well-documented. Evidence from the Programme for International Student Assessment (PISA) also reveals an association between socio-economic background and the performance of 15-year-old students in reading, mathematics and science across Australia (Thomson et al, 2019, 2020).

The PIAAC data shows that Australia has the highest proportion of immigrants among the PIAAC participating countries. However, whilst immigrants in Australia have lower levels of literacy and numeracy than native Australians, the difference is among the lowest across participating countries. Immigrants in Australia have better skills than immigrants in other countries.

In Australia, contrary to many other countries, second generation migrants have skills comparable to skills of those who were born in Australia and whose both parents were born in Australia. The integration of migrants, as measured by basic skills levels of their offspring, therefore, does not seem to be a challenge in Australia. Migrants in Australia whose mother tongue is the same as the language of assessment (English) perform much better than migrants whose mother tongue is not English. While around half of migrants in Australia are of English mother tongue, the remaining half need to learn English to successfully function in the host country. Poor mastery of English is a barrier to reaching full potential in literacy and numeracy skills (as assessed in English). Immigrants who would have scored highly had they been tested in their mother tongue may benefit particularly from learning English (OECD, 2017).

3.4 Problem solving and ICT skills

PIAAC also included an assessment of adults’ problem solving skills, called Problem Solving in Technology-Rich Environments (PSTRE). Just over 13% (2.2 million) of Australians were reported at Below Level 1 and 31% (5.3 million) were reported at Level 1. Around 25% (4.1 million) had skills at Level 2, and 3.2% (540,000) at Level 3 (see figure 2). An estimated 25% (4.2 million) of Australians aged 15 to 74 years were not able to be classified. ‘Not Classified’ refers to those adults who either opted out of the computer-based assessment, failed a basic ICT test or had no computer experience.

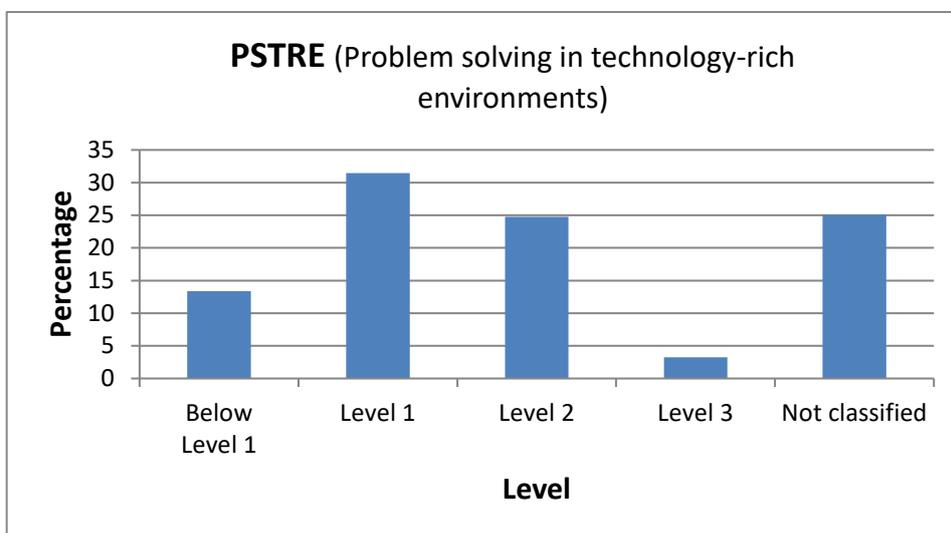


Figure 2 Proportions of persons in PSTRE in PIAAC. Total Australian population aged 15-74 years

By international standards, adults in Australia, across all age groups, have strong PSTRE skills. This is important as ICT technologies and the use of computers have changed working methods and work organisation. In many countries, including Australia, young people are more familiar with ICT technologies and perform better in PSTRE than older adults: in Australia while more than half of 16-25 year-olds have strong PSTRE skills, fewer than 20% of 55-65 year-olds reach this level of proficiency (OECD, 2017).

3.5 Summary

Australia's ALLS and PIAAC results, no matter how you read them, demonstrate unequivocally that a significant number of people aged from 15 to 74 years old in Australia do not have access to sufficient foundation skills in reading and numeracy to be able to cope equitably with life and work in the 21st century (OECD, 2017). This is consistent with Australia's recent performance on PISA and its measure of the abilities of 15 year-olds. The capacity to make considered decisions requires good foundational literacy and numeracy skills – whether they be on the spot decisions at a workplace or when out shopping; following written instructions about a medical or health matter; making decisions about financial matters, or understanding the implications of gambling. The results of these surveys show that millions of Australian teenagers and adults do not have such foundational skills and they are, potentially, disempowered, especially as we move further into the 21st Century and its demands for higher level and more flexible skills.

A further observation from the information presented above is that Australia gains incomparably comprehensive, detailed and comparative information about the status and explanation of Australian adults' literacy and numeracy levels from its participation in PIAAC and preceding international adult literacy studies

3.6 What does the research show?

The research evidence (e.g., see OECD, 2013a, 2016, 2017, 2019) shows that valuing, supporting and enhancing an individual's LLN skills—from all viewpoints—has individual, societal and economic benefits. Some specific findings based on the data from the international surveys include the following.

- Education and training make a difference: literacy and numeracy performance increases with each extra year of education and training.
- Individuals with high levels of literacy and numeracy skills were shown to have a better chance of securing stable, full-time employment.
- Individuals with high levels of literacy and numeracy skills were significantly more likely to undertake further education and training, engage in community groups or organisations, and report better health.
- Substantial and direct individual financial benefits are associated with higher levels of literacy or numeracy, with a steady gap in median income of people assessed at each of the five described skill levels
- Individuals with low levels of skills have poorer health, trust others less and are less likely to engage in community life and democratic processes than highly-skilled adults. Skill levels have a significant positive relationship with well-being, even when other factors, such as gender, age, immigration background, socio-economic background and education, are taken into account.

A Productivity Commission report (Shomos & Forbes, 2014) based on the PIAAC data, summarised some of the benefits and outcomes of improving the literacy and numeracy levels of adult Australians:

Higher literacy and numeracy skills are associated with better labour market outcomes (employment and wages). Econometric modelling shows that:

- an increase in literacy and numeracy by one skill level is associated with an increased likelihood of employment of 2.4 and 4.3 percentage points for men and women, respectively;
- an increase in literacy and numeracy skills is associated with a similar increase in the probability of employment, whether a person had a degree, diploma/certificate or Year 12 education;
- an increase in literacy and numeracy by one skill level is associated with about a 10 per cent increase in wages for both men and women. This positive association is equivalent to that of increasing educational attainment from Year 11 to Year 12 or to a diploma/certificate;
- up to 40 per cent of the association between education and employment is attributable to literacy and numeracy skills. These results are consistent with education providing many other attributes of human capital that are valued in the workplace; and
- more than half of the ‘penalty’ that affects the wages of people with a non-English speaking background is explained by their lower literacy and numeracy skills. (Shomos, & Forbes, 2014, p. vi)

It was this research and the outcomes based on ALLS and PIAAC data that led to the NFSS and its actions and recommendations, and that has now been used as the starting point for the consistent arguments about the critical need to address adult and youth LLND skills across Australia in the recent reviews by Joyce, Shergold and the Productivity Commission mentioned earlier.

3.7 Intergenerational literacy

The fourth Term of Reference, (the relationship between parents’ literacy skills and their children’s education and literacy skill development from birth to post-secondary education) relates to the issue of intergenerational literacy.

The PISA studies collect information about the participating 15-year-old students’ socio-economic background, including their mothers’ and fathers’ level of education and occupation. There is no separate measure of parental literacy and numeracy; however, PISA’s index of socio-economic status (combining parents’ education, occupation and home possessions) gives some indication of the relationship between parental literacy and numeracy and that of their children. In Australia, the most recent data from PISA for Australia shows a strong association between socio-economic background and proficiency, similar to that of other OECD countries:

Across the OECD, 47 score points separate the reading literacy performance of students from the least disadvantaged backgrounds (those in the highest quartile of socioeconomic background) and the socioeconomically average student. In Australia, this difference is about the same – 44 score points – and represents about 1.4 years of schooling. Not surprisingly, the difference between the least advantaged and most disadvantaged students is even larger: 89 score points on average across the OECD and the same in Australia. This is the equivalent of around 2.7 years of schooling. (Thomson et al, 2020)

In her analysis of policy interventions in relation to Adults with low literacy and numeracy skills based on the PIAAC survey, Windisch summarised the research about intergenerational literacy:

Research evidence shows strong intergenerational links between parents’ and their children’s literacy skills. Literacy practices in childhood shape literacy skills later in life (Benseman and Sutton, 2010). For example Bynner and Parsons’ longitudinal studies (2000, 2007) in the United Kingdom clearly show that adults who have poor literacy skills are more likely to have children who also struggle with these

skills. Improving the literacy skills both of parents and children can help reverse these intergenerational patterns (BMBF, 2012). (Windisch, p. 81)

3.8 Indigenous/First Nations literacy and numeracy

There is a scandalous lack of current evidence-based information about the levels of literacy and numeracy among Indigenous adults. One source of national reporting dates back to a study of a decade and half ago, the International Workforce Literacy Review: Australia (Wignall & Bluer, 2007), which in turn reported on results from Australia's participation in the first international adult literacy survey, the Survey of Aspects of Literacy (SAL, 1996). Wignall write,

The SAL reported some estimates for people who were of Aboriginal and Torres Strait Islander origin (Indigenous peoples), but the data was criticised heavily as it excluded remote and sparsely settled areas from the SAL sample. This meant that an estimated one-quarter of Indigenous peoples, who lived in such areas, did not have a chance of being selected in the survey. As the English literacy skills of this group were estimated to differ widely from the skills of those Indigenous peoples living in urban areas, the results could only be used as an indicator of the literacy skill levels of the total Indigenous population. Significantly, greater proportions of Indigenous peoples were at low literacy levels compared with other people who spoke English as their first language, and their skills showed more variation across the three scales [of the international adult literacy study]. Some 41% were at Level 1 on the prose scale, 45% were at Level 1 on the document scale, and 47% were at Level 1 on the quantitative scale. (Wignall & Bluer, page 9)

Wignall continues, 'Although Indigenous education and literacy have been issues of much debate over several decades, the Commonwealth government did not elect to fund a specific extension project to the 2006 Adult Literacy and Lifeskills Survey (ALLS) that would have produced a larger and broader sample of Indigenous respondents, and therefore more valid data. (Wignall & Bluer, page 10)

Australia's decision not to oversample Indigenous adults, and to exclude Indigenous people in remote areas, in both the first and forthcoming cycles of PIAAC, indicates a lack of commitment to investigating and improving on the quality of literacy and numeracy among this population. The continuing poor results in literacy and numeracy of Indigenous school children, evidenced in NAPLAN (e.g. see Australian Curriculum, Assessment and Reporting Authority, 2019), strongly imply that adult literacy and numeracy are almost certainly at least as far behind the attainment of the non-Indigenous population – but without good data, this remains speculation.

3.9 Numeracy: a specific challenge in Australia

As outlined above, especially in the OECD report (OECD, 2017), numeracy is a specific challenge in Australia, especially for women. The PIAAC data found that 54 per cent of 15- to 74-year-olds – more than nine million adults – were performing at the lowest three levels. Worryingly, around 10 per cent more females than males were performing at these lower levels. In numeracy, Australia was 15th out of 34 countries, just below the mean; in literacy Australia was fifth and significantly above the mean.

As the OCED pointed out:

While many other countries are doing better in literacy than in numeracy, the difference between literacy and numeracy scores is not nearly as significant as in Australia. In Australia, 13% of adults with higher literacy skills (Level 2 and above in the Survey) perform poorly in numeracy, compared to 10%

among participating countries. Underperformance in numeracy is observed in Australia across all age groups, including young people (16-24 year-olds), and across all levels of educational attainment. For example, 7% of all tertiary graduates have low numeracy skills compared to 3% with low literacy skills. (OECD, 2017, p. 46)

The PIAAC results are consistent with the equivalent international survey of 15-year-olds in schools, the Programme for International Student Assessment (PISA). The most recent 2018 PISA results show Australia 29th out of 79 countries in numeracy, compared to literacy where we are 16th and significantly above the mean, although, more worryingly, in PISA in both literacy and numeracy, Australia's performance has significantly declined since 2000.

The good news is that adults with high proficiencies in literacy and numeracy are much more likely to report good health, to be employed, to have higher earnings, and to have positive social dispositions and take part in community life – and numeracy appears to be a more potent predictor of some of the social and economic outcomes. The bad news is that surveys like PIAAC and PISA show that millions of Australians do not have the foundational numeracy and maths skills they need in employment and to function effectively in modern life.

4. Terms of Reference 5: The impact of schooling in 2020 from COVID-19

The fifth Term of Reference is:

Whether changes to schooling in 2020 as a result of COVID-19 will have a disproportionate impact on the skill development of those children of parents with lower literacy and numeracy levels, and, if yes, consideration of appropriate remediation programs which might address this.

A ministerial briefing paper on the likely impact of COVID-19, which was submitted to the Australian Government in April 2020, found that, based on previous studies, 'the level of education, socioeconomic status, and consequent capacity to provide home learning support and resources for students is lower among parents of educationally disadvantaged students than in the broader community.' (ACER 2020)

While it is too early to bring definitive evidence to bear on this question, information from international studies that are currently underway or planned for the near future will throw further light on the question. These studies include the UNESCO and IEA co-funded Responses to Educational Disruption Survey (REDS), and the PISA 2022 Global Crisis Module. (Australia is not participating in the first of these, but is participating in the second.) It should be noted that, like the regular PISA collection of background information about parents referred to above, neither study will capture data on adult literacy directly, but they will collect information on parental education, which can serve as a proxy for literacy.

5. Terms of Reference 6: Effectiveness of adult literacy and numeracy educational programs

Term of Reference 6 (International comparisons of government policies and programs that may be adapted to the Australian experience.), is about the availability, impact and effectiveness of adult literacy and numeracy educational programs in Australia and internationally.

There are a number of critical issues in relation to this, including the capability of the existing VET and LLN workforce to implement any effective adult literacy and numeracy educational programs, and the range and type of programs that need to be implemented.

For a significant period from the late 1980s onwards, Australia was considered one of the leading nations in addressing adult LLN issues. The Australian Language and Literacy Policy (ALLP) was released in 1991. It was a significant document for adult literacy, and it identified a strong relationship between training reform and the development of the literacy skills of the Australian workforce. The policy linked language and literacy competence to national economic imperatives and placed English language and literacy into mainstream education and training for the first time. The ALLP also expanded the Australian migrant education program to all migrants without functional English Language, not to just recent arrivals. One of the key outcomes resulting from the ALLP was extra funding for a range of programs including provision, publications and research. Some of the key program initiatives included:

- The Workplace English Language & Literacy (WELL) program, which provided workers with English language, literacy and numeracy skills to help them meet the demands of current and future employment. The successful WELL Program ran across Australia until the mid-2010s (see Hanemann, 2017);
- The Adult Literacy Innovative Projects Programme, which was maintained in various forms until 2007;
- Labour market programs (the names have changed over the years, but the program still exists today as the SEE (Skills for Education and Employment) program.
- The Adult Literacy Research Network, which evolved into the Adult Literacy and Numeracy Research Consortium (ALNARC), run under the auspices of the National Languages and Literacy Institute of Australia (NLLIA). ALNARC consisted of University-based Research Centres in each State/Territory. Funding for ALNARC ceased in 2002 and was partially moved across to the VET research body, NCVET, but dedicated funding for LLN research finished in 2007.

Furthermore, the States and Territories had their own Information and Resource centres that supported adult LLN teachers and programs, and developed and published a wide range of teaching resources and materials (e.g., see Hazell, 2002). Professional learning programs such as the Adult Literacy Teaching (ALT) and Adult Numeracy Teaching (ANT) programs were developed under the auspices of the TAFE National Staff Development Committee (NSDC), implementing the \$3.2 million Adult Literacy Strategies through the National Framework for Professional Development of Adult Literacy and Basic Education (ALBE) Personnel, as a component of the ALLP, and rolled out on a national basis in the mid-to-late 1990s and continued into the early 2000s.

The components of the NFSS cover and incorporate different elements of the above, earlier developments arising from the ALLP, especially in how it names the need to strengthen foundation skills in the workplace, and building the capacity of the education and training workforces to deliver foundation skills. However, the

strategy needs to be explicitly supported with funded programs that enables the strategy to be successfully and extensively implemented.

This past experience, knowledge and expertise should be built on and developed appropriately at a national level, while considering what can be learnt from international best practice.

A number of relevant issues have already been addressed, especially about implementing successful policies and programs (see Section 3 above). However, a number of issues are particularly relevant here that need to be discussed in more detail.

5.1 Achieving long term benefits and gains

There are many challenges in deciding on what intervention or support programs work best for adults who have low levels of LLND skills. In a comprehensive review of this issue, Windisch summarised the challenges as:

Low basic skills levels of adults are a complex policy problem that has neither straightforward causes nor straightforward solutions. Tackling serious literacy and numeracy weaknesses among adults is challenging because there is no 'one-size-fits-all' solution. Low-skilled adults are a diverse group and didactical and methodological approaches have to address the specific learning needs of each adult learner, be this a low-skilled worker trapped in a low-skill job, a young school dropout, an unemployed person or a parent who has been inactive in the labour market. Often those concerned will have done badly at school and have a negative perception of education; they may lack awareness of their deficiencies, and even if aware, are embarrassed to admit it. (Windisch, p. 8)

It should also be noted that, for disengaged, low performing literacy and numeracy adults, there is evidence of a strong connection between *participation* in literacy and numeracy programs and changes in literacy and numeracy *practices* that can in turn lead to increased *proficiency* levels over time (see e.g. Reder 2012; Reder and Bynner, 2009; Wolf and Evans, 2011). It cannot be assumed that short term, targeted LLN programs will have any immediate impact on this cohort, and a range of long term practices and programs need to be implemented, such as community, workplace or family literacy programs (see Windisch, 2015).

5.2 Which programs need to be implemented?

5.2.1. VET and workplace programs

Literacy and numeracy provision in the workplace can benefit both employees and employers, and research indicates that literacy and numeracy provision associated with vocational and workplace training is best delivered within the context of that training wherever possible (e.g., see Bensemann, 2012; Windisch, 2015; Workplace English Language and Literacy (WELL) Program, 2000). Also refer to Appendix B for policy and program recommendations from the PIAAC report. This has also been documented in *Built in not bolted on* (Workplace English Language and Literacy (WELL) Program, 2000) a significant document that outlined the place of LLN skills in VET and workplaces. This is because all vocational learners will be developing LLN skills as they develop vocational and workplace competence.

As Skills Australia noted:

Connecting LLN to a student's core VET program enables the student to address their poor LLN skills in a meaningful and relevant context. This is considered preferable to students feeling singled out and potentially stigmatised. (Skills Australia, 2010b, p.34)

Attention to LLN issues is not just the responsibility of a few specialist teachers. The risk in this approach is of failing to reach all learners needing assistance. To manage this, all staff dealing with training and assessment require knowledge about vocational LLN.

Taking a holistic approach to LLN can assist high competency completion rates, learner engagement and employer satisfaction. This means providing policies and procedures that deal with LLN from both an access and equity perspective and from an integrated skills perspective. Overall, a holistic approach allows quality training and assessment services to be successfully delivered.

Some key points about effective delivery of LLN in VET and workplaces, summarised from both the PIAAC research and from *Built in not bolted on* and more recent research include:

- Develop links between the world of learning and the world of work
- Provide training for workers
- Ensure that the training is relevant
- Identify those most at risk of poor skills proficiency
- Recognise and certify skills proficiency
- The most strategic and effective role in industry for a language, literacy and numeracy practitioner will be as a member of a training team
- All trainers and assessors need to locate the language, literacy and numeracy information in the Training Packages they are using. This is necessary to ensure that they are delivering appropriate training, and conducting fair, valid and reliable assessments
- Some workers need specialist assistance with the language, literacy or numeracy skills required in some units of competence. Specialist support can be used to support the trainees or trainer between sessions.

Language, literacy and numeracy specialists working in VET can assist in these ways:

- assessing units dealing with communication, team work, mathematical concepts etc.
- preparing reader friendly assessment instruments
- working alongside the industry expert during primarily technical assessments
- support re the layout, content, use of diagrams, use of white space and font size to achieve reader friendly workplace and training notes and materials
- development and advice about teaching/learning strategies to cater for different learning styles within a group
- delivering face-to-face training or co-delivering training
- supporting training on the job
- collaborating and helping to design training and assessment materials and assessment tools. (OECD, 2013b; Workplace English Language and Literacy (WELL) Program, 2000)

Another positive outcome resulting from the ALLS results in 2006 was the initiative by the relevant industry body at the time, Innovation & Business Skills Australia Ltd (IBSA), to develop the Foundation Skills Training Package (FSK) as part of a national, systemic approach to developing foundation skills units of competency, qualifications and skill sets. Such foundation skills units can be packaged with vocational qualifications at all AQF levels in order to support learners to improve their LLND skills as part of their training. These exist today for RTOs to use as part of their training programs.

5.2.2. WELL program replacement needed

The WELL Programme successfully operated from 1991. The Australian Government allocated funds for WELL, increasing to over \$35 million in 2015-16, prior to the program funding ceasing in 2017. Current Skills for the Future funding in relation to workplace programs is at a significantly lower level (up to \$52.5 million over four years to 30 June 2023).

It is recommended that a re-introduction of the WELL program, with associated increased funding, be considered based on consultations with industry and businesses through organisations such as the Australian Industry Group.

5.3 School, community and First Nations programs

As stated earlier, people with literacy problems can often be reluctant to seek help. Successful adult literacy and numeracy programs need to be practical, purposeful and designed with the individual's needs in mind. Adult and community education (ACE) literacy programs are often successful because they can build literacy skills through informal learning, outside of the formal classroom, and can be based around local, personal and community-based real life activities. They can also deliver formal learning programs and provide pathways into accredited vocational programs. ACE providers should be funded and supported to provide:

- non-accredited LLND courses for both personal development and social capital;
- opportunities for adults with barriers to learning to develop their LLND skills to build their confidence and contribute to their families, community and the economy; and
- family literacy programs focussed on socially and economically marginalised Australian communities and schools, especially those with numbers of First Nation students.

Community-based providers are critical in helping adults gain LLND skills. Community training providers include adult education community education (ACE) providers, neighbourhood houses, men's sheds and universities of the third age.

Existing adult community literacy and numeracy programs targeted at First Nations people should be reviewed and if found to be successful, funded by governments at the levels required, and not be dependent on donations or on charities for support and funding. Some that are known to ACER include:

- The **Literacy For Life Foundation**. See: www.lfff.org.au
- The work in this area by the **Batchelor Institute**. See: www.batchelor.edu.au
- The **Indigenous Literacy Foundation (ILF)**. See: [The Indigenous Literacy Foundation | ILF | reading opens doors charity non profit](#)
- The **Stronger Smarter Institute**. See: [Stronger Smarter Institute](#)

Following reviews of existing programs, new programs should be funded and developed to fill any gaps identified.

5.3.1. School support programs

In relation to supporting learners in their final years of schooling to improve their LLND skills, Shergold stated: *Literacy, numeracy and digital literacy will be recognised as essential skills for every student. At a time of technological transformation, when the future of work is uncertain, these attributes are more important than ever. Students must be supported to attain capability in these areas before they finish school. Every young person who leaves without them is having their economic and social future short-changed. (Shergold, p. 13)*

This issue was also addressed explicitly in *Chapter 4. Low-skilled adults in post-secondary vocational education and training (VET) in Australia* of the OECD Country report, *Building Skills for All in Australia: Policy Insights from the Survey of Adult Skills* (OECD, 2017) and the recommendations in that report address these issues and should be considered.

It is important to address the issue of supporting schools and their communities in remote areas of Australia, to work together targeting their more disengaged cohorts to work together to run a range of LLND programs that are flexible and cater for their needs and interests.

5.3.2. Family literacy programs

Family literacy programs have never been well promoted or used in Australia, but there is international evidence of their value. In her report for the OECD on adults with low literacy and numeracy skills for the OECD, Windisch writes,

Research evidence shows strong intergenerational links between parents' and their children's literacy skills. Literacy practices in childhood shape literacy skills later in life (Benseman and Sutton, 2010). For example Bynner and Parsons' longitudinal studies (2000, 2007) in the United Kingdom clearly show that adults who have poor literacy skills are more likely to have children who also struggle with these skills. Improving the literacy skills both of parents and children can help reverse these intergenerational patterns (BMBF, 2012). According to Benseman and Sutton (2010), intergenerational family literacy "epitomises relevant adult learning". Family literacy programmes engage adults in their role as parents, enabling them to enhance their literacy and parenting skills, particularly in relation to their children's emerging literacy. The programmes recognise adults as learners in their own right, but also as a powerful influence on those around them in their homes and communities. Some studies suggest that learning outcomes of family literacy interventions are better than those of other kinds of programmes (Carpentieri et al., 2001; Kruidenier et al. 2010). (Windisch, p. 81)

5.4 LLN workforce capability

For many years there have been warnings regarding the capacity of the existing workforce of adult LLN teachers and trainers to cope with addressing and supporting the LLND needs of adults, including in VET and the workforce:

The embedding of LLN in workplace and other learning raises issues about the capability of VET trainers in identifying and delivering integrated LLN and skills programs related to workplace contexts. (Skills Australia, 2010b, p.34)

Whilst there is no up-to-date data about the adult LLND workforce in Australia, it is recognised that this workforce in Australia is ageing, is predominantly female and has quite a casualised or short-term, contract based workforce (e.g., see Berghella et al, 2006; Circelli, 2015; McGuirk, 2001)

This challenge was also reflected in the National Foundation Skills Strategy, where one of the four key priorities was:

Building the capacity of the education and training workforces to deliver foundation skills – building the skills of specialist LLN practitioners, developing the workforce to enable the effective teaching of employability skills and supporting vocational trainers to better integrate foundation skills with vocational training will enable high quality delivery of foundation skills. (SCOTese, 2012, p. 3)

5.4.1. Available professional learning programs

In late 2008, the Federal Department responsible for funding national adult literacy and numeracy programs approached the relevant industry body at the time, the Innovation & Business Skills Australia Ltd (IBSA), to investigate the feasibility of a set of new national qualifications in adult language literacy and numeracy. In the documentation for the resulting courses, they stated:

The existing LLN workforce (like the general VET workforce) is ageing and the number of university based undergraduate and post-graduate qualifications specifically designed to produce and/or up-skill adult literacy and numeracy practitioners has dwindled dramatically since the mid-1990s. Practitioners operating in the field today hold a range of credentials – but there is no standard national qualification for LLN practitioners available in Australia. NCVET research also found the opportunity for formal professional development for credentialed and non-credentialed practitioners was also rare and that there had not been a formal replacement for the Adult Literacy Teaching and Adult Numeracy Teaching courses that were developed by the National Staff Development Committee in 1995. (IBSA, 2010, p. 3).

The two new qualifications that were developed by IBSA as mentioned above, have now evolved into these current two current and available qualifications:

- TAE80113 - Graduate Diploma of Adult Language, Literacy and Numeracy Practice; and
- TAE80213 - Graduate Diploma of Adult Language, Literacy and Numeracy Leadership.

TAE80113 has a wide number of benefits. It is a specialist, practical qualification in teaching adult LLN. TAE80113 prepares adult literacy and numeracy teachers for a variety of roles, including in VET and community-based programs. TAE80113 provides opportunities to introduce new teachers to the field. Many other postgraduate qualifications in the adult LLN field have closed due to policy and funding challenges in the past decade. Whilst there are other tertiary programs focussing on school literacy or adult English language acquisition, adult literacy and numeracy is a very different field with unique issues, learning materials and methodologies. The TAE80113 is available and provides an essential resource for upskilling and training staff and ensures critical LLND skills are provided within the Australian education sector.

A workforce benefits from practitioners who have a deeper understanding of theoretical underpinnings, advanced design and delivery skills, and an understanding of big picture issues such as the impacts of policy and research. Expanding the number of graduates in the TAE80113 would improve VET outcomes. However, there has been a lack of assistance to access the qualification. The Australian Government Department of Education and Training have discontinued the scholarship program that enabled individuals to study a suitable qualification to become an adult literacy practitioner.

As an illustration of this, the take up of the TAE80113 over recent years has been minimal across Australia. Available data about the number of VET professionals completing the more popular TAE80113 are:

- 2016: 25
- 2017: 20
- 2018: 20

At present there are only 5 providers listed as having the TAE80113 on scope to deliver it, whilst there are only 2 providers with the TAE80213 on scope.

This data indicates quite clearly that the professional learning opportunities and the career pathways for adult LLND teachers and trainers is stagnating.

6. ACER Recommendations

6.1 Australia must undertake full PIAAC Cycle 2 participation

The research presented earlier in this submission highlights that Australia gains incomparably comprehensive, detailed and comparative information about the status and explanation of Australian adults' literacy and numeracy levels from its participation in PIAAC and preceding international adult literacy studies.

Therefore, it will be critical that Australia participates fully in the second cycle of PIAAC in a few years' time, in order to see and review how Australian adults have performed in relation to adult literacy, numeracy and problem solving. This allows research to be undertaken based around the factors set out in the Terms of Reference of this Parliamentary Inquiry, and provides the evidence to reflect on the results from both a policy level in relation to adult education, but also in relation to how school education is preparing young people for the world as adults.

Australia should make sure that the PIAAC Cycle 2 survey instruments are administered to a random representative sample across Australia **including** remote Indigenous adults and incarcerated adults, along with continuing to oversample to include a younger cohort (15 year-olds) and an older cohort (66-74) compared with the minimum international requirements. The oversampling enables state and territory performance to be compared.

ACER believes that the ABS analysis and available reports based on the PIAAC data is not fully utilised nor analysed by the ABS. The rich dataset should be analysed from a much broader perspective in order to answer a number of the questions referred to in this Inquiry and as happens in many other countries that participate in PIAAC. ACER would be willing to work with ABS to produce analyses and reports similar to those that ACER undertakes and publishes in relation to PISA (for example, see Thomson et al 2019).

6.2 Make numeracy a priority

It's evident from the research that we need to address numeracy in Australia, but how? A good first step would be to explicitly target and prioritise numeracy, for example, by upskilling and training many more personnel involved in providing VET training in numeracy. A second step would be to target adult numeracy and maths programs to women – not only learners and workers, but also educators. A third step would be to conduct research, to monitor and understand much more about the teaching and learning of numeracy, for the good of all Australians.

One significant issue that could be addressed is the need to overcome the negative attitudes adults and young people have towards mathematics and numeracy. One potential model to consider to potentially implement in Australia would be that of the UK National Numeracy program (www.nationalnumeracy.org.uk/). Their aim is to help raise low levels of numeracy among both adults and children and to promote the importance of everyday maths skills. They aim to challenge negative attitudes, influence public policy and offer practical ways of helping adults and children improve their numeracy - in the community, the workplace and formal education. They are very proactive and run a wide range of programs. Support for the establishment of such a program across Australia would be a positive initiative.

6.3 Implement existing National review recommendations and review the National Foundation Skills Strategy

As mentioned above, all recent national reviews and reports related to Vocational Education and Training (VET) in Australia, such as the Joyce review (Joyce, 2019), the Shergold review (Shergold, 2020) and the Productivity Commission 2020 report: the *National Agreement for Skills and Workforce Development Review*, have highlighted the need to explicitly target and support the improvement of adult and youth language, literacy, numeracy and digital literacy (LLND) skills and abilities across Australia..

ACER recommends that the findings and recommendations with regard to the LLND in each of the above reviews are addressed explicitly and a set of agreed, consistent policies and associated programs is introduced to facilitate the desired outcomes. As an example, below are two of the relevant recommendations from the 2020 Productivity Commission report that should be considered.

RECOMMENDATION 12.1 — DEVELOPING A NATIONAL STRATEGY TO IMPROVE FOUNDATION SKILLS

The Australian, State and Territory governments should jointly develop a strategy to reduce the number of people with low language, literacy, numeracy and digital literacy (LLND) skills (below level 2 in the Australian Core Skills Framework). The LLND strategy should:

- recognise the varied circumstances of people with low LLND skills
- cover the range of LLND training programs across schools, the VET system, workplace programs and community adult education providers
- guide and coordinate policies in these areas to improve LLND outcomes
- facilitate a staged approach to expanding access to LLND training, using evaluations to inform where the greatest improvements can be achieved at lowest cost. The strategy should draw on the scoping study into foundation skills commissioned by Skills and Training Ministers in November 2020.

RECOMMENDATION 12.2 — EMBEDDING LLND IN THE NEW INTERGOVERNMENTAL AGREEMENT

As part of the new LLND strategy, governments should identify the VET-specific, high-level objectives and outcomes relating to LLND skills for inclusion in the new intergovernmental agreement on skills. A schedule to the new agreement should contain the following key elements:

- governments' roles and responsibilities, in relation to the different programs
- the relationship between jointly-funded programs and programs funded by a single level of government
- LLND funding arrangements through both the skills Specific Purpose Payment and any National Partnership Payments with per-student funding retained as the main funding mechanism for most activity delivered through the VET system, but block funding considered for organisations tackling more difficult-to-reach students
- reporting and accountability arrangements with respect to these programs, including a performance reporting framework.

(Productivity Commission, 2020, pp. 52-53)

As part of this process, the National Foundation Skills Strategy (SCOTESE, 2012) should be reviewed and revised. The components of the existing 2012 NFSS are still relevant today:

The components of the National Strategy are designed to work together to enable adult learners to access and benefit from foundation skills development opportunities. Four key priority areas for action focus on the conditions necessary for adult learners to successfully engage with foundation skills provision, namely:

- *Raising awareness and commitment to action – building understanding of foundation skills in the workplace and the community, and removing the stigma associated with low adult foundation skills, will empower individuals to seek out development opportunities to build their skills.*
- *Adult learners have high quality learning opportunities and outcomes – providing a variety of foundation skills development opportunities that can be tailored to individual needs will make it easier for learners to build skills that are relevant to their situation.*
- *Strengthening foundation skills in the workplace – establishing strong and lasting partnerships between governments, industry, employers and unions and providing foundation skills training that is responsive to the needs of employers and industry will strengthen the foundation skills of the current workforce.*
- *Building the capacity of the education and training workforces to deliver foundation skills – building the skills of specialist LLN practitioners, developing the workforce to enable the effective teaching of employability skills and supporting vocational trainers to better integrate foundation skills with vocational training will enable high quality delivery of foundation skills.*

6.4 Implement the OECD’s policy and program recommendations

In relation to further review and revision of the National Foundation Skills Strategy, we endorse policy and program recommendations from the PIAAC report (OECD, 2013b, p. 18), which highlights the need to consider the following elements:

- Develop links between the world of learning and the world of work.
- Provide training for workers.
- Ensure that the training is relevant.
- Allow workers to adapt their learning to their lives.
- Identify those most at risk of poor skills proficiency.
- Show how adults can benefit from better skills.
- Provide easy-to-find information about adult education activities.
- Recognise and certify skills proficiency.

This set of PIAAC recommendations is presented in detail in Appendix B.

6.5 Implement informal learning and integrated LLND focussed programs targeted at specific learner cohorts

We recommend that the following programs and initiatives be reviewed and incorporated into the revised NFSS, and relevant and appropriate LLND focused programs be implemented:

- A WELL program replacement
- Family Literacy Programs
- Targeted post-compulsory aged School programs
- Non-accredited Adult community education programs
- First Nations programs.

6.6 Increase and improve LLN workforce capability

ACER recommends that a rolling, ongoing program of funded professional learning programs be established under the NFSS that offers career pathways for adult LLND teachers and trainers in order to refresh and expand the depth and breadth of the adult LLND workforce. The basis of these programs should be the:

- TAE80113 - Graduate Diploma of Adult Language, Literacy and Numeracy Practice; and
- TAE80213 - Graduate Diploma of Adult Language, Literacy and Numeracy Leadership.

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Appendix A. Australia’s performance in PIAAC

Levels of proficiency in PIAAC

Five levels of proficiency are described in PIAAC, although Level 1 has been broken into a below Level 1 and a Level 1, given the high numbers of adults performing at Level 1. Table 1 shows the proficiency descriptions for the top and the lower two levels of PIAAC, and the percentage of Australians achieving each level.

Table 1 Proficiency levels of PIAAC Cycle 1, with percentage of Australians per level

Level	Percentage of Australians at this level	The types of tasks completed successfully at each level of proficiency	
		Reading	Numeracy
Below Level 1	Reading: 3.7% Numeracy: 6.5%	The tasks at this level require the respondent to read brief texts on familiar topics to locate a single piece of specific information. There is seldom any competing information in the text and the requested information is identical in form to information in the question or directive. The respondent may be required to locate information in short continuous texts. However, in this case, the information can be located as if the text were non-continuous in format. Only basic vocabulary knowledge is required, and the reader is not required to understand the structure of sentences or paragraphs or make use of other text features. Tasks below Level 1 do not make use of any features specific to digital texts.	Tasks at this level require the respondents to carry out simple processes such as counting, sorting, performing basic arithmetic operations with whole numbers or money, or recognising common spatial representations in concrete, familiar contexts where the mathematical content is explicit with little or no text or distractors.
1	Reading: 10.4% Numeracy: 15.3%	Most of the tasks at this level require the respondent to read relatively short digital or print continuous, non-continuous, or mixed texts to locate a single piece of information that is identical to or synonymous with the information given in the question or directive. Some tasks, such as those involving non-continuous texts, may require the respondent to enter personal information onto a document. Little, if any, competing information is present. Some tasks may require simple cycling through more than one piece of information. Knowledge and skill in recognising basic vocabulary determining the meaning of sentences, and reading paragraphs of text is expected.	Tasks at this level require the respondent to carry out basic mathematical processes in common, concrete contexts where the mathematical content is explicit with little text and minimal distractors. Tasks usually require one-step or simple processes involving counting, sorting, performing basic arithmetic operations, understanding simple per cents such as 50%, and locating and identifying elements of simple or common graphical or spatial representations.
2	Reading: 30.1%; Numeracy: 32.5%		
3	Reading: 37.9%; Numeracy: 31.3%		
4	Reading: 14.5%; Numeracy: 10.9%		

5	<p>Reading: 1.2%</p> <p>Numeracy: 1.4%</p>	<p>At this level, tasks may require the respondent to search for and integrate information across multiple, dense texts; construct syntheses of similar and contrasting ideas or points of view; or evaluate evidence based arguments. Application and evaluation of logical and conceptual models of ideas may be required to accomplish tasks. Evaluating reliability of evidentiary sources and selecting key information is frequently a requirement. Tasks often require respondents to be aware of subtle, rhetorical cues and to make high-level inferences or use specialised background knowledge.</p>	<p>Tasks at this level require the respondent to understand complex representations and abstract and formal mathematical and statistical ideas, possibly embedded in complex texts. Respondents may have to integrate multiple types of mathematical information where considerable translation or interpretation is required; draw inferences; develop or work with mathematical arguments or models; and justify, evaluate and critically reflect upon solutions or choices.</p>
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Age and Gender

Figure 3 below shows the distribution by age group of Australian adults in the three highest PIAAC proficiency levels for literacy (reading) and numeracy (mathematics).

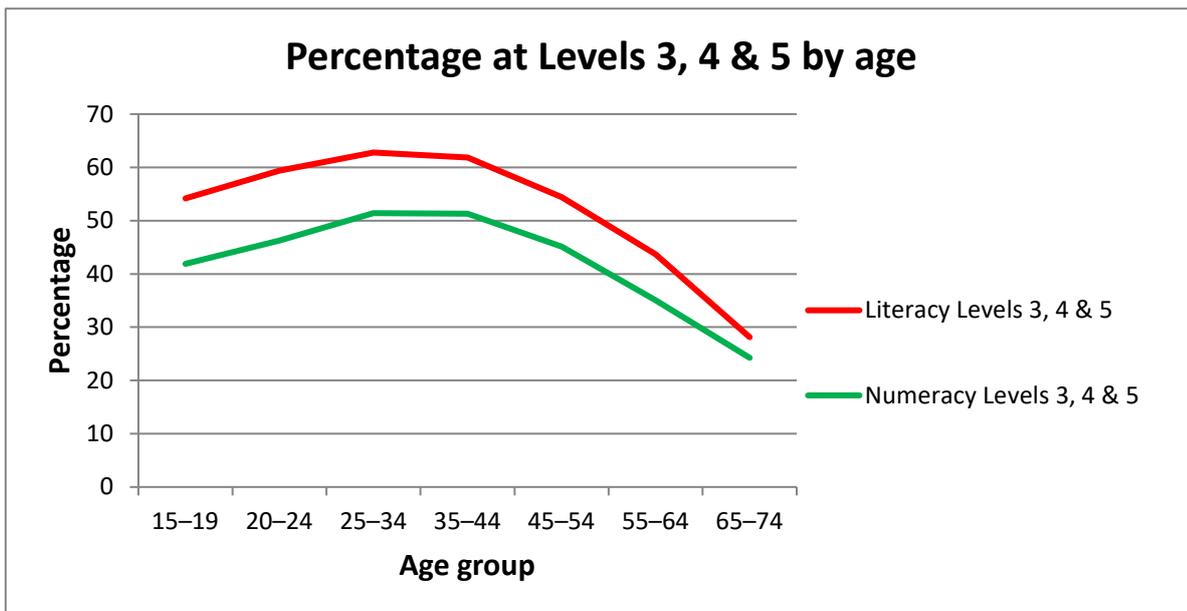


Figure 3 Percentage of Australian PIAAC cohort at the upper proficiency levels, by age

Literacy and numeracy proficiency significantly increases from age 15 with the peak in performance being in the early 30s. From that age onwards, performance declines. Some age characteristics include:

- younger learners can have lower LLN skills than older learners
- the peak in performance is from the mid-20s into the 30s
- older adults, especially from age 55 onwards, have significantly lower level skills.

The improvements in literacy and numeracy proficiency observed for each additional year of age between 15 and 30 can be linked to the fact that significant proportions of young people continue in education or training until their mid- to late 20s. In other words, participation in education and training after the age of 15 continues to add “value” to their LLN proficiency.

The decline in proficiency in adults over 35 suggests that there are a range factors and processes involved in maintaining adults’ levels of skills. Indeed, even when educational attainment is accounted for, older cohorts score progressively lower, on average, than younger cohorts. There is the argument “if you don’t use it, you lose it”.

Figure 4 below shows that age-group profile for literacy broken down by sex, with the decline in performance starting a little earlier for females but from a higher performance level than for males in the younger age groups; and Figure 5 below shows a similar pattern for numeracy, but with a more consistent male-female difference. Indeed, 49.4% of males are at Level 2 or below, with 59.0% of females at Level 2 or below, a difference of almost ten percentage points.

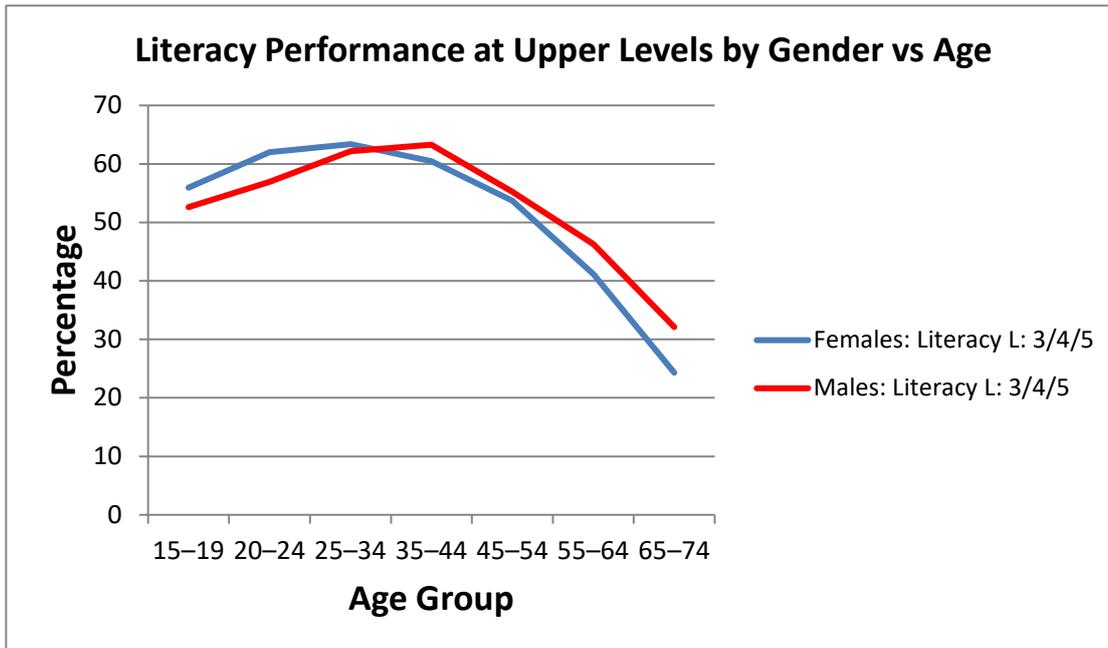


Figure 4. Age-group profile for PIAAC literacy for females and males

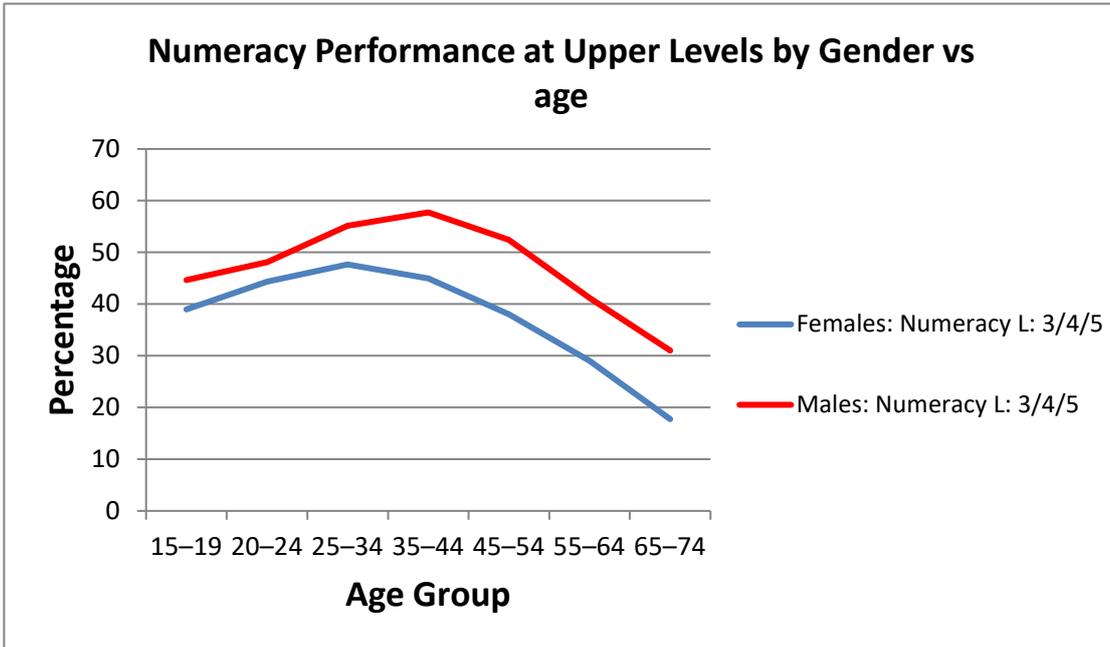


Figure 5. Age-group profile for PIAAC numeracy for females and males

Employment status

The following summary graphs of the PIAAC data and results show some of the relative performance by employment status (Figures 6 and 7) (ABS, 2013).

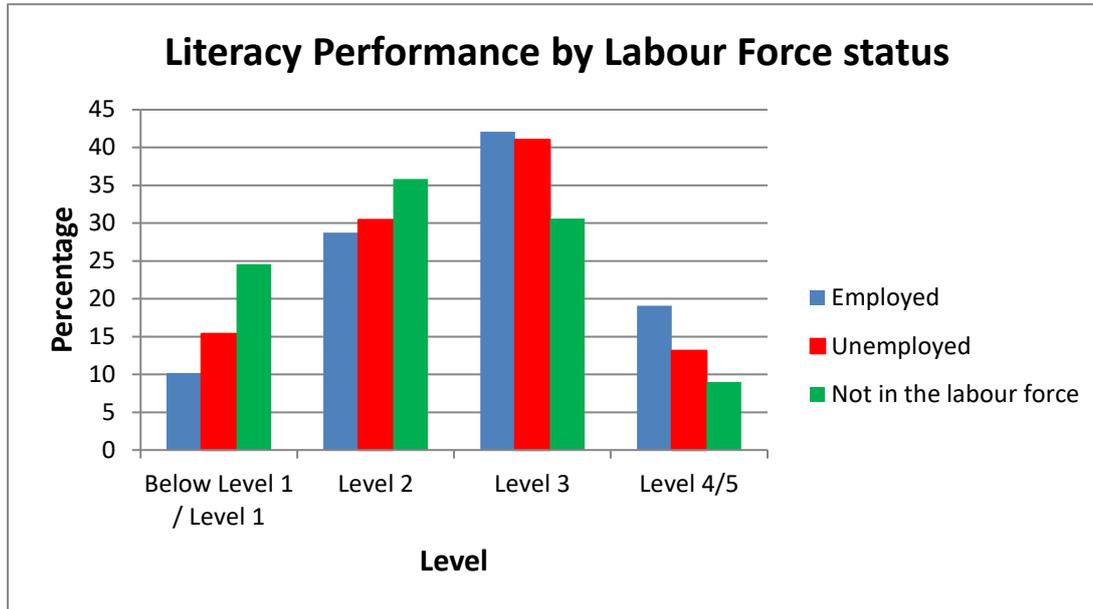


Figure 6. Proportions of persons in Literacy versus Labour Force Status in PIAAC by age. Total Australian population aged 15-74 years

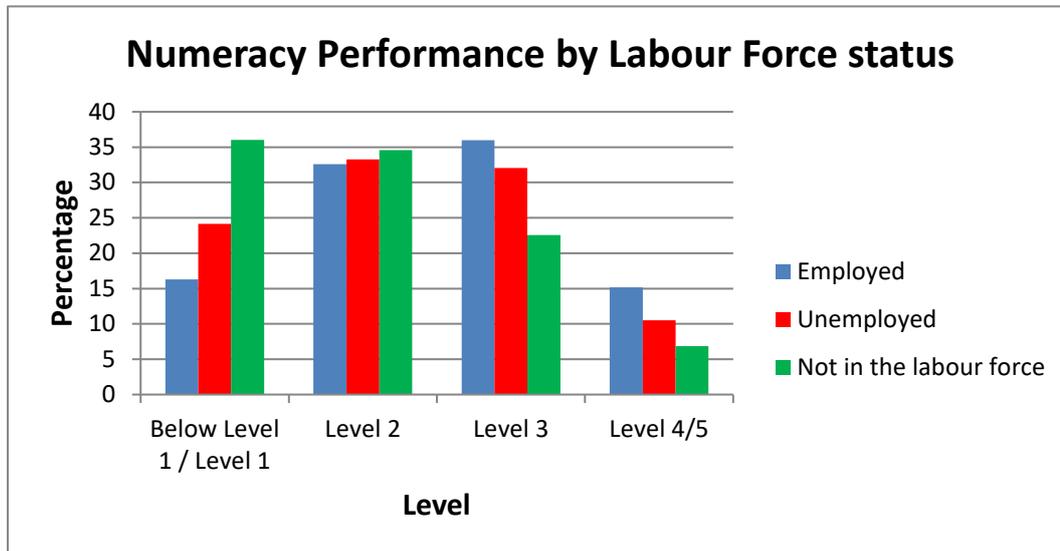


Figure 7. Proportions of persons in Numeracy versus Labour Force Status in PIAAC by age. Total Australian population aged 15-74 years

So even for adults who are employed the proportions performing at the lower levels are still quite significant: 38.8% in literacy are at Level 2 or below and 48.9% for numeracy.

This data is also available by industry and occupation (ABS, 2013), as summarised in Figures 8 and 9 below.



Figure 8. Proportion at Level 3 or above, by occupation: 2011–12

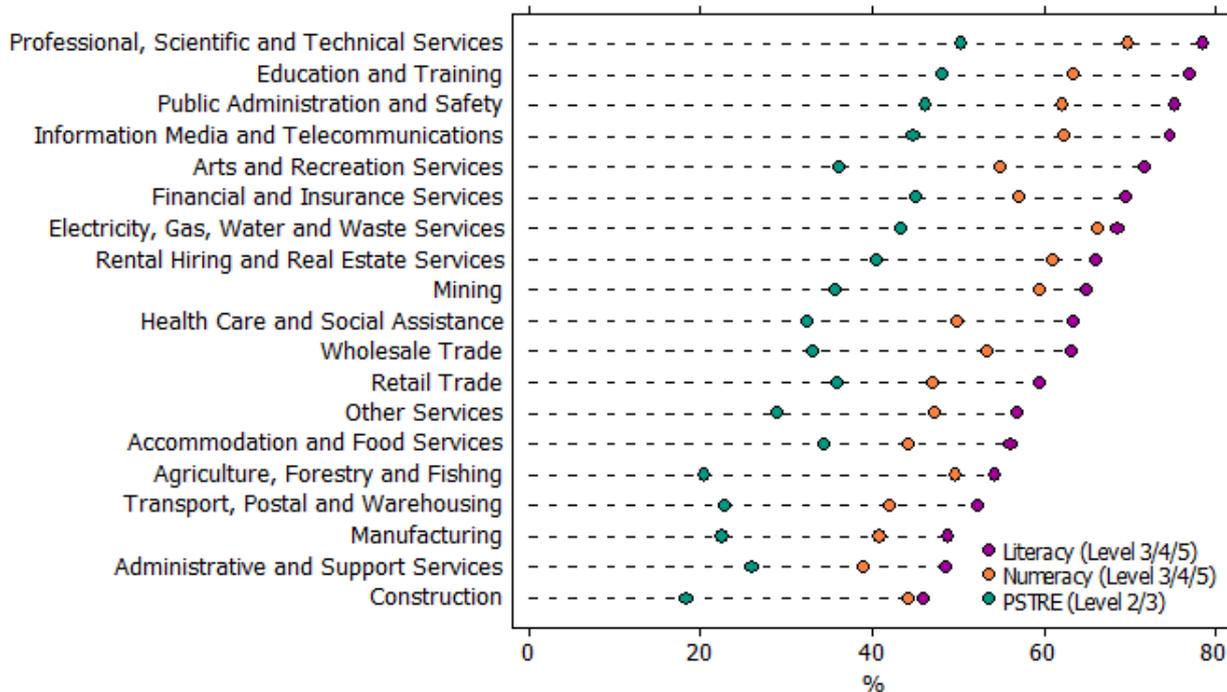


Figure 9. Proportion at Level 3 or above, by industry—2011–12

Evidence from PISA also reveals an association between socio-economic background and the performance of 15-year-old students in reading, mathematics and science across Australia (Thomson et al, 2019).

Appendix B. Key points for policy

The following is the set of key policy recommendations from the first international report on PIAAC (OECD 2013a). As per ACER's recommendations in this submission, these points for policy are critical for Australia to understand and adopt.

Develop links between the world of learning and the world of work. Skills development can be more relevant and effective if the world of learning and the world of work are linked. Learning in the workplace allows young people to develop “hard” skills on modern equipment, and “soft” skills, such as teamwork, communication and negotiation, through real-world experience. Hands-on workplace training can also help to motivate disengaged youth to stay in or re-engage with the education system and makes the transition from education into the labour market smoother.

Provide training for workers. Employers have an important role in training their own staff; but some, particularly small and medium-sized enterprises, might need public assistance to provide such training.

Ensure that the training is relevant. Employers and trade unions can also play an important role in shaping education and training, to make it relevant to the current needs of the labour market but also to ensure that workers' broader employability is enhanced.

Allow workers to adapt their learning to their lives. Programmes to enhance adult information-processing skills need to be relevant to users and flexible enough, both in content and in how they are delivered (part-time, flexible hours, convenient location) to adapt to adults' needs. Distance learning and the open educational resources approach have also allowed users to adapt their learning to their lives.

Identify those most at risk of poor skills proficiency. The most disadvantaged adults need to be not only offered, but also encouraged, to improve their proficiency. This means identifying low-skilled adults who require support, particularly foreign-language immigrants, older adults and those from disadvantaged backgrounds, and providing them with learning opportunities tailored to their needs. This is likely to require innovative approaches and significant community engagement.

Show how adults can benefit from better skills. More adults will be tempted to invest in education and training if the benefits of improving their skills are made apparent to them. For example, governments can provide better information about the economic benefits, including wages net of taxes, employment and productivity, and non-economic benefits, including self-esteem and increased social interaction, of adult learning.

Provide easy-to-find information about adult education activities. Less-educated individuals tend to be less aware of education and training opportunities, and may find the available information confusing. A combination of easily searchable, up-to-date online information and personal guidance and counselling services to help individuals define their own training needs and identify the appropriate programmes has often made a real difference

Recognise and certify skills proficiency. Providing recognition and certification of competencies can facilitate and encourage adult learners to undertake continued education and training. Transparent standards, embedded in a framework of national qualifications, and reliable assessment procedures are important instruments to this end. Recognising prior learning can also reduce the time needed to obtain a certain qualification and, thus, the cost in foregone earnings.

(OECD, 2013b, p. 18)