

Foundation skills policy contexts and measures of impact

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Foundation Skills Literature Review Project
Scholarship recipient

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About the research

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Building the research capacity of the vocational education and training (VET) sector is of key interest to the National Centre for Vocational Education Research (NCVER). The Foundation Skills Literature Review Project, funded by NCVER, provided scholarships to practitioners to develop their research skills through undertaking literature reviews focused on key topics relating to foundation skills. Here 'foundation skills' refers to adult language, literacy (including digital literacy) and numeracy skills, as well as employability skills, such as problem-solving, collaboration and self-management.

The four main topic areas were:

- perspectives on adult language, literacy and numeracy
- policy contexts and measures of impact
- context and sites – pedagogy and the learners
- workforce development.

The literature reviews will form a key information source for the Foundation Skills Pod, a new resource hosted on VOCEDplus <<http://www.voced.edu.au/pod-foundation-skills>>. The Foundation Skills Literature Review Project is a partnership between NCVER and the University of Technology Sydney and the Australian Council for Adult Literacy.

This review looks at policy contexts and their measures of impact, with a particular focus on foundation skills policy in Australia, implemented as the National Foundation Skills Strategy for Adults, 2012–22. It highlights that adult education and learning policies, both here and in other countries such as the United States and the United Kingdom, have been increasingly influenced by international point-in-time assessments; namely, the Organisation for Economic Co-operation and Development's (OECD) suite of adult literacy surveys. The use of these types of assessments fits with the push for a more human capital approach to foundation skills policy development in Australia in recent years; that is, a focus on the skills people have and the skills they need to develop to progress through or change jobs, undertake education and training, and more fully participate in their community.

In this review Newton draws attention to the lack of research into foundation skills policy implementation and its impact. With the National Foundation Skills Strategy for Adults having been in place since late 2012, she suggests that an examination of its impact in addressing the needs of adults with low levels of foundation skills, and also in raising the skills of the Australian workforce, is warranted.

Dr Craig Fowler
Managing Director, NCVER

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Introduction

The National Foundation Skills Strategy for Adults (NFSS) was released in November 2012 by the then Parliamentary Secretary for Higher Education and Skills (Standing Council on Tertiary Education, Skills and Employment 2012). It is a bi-partisan agreement supported by all Australian states and territories through the Council of Australian Governments. The NFSS, which had been long expected by both the education sector and industry, is the current national policy document in Australia for foundation skills.

The purpose of this literature review is to investigate what research has been conducted into foundation skills policy and associated measures of impact, both before and after the release of the document. The focus is primarily on foundation skills policy in Australia, however, no policy emerges without a background or context. The impact of the Organisation for Economic Co-operation and Development's (OECD) large-scale assessment projects such as the International Adult Literacy Survey in 1996 and the Adult Literacy and Like Skills (ALLS) survey in 2006, as well as the latest iteration, the Programme for the International Assessment of Adult Competencies (PIAAC), will be considered, along with international policies and programs.

The review will seek to clarify and define the nature of policy, the reason being that the National Foundation Skills Strategy for Adults is framed as a 'strategy' rather than a 'policy'. Research will be reviewed to determine whether the wording of a policy document can affect its impact. The precursors to the NFSS will be considered to provide an understanding of the context in which the current strategy sits. This is relevant because most Australian research on language, literacy and numeracy policy to date has been based on these predecessors.

Clarification of the term 'foundation skills' is also required. New Zealand began referring to language, literacy and numeracy as foundation skills in its Tertiary Education Strategy 2002–07 (New Zealand Ministry of Education 2004), describing them as 'a set of skills, knowledge and dispositions in the areas of language, literacy and numeracy' and 'cross-cutting skills, such as the ability to use technology'. Furthermore, these skills are not static; they are developed within a wider context than merely the skills and knowledge needed to transition from school to tertiary education and/or work, and they need to be continually updated and redeveloped throughout life (p.32).

In releasing the National Foundation Skills Strategy for Adults (2012), the Australian Standing Council on Tertiary Education, Skills and Employment defined foundation skills as the combination of:

- English language, literacy and numeracy – listening, speaking, reading, writing, digital literacy and use of mathematical ideas, and
- employability skills, such as collaboration, problem solving, self-management, learning and information and communication technology (ICT) skills required for participation in modern workplaces and contemporary life.

(p.2)

Other nations have used different terms and definitions. In reviewing the literature, the impact of these differing terms and definitions will be considered.

What is policy?

Policy is 'a set of ideas or a plan of what to do in particular situations that has been agreed to officially by a group of people, a business organisation, a government, or a political party'; the term 'strategy' is considered to be a synonym (Cambridge Dictionaries Online 2016).

Policy can be viewed from a number of different perspectives. According to Lo Bianco (2001), policy can be viewed as being not only about what is announced (policy as text), it is also concerned with what is said and written about the policy (policy as discourse) and what is implemented in the name of the policy (policy as a plan). Policy as a plan includes both intent and implementation. Policy in intent generally reflects government policy, as it covers the goals, strategies, guidelines and tools established to support the proposed course. Policy in implementation refers to how policy is translated into action and also looks at what worked and what did not (measures of impact) (National Adult Literacy Agency 2011, p.11).

Lo Bianco and Wickert note that 'policy texts are produced within and influenced by particular contexts' (2001, p.2), which can affect what is included and what is excluded in policy documents. Policy can be implicit as well as explicit (Lo Bianco 2001, p.20) and as much can be learnt from what is implied by the policy and the discourse that surrounds it as what is explicitly written. This can have the effect of excluding or marginalising groups (Lo Bianco 1990). For example, Singh (2001) draws attention to the lack of provision for the teaching of English for migrant children from non-English speaking backgrounds until 1970, when the Child Migrant English Program was introduced in Australia.

Bias in research is not uncommon (Rajendran 2001) and any review of research into foundation skills policy will need to consider the different perspectives of the researcher, as this will influence both the tone of the report and the outcome of the research. In reviewing the research literature, two theoretical paradigms were dominant: a human capital paradigm, which sees foundation skills as a discrete set of skills that can be developed and accumulated to improve an individual's value to society (Wolf & Evans 2011) and a view of foundation skills as 'situated social practice'; that is, as skills shaped by the social context in which they are used (Hamilton 2010).

Wickert (2001) highlights some of the issues that surround policy analysis in various areas and draws attention to the lack of policy analysis around language and literacy that existed in Australia at the time of the release of the Australian Language and Literacy Policy (ALLP) in 1991.

Foundation skills

The need to define foundation skills became evident early in the research for this literature review. However, defining foundation skills is difficult. The term has been used generically and interchangeably with terms such as 'basic skills', 'core skills', 'life skills', 'generic skills' and 'employability skills'. The International Labour Organization (ILO; 2002, p.12) describes foundation skills as 'literacy, numeracy, citizenship, social skills, learning-to-learn skills, and the ability to solve problems together'. Perkins (2009) provides a good overview of the complexities of defining literacy and numeracy, proposing that, to facilitate acceptance of literacy and numeracy as a mainstream issue, it may be necessary to 'move from talking about literacy and numeracy to a discussion of core skills or foundation skills' (p.37). In late 2010 the National Quality Council released a report on foundation skills in training packages (Roberts & Wignall 2010a), which attempted to address some of the design issues impacting on delivery. By 2011, the term 'foundation skills' was largely being used to describe adult literacy and numeracy skills (Black & Yasukawa 2011).

However, it was Roberts and Wignall (2010b), in a briefing paper to the National VET Equity Advisory Council (NVEAC), who highlighted that, in the new strategy, foundation skills would include both core skills, as described in the Australian Core Skills Framework (ACSF),¹ and employability skills. The employability skills described had been developed from a 2002 research paper prepared by the Australian Chamber of Commerce and Industry (ACCI) and the Business Council of Australia (BCA). The research team defined employability skills as the 'skills required not only to gain employment, but also to progress within an enterprise to achieve one's potential and contribute successfully to enterprise strategic directions' (p.14). The research identified eight key skills:

- communication
- teamwork
- problem-solving
- initiative and enterprise
- planning and organising
- self-management
- learning
- technology (p.7).

The Australian Core Skills Framework covers five skills: learning, reading, writing, oral communication and numeracy. First released in 2008 and revised in 2012 as a framework to 'facilitate a consistent national approach to the identification and development of the core skills in diverse personal, community, work, and education and training contexts' (p.2), it is the primary framework used in Australia to measure an individual's performance in language, literacy and numeracy.

¹ Department of Education and Training, Australian Core Skills Framework, 2016, <<https://www.education.gov.au/australian-core-skills-framework>>.

National Foundation Skills Strategy for Adults

The release of the NFSS in 2012 provided Australia with its first comprehensive policy in relation to 'foundation skills' and its first literacy and numeracy policy since the Australian Language and Literacy Policy in 1991, the latter having been preceded by the National Policy on Language (NPL) in 1987 (Lo Bianco 2001). Four principles underpinned the National Policy on Language:

- English for all
- support for Aboriginal and Torres Strait Islander languages
- a language other than English for all
- equitable and widespread language services.

The Australian Language and Literacy Policy adopted and built on some of these principles in its four goals:

- Goal 1: All Australian residents should develop and maintain a level of spoken and written English which is appropriate for a range of contexts, with the support of education and training programs addressing their diverse learning needs.
- Goal 2: The learning of languages other than English must be substantially expanded and improved to enhance educational outcomes and communication within both the Australian and the international community.
- Goal 3: Aboriginal and Torres Strait Islander languages should be maintained and developed where they are still transmitted. Other languages should be assisted in an appropriate way, for example, through recording. These activities should only occur where the speakers so desire and in consultation with their community, for the benefit of the descendants of their speakers and for the nation's heritage.
- Goal 4: Language services provided through interpreting and translating, print and electronic media and libraries should be expanded and improved (Brock 2001).

As Lo Bianco (2001) points out, successful policies require political champions to promote and drive their development and implementation. Both the National Policy on Language and the Australian Language and Literacy Policy (ALLP) had these: the NPL was championed by the education minister at the time, Senator Susan Ryan, and also by the then prime minister, Bob Hawke, and the ALLP benefited from the driving force of John Dawkins, who replaced Senator Ryan as education minister (Lo Bianco 2001, p.15). However, also necessary was the serendipitous agreement of multiple stakeholders in relation to the importance and future direction of an event or action. For the Australian Language and Literacy Policy, it was the identification of the need for a coordinated approach to adult language and literacy at a national level by government, business, industry and unions (Wickert 2001, p.79).

A similar situation led to the development of the NFSS, in that the results of the 2006 Adult Literacy and Life Skills Survey (ALLS) were released around the same time as a change of federal government. The incoming government had already signalled its intentions regarding educational policy, promoting a skills agenda to lift Australia's flagging productivity (Rudd & Smith 2007). The release of the results from the 2006 survey highlighted Australia's need for a national policy to address the poor results in literacy, numeracy and problem-solving, if productivity levels were to lift.

The Adult Literacy and Life Skills Survey, an international survey developed by the OECD and administered in Australia by the Australian Bureau of Statistics (ABS), tested adults' literacy, numeracy and problem-solving skills in a range of OECD member nations. In Australia, it was found that almost 50% of the working-age population had literacy scores below the level considered necessary to function effectively in work and everyday life (Level 3) and more than 50% of respondents had numeracy scores below this level (ABS 2008). These findings were interpreted in a largely negative manner, creating a perceived 'crisis' for Australia, its citizens and its economy (Gallasch 2012; Pancini 2012; Black, Yasukawa & Brown 2013; Hiatt 2013; Yasukawa & Black 2016b).

It was not until 2011 however that the Australian Government signalled a clear intent to develop a National Foundation Skills Strategy by allocating funding in the 2011 federal Budget (Australian Government 2011, p.16).

In the intervening years, industry associations and adult literacy groups in Australia had been quick to seize on the results from the Adult Literacy and Life Skills Survey to leverage government for changes to policy. An early report on the impact of low foundation skills in the workforce identified that inadequate skill levels were a problem not only at the lower levels of the workforce but also at higher levels, such as at supervisory and managerial levels (Townsend & Waterhouse 2008), this report also finding a lack of awareness within organisations about language, literacy and numeracy (LLN) and employability skills. In 2010, the Australian Industry Group released a report titled *National Workforce Literacy Project*, with the organisation anticipating that the report and subsequent work it undertook would 'contribute to policy formulation in this area as a part of a broader national strategy to address workforce literacy and numeracy' (Australian Industry Group 2010, p.18). The release of *Australian workforce futures* (Skills Australia 2010) added further impetus to the push for a national strategy to address the perceived literacy and numeracy challenges. Skills Australia recommended that 'the Australian Government ... develop and implement a national adult language, literacy and numeracy strategy to drive significant improvement' (Skills Australia 2010, p.9).

Other national organisations contributed to the discussion. For example, the combined Industry Skills Councils, who had responsibility for the development of national industry standards in the form of training packages, called for urgent action in its report, *No more excuses* (Industry Skills Councils 2011). They suggested that the responsibility for addressing the nation's low LLN skills needed to be shared by industry, government and all education sectors and called for a coordinated national response. A joint position paper published by Adult Learning Australia and the Australian Education Union (2011) called for leadership from government and a broader approach to addressing the challenge for the nation of low literacy and numeracy in Australia.

At the same time, the Australian Government commissioned a range of activities in the area of foundation skills including: the development of the Foundation Skills Training Package (FSK) (Australian Government 2013); resources to support the implementation of the training package (Innovation & Business Skills Australia 2016; Manufacturing Skills Australia, nd); and the National Foundation Skills Strategy Project (Government of South Australia 2016). It also funded industry skills councils to map qualifications against the Australian Core Skills Framework. In 2014, the Productivity Commission released a staff working paper that served to strengthen the link between foundation skills and the nation's economic wellbeing (Shomos & Forbes 2014). Modelling found that an increase of one skill level in

literacy or numeracy would increase the likelihood of employment by 2.4% for men and 4.3% for women.

In 2013, the preliminary results from the Programme for the International Assessment of Adult Competencies (PIAAC) were released. These seemed to indicate that Australia had slipped slightly in its results, with the percentage of working-age adults with numeracy skills below Level 3 increasing by almost 4%. It is important to note however that comparison of the results of PIAAC with the Adult Literacy and Life Skills Survey should be attempted with caution as differing methodologies have been used in the surveys (ABS 2013). Unlike the ALLS, which referred to Level 3 as the minimum level of proficiency required by individuals to meet the complex demands of everyday work and life, the competencies assessed in PIAAC are considered to sit on a continuum of proficiency; that is, there is no longer considered to be a minimum level at which an individual is considered to be proficient or not in a certain skill (OECD 2013).

When the National Foundation Skills Strategy was launched in 2012, it was not accompanied by any significant funding programs. There was a small amount of funding available for innovative programs, of which the National Foundation Skills Strategy Project was one. In 2013 Australia had a change of government at the federal level. The incoming government cut funding for existing language, literacy and numeracy programs such as the Workplace Language Literacy and Numeracy program and reduced support for other programs. Funding for foundation skills training is very limited. Limited funding was, and still is, available through the Industry Skills Fund.

The aim of the introduction of the FSK Training Package was to enable funding provision through the states and territories by enabling foundation skills units of competency to be incorporated into vocational programs, including Australian apprenticeship arrangements. However, some jurisdictions have continued to use their existing programs such the Certificate in Applied Vocational Study Skills and Course in Underpinning Skills for Industry Qualifications (USIQ; Western Australian Department of Training and Workforce Development 2016a, 2016b). Under Smart and Skilled funding arrangements in New South Wales, another 17 foundation skills qualifications (excluding the three qualifications in the FSK Training Package) are listed as eligible for funding in that state (New South Wales Department of Industry 2016). The reasons for the slow uptake of the FSK Training Package at state and territory levels are not known. A lack of clarification on how to include foundation skills units into technical qualifications without the loss of technical units, as well as jurisdictional funding available only for qualifications and not individual units, has been suggested as possible.

In line with the view of the Australian Government of the time (National Adult Literacy Agency 2011, p.16), the National Foundation Skills Strategy reflects a human capital perspective on the development of foundation skills (Baptiste 2001; Eide & Showalter 2010; Yasukawa & Black 2016a). A human capital perspective takes the view that the skills and knowledge encapsulated in individuals can be used for economic and societal growth (Sweetland 1996; Wolf & Evans 2011). It aligns with the measurement approach to skills acquisition that underpins the OECD's large-scale assessment programs such as the Adult Literacy and Life Skills Survey and the Programme for the International Assessment of Adult Competencies (Tett 2014, cited in Yasukawa & Black 2016a, p xi). This perspective is highlighted in the development of the National Foundation Skills Strategy by combining employability skills with language, literacy and numeracy skills and the inclusion of digital

literacy into the broad term 'foundation skills'. According to the Standing Council on Tertiary Education, Skills and Employment (2012, p.2): 'Foundation skills ... affect an individual's ability to progress through a career, change careers paths, participate in education and training and engage with their community'.

This is a move away from the previous social capital approach to literacy and numeracy policy, as evidenced in the National Policy on Languages and to some extent in the Australian Language and Literacy Policy (Lo Bianco 2001; Falk 2001; Black & Yasukawa 2010). 'Social capital' refers to the networking and societal norms that individuals employ to work together for collective outcomes (Woolcock & Narayan 2000). Falk (2001) argues that the 'normalisation' of language, literacy and numeracy (foundation skills) policy within human capital theory is responsible for the inability of the long-term unemployed to change their status, despite doing 'all the right things', such as undertaking training and improving their skills. Social capital, which also includes the social networks built upon trust, is needed to support such people in their quest for employment. Woolcock and Narayan (2000, p.227) argue that there are two forms of social capital – 'bonding' and 'bridging'. Bonding social capital enables people to 'get by', while bridging social capital allows people to 'get on'. People from low socio-economic backgrounds often lack access to the bridging social capital necessary for successfully transitioning to employment (Falk 2001, p.203).

Falk (2001) examines both the human capital and social capital approach to Australian literacy and numeracy policy and concludes that, while there is a place for social capital theory in policy-making, caution needs to be taken in incorporating it. He highlights the 'closed' nature of bonding ties in social capital, which restrict people to the communities and networks they know, and the need for these people to develop the 'looser' bridging ties, which link networks, allowing them to move beyond the closed network in which they currently exist. To successfully incorporate social capital theory into human capital approaches to policy, access to bridging networks need to be available. It is possible that the proposed Youth Jobs PaTH – Prepare – Trial – Hire program (Department of Human Services 2016) may be an example of such incorporation of a social capital approach.

Yasukawa and Black (2016b) are concerned however that the National Foundation Skills Strategy is too deeply embedded in human capital theory for other approaches to be considered. This then leads to marginalisation of other purposes and social constructs. They argue that there is a discord between the predominant view of foundation skills as 'something whose worth can be measured objectively' and the view that foundation skills are a product of the social practices of people in a range of environments and gained both through informal and formal mechanisms (Yasukawa & Black 2016b, p.21). By devaluing the foundation skills gained through social practices outside work or the work-related education for purposes other than work, communities are also being marginalised and devalued (p.36).

International policies

How does Australian policy compare with the policies of other nations? Both the Irish National Adult Literacy Agency (NALA 2011) and the OECD (Windisch 2015) have undertaken extensive literature reviews of policy interventions in a number of developed countries.² There is considerable divergence between policies. However, most have in common a focus

² The information on Australian policy in the NALA paper is dated as it includes the now defunct Workplace English Language and Literacy (WELL) Program and predates the introduction of the National Foundation Skills Strategy.

purely on language, literacy and numeracy rather than the broader foundation skills focus of Australian policy. Only the United Kingdom is introducing more expansive 'functional skills' qualifications (unionlearn 2013). These encompass information and communication technology (ICT) skills, as well as English and mathematical skills.

The two policy reviews served different purposes. The Irish National Adult Literacy Agency paper was commissioned to provide an evidence base for the development of LLN policy in Ireland. The policies reviewed were chosen for their relevance to the Irish context (2011, p.5). The purpose of the paper by Windisch (2015) was to identify both successful and unsuccessful policies in order to clarify policy levers that may work for low-skilled adults in OECD countries (p.17). Successful policy interventions were found to be uncommon and often the supporting evidence was weak (p.8).

New Zealand, one of the few English-speaking countries to have improved its results on the OECD international assessments (Satherley, Lawes & Sok 2008), has had a strong LLN policy framework since 2001. Aikema and Rean (2013) undertook a literature review of research into LLN policies and practice in six countries – New Zealand, Australia, Canada, Ireland, the United Kingdom and the United States. They examined policy and practice to assess its implications for New Zealand. They found positive correlations between the practice of embedding LLN into vocational training and retention and successful outcomes for the learners. Workplace learning was shown to be successful in engaging learners who would not otherwise participate in LLN programs. Many of their findings, particularly those on participation and persistence, have implications for practice in the context of Australia's foundation skills strategy.

Added to the mix is the UNESCO policy, *Education for all*. Since this policy's publication in 2000 there has been an increased interest in LLN worldwide, reflected in the number of non-OECD countries that have established literacy campaigns and programs (Hanemann 2015). These are large-scale campaigns and programs with ambitious goals. For example, in Bangladesh the aim is to reach 37 million illiterate people by 2015 through achieving goals 3 ('promote learning and life skills for young people and adults') and 4 ('increase adult literacy') of *Education for all* (Hanemann 2015, p.16). The UNESCO policy differs in significant ways from the Australian policy and that of most other OECD nations. The focus encompasses the total population, not just adults, and is rooted in a human rights agenda.

The purpose of Hanemann's (2015) paper was to examine the impact such large-scale literacy programs have had and identify what worked and what has not. The programs were assessed against a framework addressing 10 main aspects (p.13). The framework considered such issues as the outreach of the program; funding sources and cost per learner; supporting policies and strategic or operational plan; social/political support; partnerships and collaborations; and, inclusiveness. The research found that there are both advantages and disadvantages to large-scale literacy programs (p.82–3). It also identified key messages that could be applied to any literacy program:

- Successful large-scale literacy programs are linked to processes of social change and development.
- Sustainable and sufficient funding is crucial for large-scale literacy interventions.
- Literacy has to be made more visible in society, in particular in countries with significant numbers of non-literates.

- Participation in adult literacy programs is increasingly perceived as one step on a longer road to developing sustainable skills levels in reading and writing.
- In the context of accelerated technological developments, it is indispensable to broaden the concept of literacy skills to include the basic problem-solving skills required in technology-rich environments.
- There needs to be clear processes for the evaluation of the outcomes of the program (Hanemann 2015, pp.84–5).

One successful international mass literacy campaign is Cuba's 'Yo Si Puedo' (Yes, I can). The program has been trialled in Australia with adult Indigenous learners (Boughton & Durnan 2014). In their description of the program, Boughton and Durnan (2014) reported that 118 students in two cohorts participated in the program, with a completion rate of 68.6%. While there is no formal assessment in the Cuban model, the researchers had previously mapped the materials to the Australian Core Skills Framework (ACSF) and ascertained that completion of 64 'Yes, I Can' lessons would mean that learners would attain a minimum ACSF Level 1 to a maximum ACSF Level 2.

Policy drivers

The major drivers for the development of policies on LLN and subsequently foundation skills in Australia have been the OECD surveys, beginning with the International Adult Literacy Survey in 1996. This was followed by the Adult Literacy and Life Skills Survey in 2006 and the Programme for the International Assessment of Adult Competencies in 2011 (OECD 2016). Each of these are summative surveys; that is, they survey the knowledge and skill levels of the working-age population at a given point in time. They are not longitudinal surveys and as such do not provide feedback which can inform future learning. The surveys do however provide the opportunity to benchmark national performance against other countries. As such, they can in theory be used to measure the impact of policy and programs (Circelli et al. 2012). Indeed, the NFSS intends to use two iterations of PIAAC to measure the impact of the strategy, and its success or otherwise. The first iteration of PIAAC in 2011 will be used as the baseline against which the results from the 2022 iteration will be measured (Standing Council on Tertiary Education, Skills and Employment 2012, p.11).

The International Adult Literacy Survey had little immediate impact on Australian literacy policy. Mendelovits (2011) calls it 'a slow burn' and credits it with being the 'ember that lit the fire' of the Adult Literacy and Life Skills Survey. Mendelovits noted that, while there was resistance from LLN practitioners to standardised assessment, there was general support for the data garnered as a methodology for mobilising policy.

Another key policy driver in this area is the ageing population. Both developed and developing nations are facing issues relating to an ageing population, who will be supported by a decreasing workforce. Australia is no exception (Productivity Commission 2013). This will put significant pressure on the Australian economy. At the same time, work is changing, driven by rapidly advancing technology, which requires higher levels of skills (PriceWaterhouse Coopers 2016; CEDA 2015; Institute for the Future 2011). It is expected that people will need to stay in the workforce for longer, which will drive the need for lifelong learning and continual upskilling, in particular for those with weaker literacy, numeracy and digital skills (Chartered Accountants Australia & New Zealand 2016).

Productivity has also been a major policy driver in Australia. Throughout the first decade of this century, Australia's productivity had been consistently falling, to be below the OECD average. This resulted in the Australian Government considering measures to contribute to increasing the national productivity level. Several contributors to the House of Representatives Economics Committee's inquiry (2010) raised the issue of the need for strong foundation skills to support a drive for increased productivity. In the same year, Skills Australia (2010) released its report into Australia's future skills needs to sustain economic growth and labour force participation. This report also highlighted the necessity for strong foundation skills to achieve ongoing growth. Coulombe et al. (cited in Skills Australia 2010) asserts that lifting the national literacy score by 1% will lift the country's labour productivity rate by 2.5%, with a corresponding increase in the gross domestic product (p.36).

Measures of impact

Most policies have goals stated within them that can be used to measure the impact of the policy. The National Foundation Skills Strategy states that: 'by 2022, two thirds of working age Australians will have literacy and numeracy skills at Level 3 or above' with Level 3 being measured on the Adult Literacy and Life Skills Survey scale (Standing Council on Tertiary Education, Skills and Employment 2012, p.10). The Australian Core Skills Framework is the measurement framework most used in Australia to measure an individual's literacy and numeracy proficiency. Circelli, Curtis and Perkins (2011) and Circelli et al. (2012) in their research found that, while the levels of Adult Literacy and Life Skills Survey and the Australian Core Skills Framework may look similar on the surface, they do not correspond exactly. The difference in the levels becomes more noticeable as one progresses from a high Level 2 on either scale, so that the ALLS Level 3 corresponds most closely with the ACSF Level 4. Biennial reviews of the National Foundation Skills Strategy were proposed to ensure that it remained aligned with national and jurisdictional priorities and circumstances (Standing Council on Tertiary Education, Skills and Employment 2012, p.11). Given that most funding in Australia is measured against the Australian Core Skills Framework and is aimed at achieving improvement up to ACSF Level 3 (as opposed to either the ALLS Level 3 or the PIAAC Level 3), there is potential for the gains from the NFSS to fall short of their target.

One of the longest running foundation skills policies has been the 'Skills for Life' policy in the United Kingdom, implemented in 2001. The Skills for Life strategy had very specific participation targets and credentialling outcomes. When the policy was launched, its initial target was an improvement in the literacy levels for 750 000 people by 2004 (UK Department for Education and Employment 2001). The Leitch Review of Skills (2006), which considered the United Kingdom's long-term skill needs, recommended that '95 per cent of adults ... achieve the basic skills of functional literacy and numeracy' by 2020 (p.3). This equates to another two million people in literacy and 4.6 million people in numeracy (p.63). In 2010, it was replaced by the Skills for Sustainable Growth, which was to be implemented in the 2013–14 academic year (UK Department for Business, Innovation and Skills 2010).

In 2012, a national survey was conducted to assess the impact of the Skills for Life policy (UK Department for Business, Innovation and Skills 2012). This survey largely replicated the Skills for Life Survey 2003, allowing for direct comparison of the results. The major difference between the two surveys was the inclusion of ICT skills in the latter survey. The results suggested that, while there was some progression from Level 1 to Level 2, the proportion of people at Level 1 or below had not improved (p.2).

Bathmaker (2007) used the available statistical data from the first four years of the policy to explore trends in participation and achievement. She found a pattern of diminishing participation and achievement. She was also concerned that the strong focus on a numerical target in relation to qualification achievement may improve the United Kingdom's results on large-scale international tests, but do little to support the learning aspirations of the individual.

In 2011, the Department for Business, Innovation and Skills commissioned a review of research, largely from the United Kingdom, into adult language, literacy and numeracy provision over the previous decade. The purpose of the review was to measure the impact of improving adult literacy and numeracy skills, with the aim of producing empirical evidence to support planning in relation to the policy (Vorhaus et al. 2011). The review uncovered inconsistencies in the programs, which the authors attributed to 'inadequately designed studies and poor quality interventions' (p.15).

The review was grouped around six themes, which had been identified by the Department for Business, Innovation and Skills: learning outcomes; quality and effectiveness of provision; number of learning hours; persistence in literacy and numeracy learning; skills acquisition, retention and loss over time; and, what literacy and numeracy skills are needed.

The outcomes were focused on return on investment – both for employers and the funding body – and personal and social returns. In some ways the reported results were confusing, in that the context was not clear. For example, it was not always clear if the result applied to employed or unemployed participants, or to both. Table 1 (taken from Vorhaus et al. 2011) provides a summary of the various research projects and the impact that improving foundation skills had on the participants' earnings. Examination of the various projects throughout the Vorhaus et al. report show that the researchers largely did not differentiate between people who were employed and those who were not.

Table 1 Map of UK evidence – attaining skills in adulthood

	Impact of attaining literacy skills on earnings	Impact of attaining numeracy skills on earnings	Impact of attaining literacy skills on employment	Impact of attaining numeracy skills on employment	Comment
Metcalf et al. 2009	No	No	Inconclusive	Inconclusive	High levels of attrition
Bynner & Parsons 2006	Yes	Yes	Yes: men	Yes: women	
Machin et al 2001	Yes: men	Yes: men	n/a	Yes: men	
McIntosh & Vignoles 2001	Yes	Yes	Yes	Yes	Consistent results from two datasets. Employment effects small/ statistically insignificant
BIS 2011	Yes	Yes	Yes	Yes	McIntosh (2010) is primary source. Literacy and numeracy not distinguished

Source: Vorhaus et al. (2011, table 3.1, p.29).

The evidence of the economic value of later-life learning in the area of LLN found that improvements in skills for both men and women, particularly in numeracy, did result in an economic benefit to the individual (Vorhaus et al. 2011, p.31). However, the older an individual, the less effective any intervention was likely to be. This is in line with the findings from the US Longitudinal Study of Adult Learning (LSAL; Reder 2012).

The direct link between learning outcomes (as in, improvements in LLN) and employment was less clear. What was clear was that the social/personal benefits (increased self-esteem, perception of improved literacy and numeracy skills, and commitment to education) that result from participation in an adult literacy or numeracy program can lead to improved employment outcomes (Vorhaus et al. 2011, p.34).

The key finding in the area of personal and social returns was that participation in adult literacy and numeracy programs have a positive effect for both individuals and communities. The researchers found that these effects take time to emerge and are often evidenced in contexts away from the learning environment (Vorhaus et al. 2011, p.49). These findings support the situated social practice model of LLN learning, which sees LLN as 'situated and embedded in local activities', with learning occurring within relationships between people, be they in the workplace, the home, the formal classroom or elsewhere (Hamilton 2010, p.8).

Social practice theory also featured in the Longitudinal Study of Adult Learning (Reder 2009). Reder claims that participation in a literacy or numeracy program leads to increased 'practice engagement' (that is, engagement in literacy and numeracy activities for social reasons, such as reading a newspaper or doing a household budget). This practice outside the classroom or a formal learning environment over time leads to measurable gains in proficiency, an important finding as these latter indicators tend to be more highly valued by policy-makers (p.35).

Vorhaus et al. (2011, p.62) found a similar pattern of practice, whereby individuals may drop out of the formal learning environment but continue to practise their skills, leading to achievement. They suggested that measures of engagement should be used in conjunction with efficiency measures as a framework for identifying and tracking the development of adult LLN skills. The researchers also found that programs that embedded LLN skills development in vocational training can lead to higher retention and better success rates (Vorhaus et al. 2011, p.63).

The impact of teachers also needs to be considered. Vorhaus et al. (2011, p.71) found that effective teachers not only needed good generic teaching skills, they also needed strong subject-specific knowledge (in this case, literacy). Given the shortage of adequately qualified and experienced teachers in LLN provision in the UK, the researchers concluded that there needed to be better models of teacher practice and professional development to support workforce development in these areas (Vorhaus et al. 2011, p.79).

The impact of technology was examined, with researchers noting that there was little research into the value of ICT as an educational technology in the area of adult literacy and numeracy delivery (Vorhaus et al. 2011, p.97). However, they concluded that the delivery of both ICT skills and basic skills together could be beneficial.

In examining skills acquisition, retention and loss, Vorhaus et al. (2011) found a strong link between unemployment and skill loss: the longer a person is out of work, the greater the

risk of skill loss. Conversely, they found skill acquisition could improve with employment, if the job role/work provided challenges and encouraged learning. The use of ICT in the workplace was also found to have a positive impact on skill acquisition (p.118).

Recent results from PIAAC indicate that even though the Skills for Life policy has been in place for a significant time in the UK, the interventions are not reaching the largest cohort of low-skilled individuals – the 16 to 19 years age group (Kuczera, Field & Windisch 2016). Around one-third of 16 to 19-year-olds have been assessed as having skills below Level 2, especially in numeracy.

In Australia there were three long-running national LLN programs – the Workplace English Language and Literacy (WELL) Program, the Language, Literacy and Numeracy Program (LLNP) and the Adult Migrant English Program (AMEP). The WELL Program provided workplace-based LLN support and training on a co-contribution model; it also provided funding for resource development and strategic workplace literacy projects of national importance (such as the Australian Industry Group's National Workplace Literacy Project). The Language, Literacy and Numeracy Program provided free LLN training for eligible jobseekers. The Adult Migrant English Program provides eligible migrants and humanitarian visa holders with up to 510 hours of free English language tuition to help them to learn foundation English language and settlement skills to enable them to participate effectively in Australian society (Department of Education and Training 2016a).

Of these three programs, only AMEP continues. Both the WELL Program and the LLNP underwent reviews in 2012–13. These reviews are no longer available publicly. Despite favourable outcomes from the review, the Australian Government closed the WELL Program. The review of the LLNP saw it rebadged as the Skills for Education and Employment program (Department of Education and Training 2016b). The 2016 report, *Tackling foundation skills in the workforce* (Australian Industry Group 2016), again called for a renewed focus on foundation skills, with a national strategy that would drive change, an enlarged Employer Champions Network, and increased awareness of the return on investment that improving workforce foundations skills brings, and a discrete workplace LLN program.

Both the Adult Literacy and Life Skills Survey and the Programme for the International Assessment of Adult Competencies demonstrated a 'life course' trajectory for skills acquisition, retention and loss, with younger people demonstrating continuing skills growth up until about 30 years of age. At this point skills growth plateaus until around age 55, when it begins to decrease (OECD 2013, 2016). Research into the link between skills and ageing (Desjardines & Warnke 2012) reached the conclusion that even though there was clear evidence that skills decline over time, it was not possible to conclusively say that this is due to 'normal ageing'. Furthermore, a range of factors can delay or prevent cognitive degeneration. These factors include education and training, social engagement, health and physical and mental activity (p.10).

There are very few longitudinal studies into the impact of policy. One is the Longitudinal Study of Adult Literacy (LSAL; Reder 2013). The research was conducted over a period of ten years and involved 1000 male high school dropouts in the US city of Oregon, Washington State. The research looked at participation in formal literacy programs and also the self-directed learning undertaken by the cohort. Six waves of skill assessments were conducted, along with in-depth interviews throughout the ten-year period. The research

studied both participants and non-participants in adult literacy programs, providing a comparative picture of skills development.

An interesting finding was that 71% of the population 'self-studied', with 54% of those studying on their own never having participated in a formal program. Given that the research found that literacy gains were equivalent, regardless of whether a person was participating in a formal program or not, such self-study appears to be an important aspect of literacy development.

There was however a direct correlation between program participation and increased engagement in literacy practices. The research found that people who participated in a formal literacy program were more likely to continue to engage in informal literacy practices when they left the program. There were also reported increases in literacy engagement for people who participated in a program between waves (of assessment), with the most change being reported by those who both attended a formal program and self-studied.

There was also a positive correlation between participation in literacy programs and earnings, with those who had a faster growth in literacy skills over time benefiting the most.

While the findings from the study are significant, there is a need to replicate the research with different cohorts. This study was conducted with a small sample from a local area who were all high school dropouts. Is this representative of the low-literacy population in general?

Next steps

This literature review highlights the lack of research into foundation skills policy and implementation. The majority of research is associated with LLN skills rather than with the broader foundation skills. Australia is the only country using the term 'foundation skills' in its policy documents and explicitly including employability skills in the definition. Only the United Kingdom explicitly adds ICT skills through the Skills for Life/functional qualifications programs.

With the National Foundation Skills Strategy having been in place since late 2012 and the Foundation Skills Training Package available to support the strategy's implementation since 2013, now would be an opportune time to examine the impact the policy is having in addressing the needs of adults with low levels of foundation skills, as well as in raising the skills of the Australian workforce.

What progress is being made in achieving the goal established in 2012: that 'by 2022, two thirds of working age Australians will have literacy and numeracy skills at Level 3 or above' (Standing Council on Tertiary Education, Skills and Employment 2012, p.2)? How well are we addressing the national priority areas of:

- raising awareness and commitment to action
- adult learners having high quality learning opportunities and outcomes
- strengthening foundation skills in the workplace
- building the capacity of the education and training workforces to deliver foundation skills?

(Standing Council on Tertiary Education, Skills and Employment 2012, p.10)

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