

OECD SKILLS STUDIES

# Building Skills For All: A Review of Finland

POLICY INSIGHTS ON LITERACY,  
NUMERACY AND DIGITAL SKILLS  
FROM THE SURVEY OF ADULT SKILLS

Pauline Musset



## ACKNOWLEDGEMENTS

The OECD is very grateful to colleagues in Finland and in particular to Petri Haltia from the Ministry of Education and Culture, to Petra Packalen from the Finnish National Board of Education, and to Maija Lyly-Yrjänäinen from the Ministry of Employment and the Economy, for their work in providing us with background material and in organising our visits to Finland, and the associated advice and guidance in the preparation of this report. We also greatly benefitted from discussion with independent experts. We would also like to thank the many people in Finland who, during our visit and meetings, gave their time to welcome us and answered our questions.

This report was written by Pauline Musset, with guidance from Simon Field. Tanja Bastianic provided statistical assistance, Marco Paccagnella reviewed the estimates and analysis contained in the report. Elisa Larrakoetxea prepared the text for publication.



## *Table of Contents*

<b>Summary and Recommendations .....</b>	<b>7</b>
Introduction.....	7
Making learning meaningful for adults.....	7
The transition from education to work.....	8
Programmes for migrants.....	8
Addressing the needs of older people .....	9
<b>Chapter 1 Introduction – defining the challenge.....</b>	<b>11</b>
Why low literacy and numeracy are a challenge .....	12
Understanding the main results of the Survey of Adult Skills for Finland: challenges and trends .....	16
Who are the low skilled in Finland? .....	20
Why do foundation skills matter?.....	23
Problem solving skills in technology-rich environments.....	24
<b>Chapter 2 Making learning meaningful for adults .....</b>	<b>31</b>
Challenge: strong foundation skills in Finland, but little explicit attention to their maintenance .....	32
Recommendation: increase the explicit attention given to literacy and numeracy .....	37
Supporting arguments: raising the profile of foundation skills through personalization .....	37
<b>Chapter 3 The transition from education to work .....</b>	<b>51</b>
Challenge: obstacles in transitions to work and further education .....	52
Recommendation: sustain foundation skills and improve pathways from vocational education.....	60
Supporting arguments: strengthening progression.....	60
<b>Chapter 4 Programmes for migrants .....</b>	<b>69</b>
Challenge: weak foundation skills among some migrants.....	70
Recommendation: Personalise training for migrants, emphasising language and vocational skills .....	77
Supporting arguments: building flexibility into integration training .....	77
<b>Chapter 5 Addressing the needs of older people .....</b>	<b>85</b>
Challenge: an older generation with weak foundation skills .....	86
Recommendations: give more attention to digital and foundation skills among older people .....	92
Supporting arguments: skills for employability and citizenship.....	92

### **Figures**

Figure 1.1 In Finland, a relatively small proportion of the population lack foundation skills .....	12
Figure 1.2 In Finland, many adults have very strong foundation skills, and a minority have weak ones .	16
Figure 1.3 In Finland, few young people have weak foundation skills.....	17
Figure 1.4 In Finland, many of those lacking foundation skills are older people .....	18
Figure 1.5 In Finland, young people had weaker skills in 2012 than the same age group in 1996.....	19
Figure 1.6 Especially among young people in Finland, foundation skills are related to parental education .....	20
Figure 1.7 Those without upper secondary qualifications frequently lack foundation skills, even in Finland.....	21
Figure 1.8 In Finland, half of the first-generation migrants lack foundation skills.....	22
Figure 1.9 In Finland half of those with low foundation skills have jobs .....	22

Figure 1.10 Low-skilled adults have lower trust and political engagement levels and poorer health.....	24
Figure 1.11 Jobs requiring routine tasks or solving unforeseen problems .....	25
Figure 1.12 Proficiency in problem solving in technology-rich environments .....	26
Figure 2.1 In all countries, those with low foundation skills participate less in education and training ...	34
Figure 2.2 Many young Finns achieved no more than level 2 numeracy in the Survey.....	35
Figure 3.1 Finland has fewer unqualified young people than most countries – but still around 100 000.	52
Figure 3.2 Some early school leavers lack numeracy skills .....	53
Figure 3.3 In Finland, young NEETs have better numeracy scores than in many other countries.....	54
Figure 3.4 What are VET graduates doing one year after finishing upper secondary education? .....	56
Figure 3.5 In Finland young vocational graduates are twice as likely to be NEET as graduates from general programmes .....	56
Figure 3.6 In Finland, VET graduates more often have weak numeracy skills than general programme graduates.....	58
Figure 4.1 Migrant inflows have been increasing .....	70
Figure 4.2 Many migrants in Finland come from Estonia and the Russian Federation .....	71
Figure 4.3 Finland has almost no work migrants .....	71
Figure 4.4 How do migrants in Finland perform in numeracy? .....	72
Figure 4.5 In Finland migrants have a lower employment rate than the native-born.....	74
Figure 5.1 In Finland, more than one quarter of older people have low foundation skills.....	86
Figure 5.2 Older workers with better skills tend to be more active in the labour market .....	87
Figure 5.3 Finland is a leader in e-government .....	89
Figure 5.4 Older workers participate less on average in training .....	90
Figure 5.5 Those with low foundation skills are less likely to participate in on-the-job training .....	90
Figure 5.6 How skills decline with age .....	91
Figure 5.7 In Finland, older people still working tend to have stronger foundation skills.....	94

## Tables

Table 2.1 Participation is very high in the different adult learning programmes in Finland.....	33
Table 3.1 The foundation skills of Finnish VET graduates compare well internationally .....	57

## Boxes

Box 1.1 The OECD Survey of Adult Skills .....	13
Box 1.2 How low foundation skills are measured in the Survey of Adult Skills .....	14
Box 1.3 What adults can do at the different levels in problem solving in technology-rich environments	27
Box 2.1 Adult education in Finland .....	32
Box 2.2 The Noste programme in Finland .....	36
Box 2.3 In England, screening for weak foundation skills was pursued with caution .....	39
Box 2.4 Elements of quality formative assessment .....	40
Box 2.5 Remediating basic skills weaknesses in US community colleges .....	41
Box 2.6 Contextual learning of foundation skills in the United States: some examples .....	42
Box 2.7 The Family Literacy Project in Hamburg .....	44
Box 3.1 The Youth Guarantee Programme in Finland.....	55
Box 3.2 Recent reforms in Finnish higher education .....	59
Box 3.3 Attention to foundation skills can reduce dropout .....	61
Box 3.4 The Swedish system of higher vocational education (HVE) .....	63
Box 4.1 A mother-tongue literacy programme for migrants in Israel .....	78
Box 4.2 “Step-in” jobs for migrants in Sweden .....	79
Box 5.1 Labour market training in Finland .....	93

## Summary and Recommendations

### Introduction

In Finland, the numeracy and literacy skills of adults are among the highest in the countries measured through the OECD's 2012 Survey of Adult Skills. The Survey assessed the skills of adults in literacy, numeracy and problem solving in technology-rich environments in 24 countries and sub-national regions in the first round of the Survey. But around 600 000 adults between the age of 16 and 65 still have low foundation skills (literacy or numeracy below level 2 in the Survey). These are people who struggle with basic quantitative reasoning or have difficulty with simple written information, and for them, entering and progressing in working life, and engaging in civic life, is becoming harder and harder. About half of them are over 55, many of them with more limited initial education; the other half are those younger people who have slipped through the net of an otherwise strong education system. This report looks at these issues and makes recommendations on how Finland might build on its strong performance, and ensure better levels of foundation skills for all.

### Making learning meaningful for adults

Finland's strong schools are complemented by a wide range of adult learning opportunities, and fewer young adults have weak foundation skills than in many other countries. Finland should build on these strengths and aspire to better levels of numeracy and literacy for all, helping the weakest for sure, but also encouraging those with intermediate skills to make further improvements. Adults with weak foundation skills are often reluctant to identify themselves and seek help, and so a more explicit approach to numeracy and literacy in adult programmes would make it easier to tackle weaknesses. A 'contextual' approach is recommended, in which the need for strengthened foundation skills might be identified in the context of employment programmes or education courses, and in which such skills might then be developed by embedding them in practical vocational training or other educational programmes. This whole approach, involving the adjustment of teaching to individual needs for better foundation skills, would be consistent with Finland's commendable emphasis on personalised learning.

***Recommendation: increase the explicit attention given to literacy and numeracy***

Give more explicit attention to literacy and numeracy skills throughout the different contexts of adult learning.

- Alongside attention to those with the weakest foundation skills (below level 2 in the Survey of Adult Skills) aim over time to realise level 3 foundation skills for all Finnish adults
- Pursuing the admirable Finnish principle of personalised learning, identify and respond to diverse foundation skills requirements through tailored support and remediation
- Pursue a contextualised approach to foundation skills, identifying them in the context of employment and education programmes, and teaching and developing them in the context of vocational and other learning programme

Evaluate existing policies and collect data more systematically

**The transition from education to work**

In Finland, although few young people lack foundation skills, those few face significant disadvantages, often dropping out of education and having a weak attachment to the labour market. Since most young people in Finland are well-educated and highly skilled, young people without foundation skills face an increasing risk of marginalisation into inactivity or unemployment, with lasting damage to their prospects. Upper secondary vocational students face some particular obstacles in transitions, as tertiary programmes are often over-subscribed and because Finland lacks the kind of short cycle postsecondary vocational programmes found in many other countries. Strengthened literacy and numeracy skills among vocational students would help, as these are fundamental both to employability and further learning.

***Recommendation: sustain foundation skills in vocational education and improve pathways into higher education***

- Ensure that all programmes, including vocational programmes, offer sufficient attention to literacy and numeracy skills to support further learning and career mobility.
- Improve transitions from education to meaningful employment, through good quality apprenticeship and other quality vocational programmes.
- Continue the reforms of entrance into tertiary education, while developing postsecondary vocational programmes.
- Maintain efforts to reach out to low-skilled young people through the Youth Guarantee, and the Young Adults' Skills programme in particular.

**Programmes for migrants**

Migrants are a small but growing group in Finland and, as in other countries, they face integration challenges. They have high rates of unemployment, and 55% have low

foundation skills, when tested in Finnish or Swedish. In Finland’s impressively systematic approach, an integration plan, including a substantial training programme, is prepared for each migrant. This approach could be enhanced through a more personalised approach to training to take account of the diversity of needs, while giving more emphasis to language learning and targeted vocational training. Part-time provision, particularly in language skills could be developed. Language skills could also be developed in combination with vocational skills, and through the workplace. Migrants might also be assisted by better recognition of the skills and qualifications acquired abroad, and through family literacy programmes.

***Recommendation: personalise training for migrants, emphasising language and vocational skills***

- Personalise training programmes for adult migrants to reflect the needs of individuals, allowing part-time provision, and emphasising language provision and employability skills

### **Addressing the needs of older people**

It can be estimated that more than 800 000 people in Finland over the age of 55 (including those over 65 who were not covered by the Survey) have low foundation skills, potentially excluding them not only from the labour market, but also from civic participation. In the face of a rapidly ageing population, Finland aims to increase the labour market participation rate among older people. In support of this objective, both the foundation and digital skills of older Finns need to be sustained and if possible enhanced. The benefits would be, first, increased labour force participation, and second, better access to public services, where online provision is of growing importance. The workplace itself can be an important venue for the delivery of such training.

***Recommendation: increase attention to digital and foundation skills among older people***

- Modify government-supported labour market training so that it more effectively meets the individual needs of older workers, focusing when needed on digital and foundation skills, sustaining participation in the labour market.
- Encourage adult education providers to provide support in foundation and digital skills to older people, especially to those out of the labour market, particularly given the role played by digital skills in accessing public services online.





## *Chapter 1*

### **Introduction – defining the challenge**

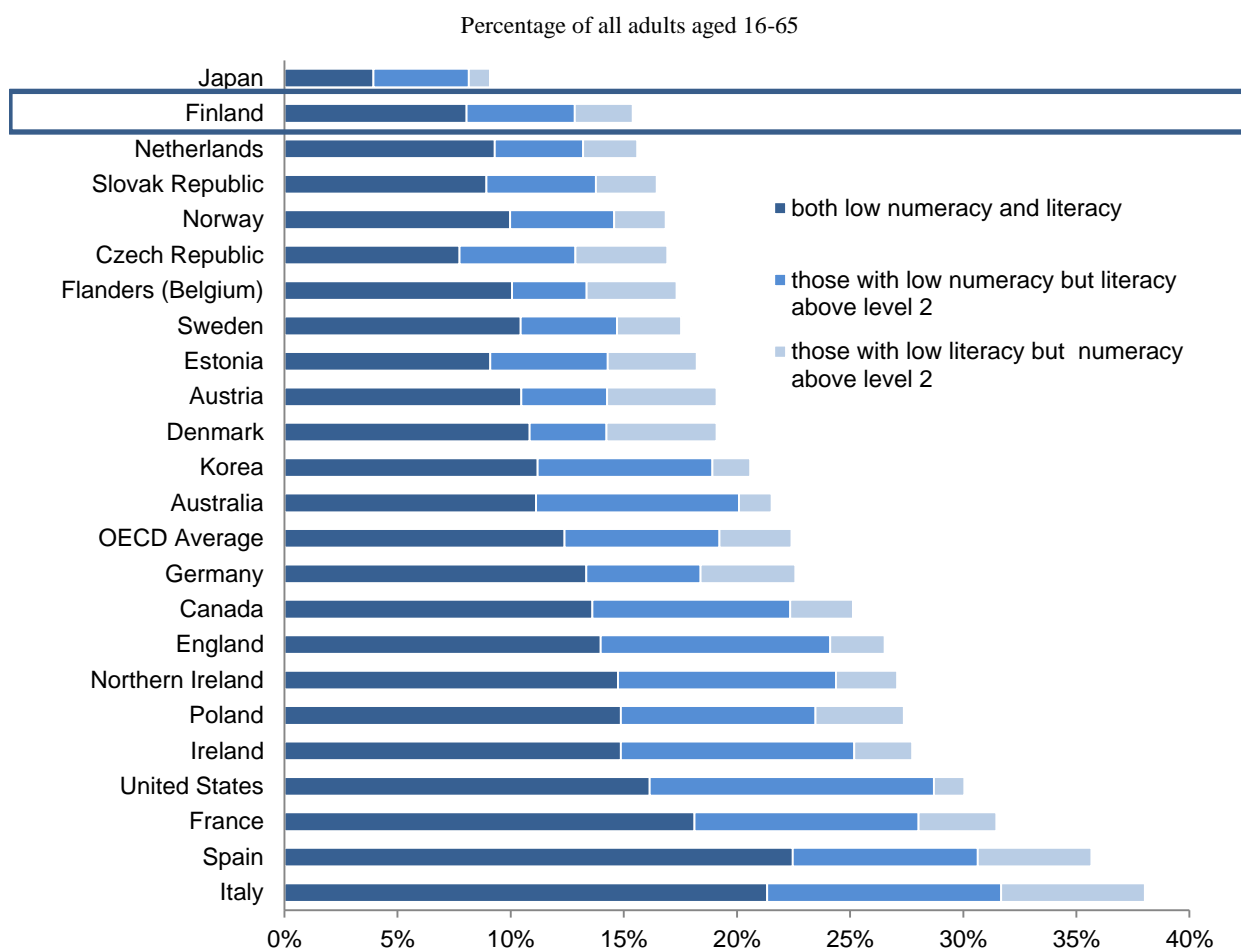
*In Finland, the numeracy and literacy skills of adults are among the highest in the countries measured through the OECD's 2012 Survey of Adult Skills. But around 600 000 adults between the age of 16 and 65 still have low foundation skills (literacy or numeracy below level 2 in the Survey). These are people who struggle with basic quantitative reasoning or have difficulty with simple written information, and for them, entering and progressing in working life, and engagement as citizens, is becoming harder and harder. About half of them are over 55, many of them with more limited initial education; the other half are those younger people who have slipped through the net of an otherwise strong education system. This report looks at these issues and makes recommendations on how Finland might build on its strong performance, and ensure better levels of foundation skills for all.*

## Why low literacy and numeracy are a challenge

### *Finland's outstanding levels of foundation skills still leave some behind*

By most standards the results for Finland from the Survey of Adult Skills were outstanding (see Box 1.1). But the dominant feeling in Finland – reflected by newspapers headlines – was that there were still too many adults with weak foundation skills<sup>1</sup>. Almost one in six adults between the ages of 16 and 65, or around 600 000 persons, have low foundation skills (under Level 2 in literacy, numeracy or both), as shown by Figure 1.1. About 100 000 have weak literacy skills, 200 000 are weak in numeracy and, about 300 000 lack both types of skills (see Fridberg et al., 2015 for comparisons of Finland with other Nordic countries). Many older people (over 65 and not directly covered by the survey) also lack foundation skills.

**Figure 1.1 In Finland, a relatively small proportion of the population lack foundation skills**



Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) ([link to database](#)).

### Box 1.1 The OECD Survey of Adult Skills

The Survey, a product of the Programme for the International Assessment of Adult Competencies (PIAAC), assesses the skills of adults in literacy, numeracy and problem solving in technology-rich environments.

The literacy assessment covers a range of skills from the decoding of written words and sentences to the comprehension, interpretation and evaluation of complex texts (but not writing).

The numeracy assessment involves managing a situation or solving a problem in a real context, by responding to mathematical content/information/ideas represented in multiple ways.

The problem solving in technology-rich environments assessment focuses on the abilities to solve problems for personal, work and civic purposes by setting up appropriate goals, and accessing and making use of information through computers.

Each of the three assessments yields results scaled from 0 to 500 points. The scales are divided into six levels in literacy and numeracy (Levels 1 through 5 plus below Level 1) and four for problem solving in technology-rich environments (Levels 1 through 3 plus below Level 1). The purpose of skill levels is to facilitate the interpretation of the results, and not as standards defining levels of skill required for particular purposes.

In addition, the Survey collected information about a number of factors in each respondent's background and context. This information includes participation in activities that use the competencies assessed in the three domains, such as the frequency of reading different kinds of material or using different types of ICT. The Survey includes questions about the use of various generic skills at work, such as collaborating with others and organising one's time. Respondents are also asked whether their skills and qualifications match their work requirements and whether they have autonomy with respect to key aspects of their work.

The Survey is administered under the supervision of trained interviewers, most often in the respondent's home. It starts with a background questionnaire, delivered in Computer-Aided Personal Interview format by the interviewer, and typically takes 30-45 minutes to complete. The assessment of the domain competencies is conducted either on a laptop computer or by completing a paper version, depending on the respondent's computer skills. To reduce the time required for the Survey, respondents are assessed in only one or two of the three domains, not in all of them.

More than 160 000 adults aged 16 to 65 were surveyed in 24 countries and sub-national regions: 22 OECD member countries – Australia, Austria, Belgium (Flanders), Canada, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Japan, Korea, the Netherlands, Norway, Poland, the Slovak Republic, Spain, Sweden, the United Kingdom (England and Northern Ireland), and the United States; and two partner countries – Cyprus\*\* and the Russian Federation (\*\*see notes A and B in OECD, 2013a). Data collection took place from August 2011 to March 2012 in most participating countries. The Survey was conducted in nine additional countries in 2012 (Chile, Greece, Indonesia, Israel, Lithuania, New Zealand, Singapore, Slovenia and Turkey), and the results will be released in 2016. A third round of the Survey, with additional countries, is planned for the 2015-19 period.

Source: OECD (2013a), *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*, OECD Publishing. doi: <http://dx.doi.org/10.1787/9789264204256-en>

Footnote by Turkey The information in this document with reference to « Cyprus » relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Footnote by all the European Union Member States of the OECD and the European Union The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus

### What does it mean to lack foundation skills?

The 600 000 Finns who struggle with basic quantitative reasoning or have difficulty with simple written information (see Box 1.2) are here referred to as having ‘low foundation skills’, recognising that some will have good occupational skills, and others will have strong foundation skills in a language other than Finnish or Swedish. Weak foundation skills reduce productivity and employability, and, as work becomes more technical and information-based, it will become harder to get by in working life with poor literacy and numeracy skills. Skills deteriorate when not used, and with ageing. Adults with poor literacy and numeracy skills tend also to have poor problem solving skills, and they may have difficulties in using computers, using email or getting access to public information. The aim of this study is to examine the evidence bearing on this population, and make recommendations to address the challenge.

#### Box 1.2 How low foundation skills are measured in the Survey of Adult Skills

Individuals are classified at different levels of numeracy and literacy based on their probability of responding to tasks of different difficulty levels (see Chapter 18 in OECD, 2013b). At each point of the scale an individual with a score of that particular value has a 67% chance of successfully completing items located at that point. ‘Low-skilled’ (below level 2 on our definition) adults would, more often than not, be unable to perform these tasks.

**MEDCO ASPIRIN** 500

INDICATIONS: Headaches, muscle pains, rheumatic pains, tooth-aches, earaches. RELIEVES COMMON COLD SYMPTOMS.

DOSAGE: ORAL. 1 or 2 tablets every 6 hours, preferably accompanied by food, for not longer than 7 days. Store in a cool, dry place.

CAUTION: Do not use for gastritis or peptic ulcer. Do not use if taking anticoagulant drugs. Do not use for serious liver illness or bronchial asthma. If taken in large doses and for an extended period, may cause harm to kidneys. Before using this medication for chicken pox or influenza in children, consult with a doctor about Reyes Syndrome, a rare but serious illness. During lactation and pregnancy, consult with a doctor before using this product, especially in the last trimester of pregnancy. If symptoms persist, or in case of an accidental overdose, consult a doctor. Keep out of reach of children.

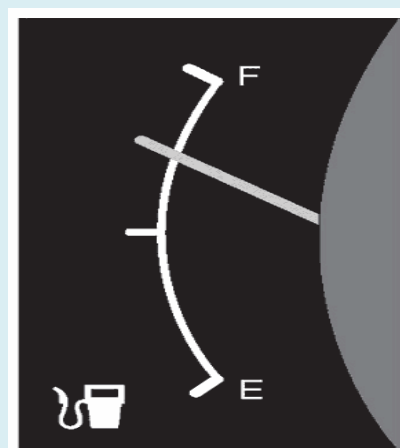
INGREDIENTS: Each tablet contains  
500 mg acetylsalicylic acid.  
Excipient c. b. p. 1 tablet.  
Reg. No. 88246

Made in Canada by STERLING PRODUCTS, INC.  
1690 Industrial Blvd., Montreal, Quebec H3D 5P1

Reprinted by permission

#### Literacy level 2/3

Q: What is the maximum number of days you should take this medicine? List three situations for which you should consult a doctor.



#### Numeracy level 2

Q: The petrol tank in this truck holds 120 litres. About how many litres of petrol remain in the tank? (Assume the gauge is accurate.)

Source: National Centre for Education Statistics (2015), “Sample Items”, <https://nces.ed.gov/surveys/all/Items.asp?sub=yes&SectionID=2&CatID=2>, accessed on 14 October 2015, OECD(2013b), Technical Report of the Survey of Adult Skills (PIAAC), [http://www.oecd.org/site/piaac/ Technical%20Report\\_17OCT13.pdf](http://www.oecd.org/site/piaac/Technical%20Report_17OCT13.pdf)

*The Survey measures look at the capacity to undertake everyday tasks*

‘Low foundation skills’ is a very abstract measure, and doubly so when it depends on an arbitrary cut-off point marking out those who are below level 2 on either literacy or numeracy in the Survey. Box 1.2 therefore gives examples of the instruments used to test whether individuals are at or below level 2. The skills measured are those of everyday life – reading a petrol gauge and understanding how to take painkillers in a sensible way. The numeracy skills do not require specific technical capacities like algebra, but they are mediated by literacy.

*Foundation skills are fundamental to life chances*

Foundation skills of literacy and numeracy lie at the root of our capacity to communicate and live and work together, to develop and share knowledge, science and culture. Their contribution to workforce skills has increasingly been recognised as critical to economic success, while evidence on gaps in adult foundation skills and the link with economic and social outcomes has also been growing, both at national and international level (e.g. through the International Survey of Adult Skills of 1994-98 and Adult Literacy and Life Skills Survey of 2003-2007). Most tellingly, there has been a belated realization that despite universal basic education in advanced countries, some adults have slipped through the net, leaving them with very weak literacy and numeracy. Numeracy and literacy are also more easily measurable than many other skills that are either highly context-dependent (like social skills) or highly specific (like playing the piano) or both. This means that they provide one of the few standardised ways of comparing skills across countries, recognising that they are just a subset, but a critical subset of the full skills package.

*Foundation skills are linked to productivity and economic growth*

While low-skilled jobs will remain in advanced economies, they will not be abundant, and they will often be insecure jobs, with low wages and poor conditions. Low skills will also limit the capacity of individuals to act as effective citizens and look after their own health. In Finland, as the share of older workers, whose labour force participation is low, grows, the overall participation rate tends to decline. Falling labour supply will reduce growth, but better skills can help increase productivity to compensate.

*Strong basic schooling underpins foundation skills.*

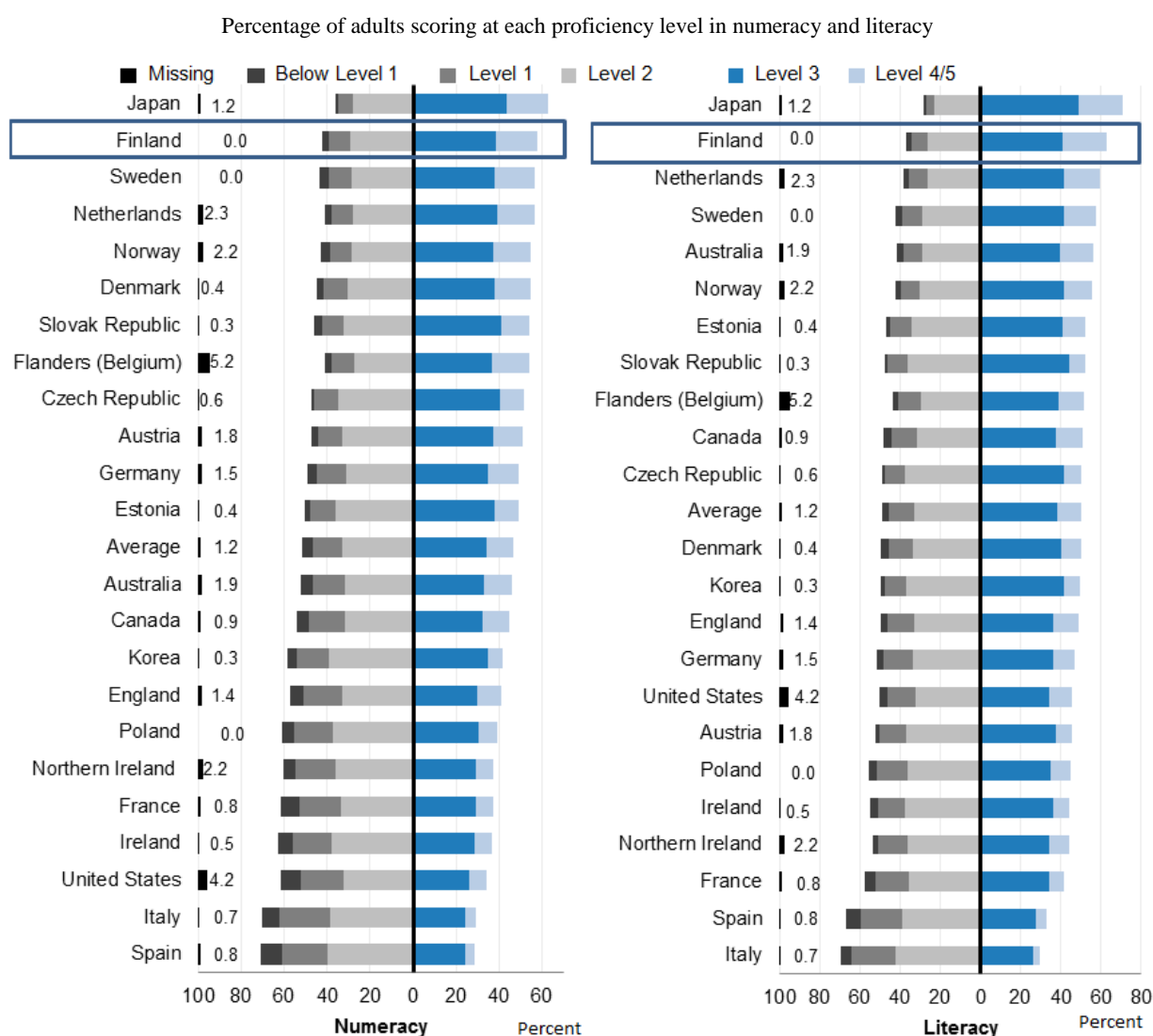
Finland has an impressive basic schooling system complemented by a wide range of adult learning opportunities, and few young adults have weak foundation skills. This report argues that Finland should increase the explicit attention given to low foundation skills, but in addition, it should build on its strengths and aspire to higher levels of numeracy and literacy for all. With this purpose in mind, Chapter 2 will argue for a more explicit approach to numeracy and literacy in all adult programmes, on the grounds that this will in itself make it easier to tackle low skills. Chapter 3 will look at the transition from education to work, for young people, and the role of foundation skills and vocational education and training. Chapter 4 will look at migrants, a diversely-skilled group that is on average disadvantaged relative to the Finnish-born population. This chapter will look at ways of investing in foundation skills to improve labour market integration. Chapter 5 will look at older adults lacking foundation skills – and the different challenges they face. Targeted interventions can increase their skills levels, and extend their working lives.

## Understanding the main results of the Survey of Adult Skills for Finland: challenges and trends

*There is a strong performance at the highest levels*

Figure 1.2 shows that about 22% of adults in Finland perform at the highest levels (Level 4/5) on literacy compared to the average of 12% of adults aged 16-65 in all participating countries. In numeracy, 20% of adults scored at the highest levels, compared to the average of 12%. At the other end of the spectrum, 15% of adults in Finland have poor literacy or numeracy skills (below level 2).

**Figure 1.2 In Finland, many adults have very strong foundation skills, and a minority have weak ones**



Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

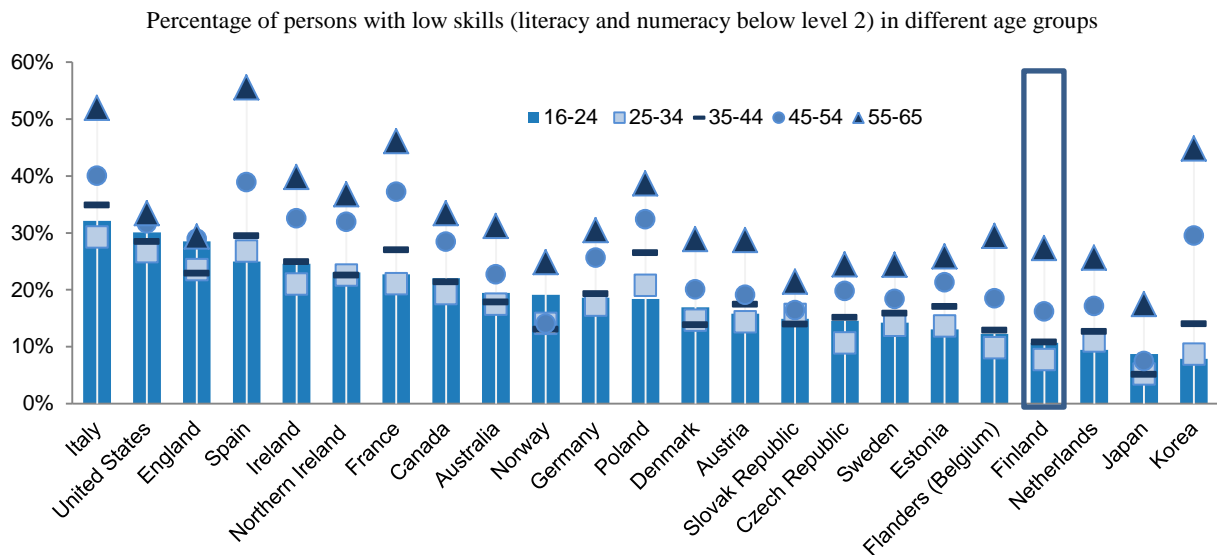
### *PISA and the Adult Skills Survey give contrasting results about literacy and gender*

The numeracy skills of women are lower than those for men, while literacy skills are more or less equal between the sexes, according to the Survey (see Figure 3.4 in OECD, 2013a). PISA data shows (differently) that girls read better than boys in school<sup>2</sup>: in reading literacy, gender differences in PISA were considerably larger than in PIAAC, and they have widened in the more recent PISA cycles (2000, 2003 and 2009). In the corresponding age groups in PIAAC, the gender differences were small, disappearing, or being reduced significantly. These differences are probably linked to what happens in working life, and how women and men choose different occupations (Malin, 2015). Proficiency in literacy and numeracy are very highly correlated in Finland, as in the other countries that took part in the Survey (see Figure 2.9 in OECD, 2013a). This may also reflect the fact that the tests of numeracy are mediated through comprehension of written text.

### *In Finland, older people are much more likely to have weak foundation skills than younger ones*

Fully half of the low skilled (aged 16-65) are between 55 and 65 – this means 300 000 individuals. Whereas only about 10% of 25-34 year olds have low foundation skills, almost 30% of those aged 55-65 are in the same position (see Figure 1.3. More than half of those with low foundation skills are over 45 (see Figure 1.4). Comparison of literacy skills of cohorts<sup>3</sup> assessed in 1998 in IALS and in 2012 in PIAAC shows that in Finland, as in most other countries, proficiency declines with age (see Figure 5.4b in OECD (2013a) for trend scores in literacy by age (age effect) in selected countries, including Finland).

**Figure 1.3 In Finland, few young people have weak foundation skills**

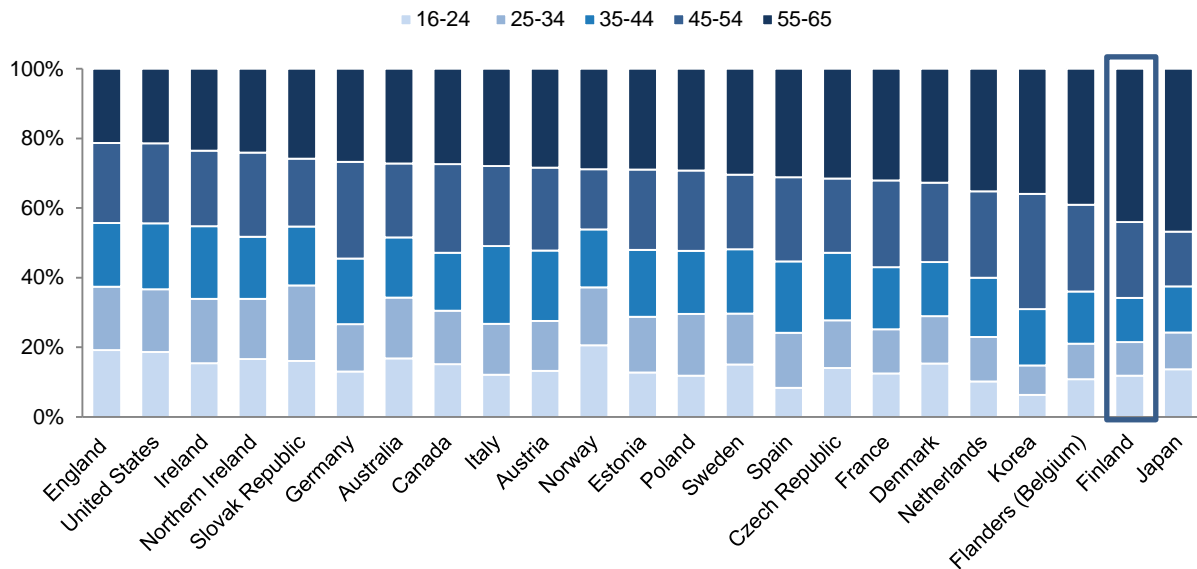


Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).



**Figure 1.4 In Finland, many of those lacking foundation skills are older people**

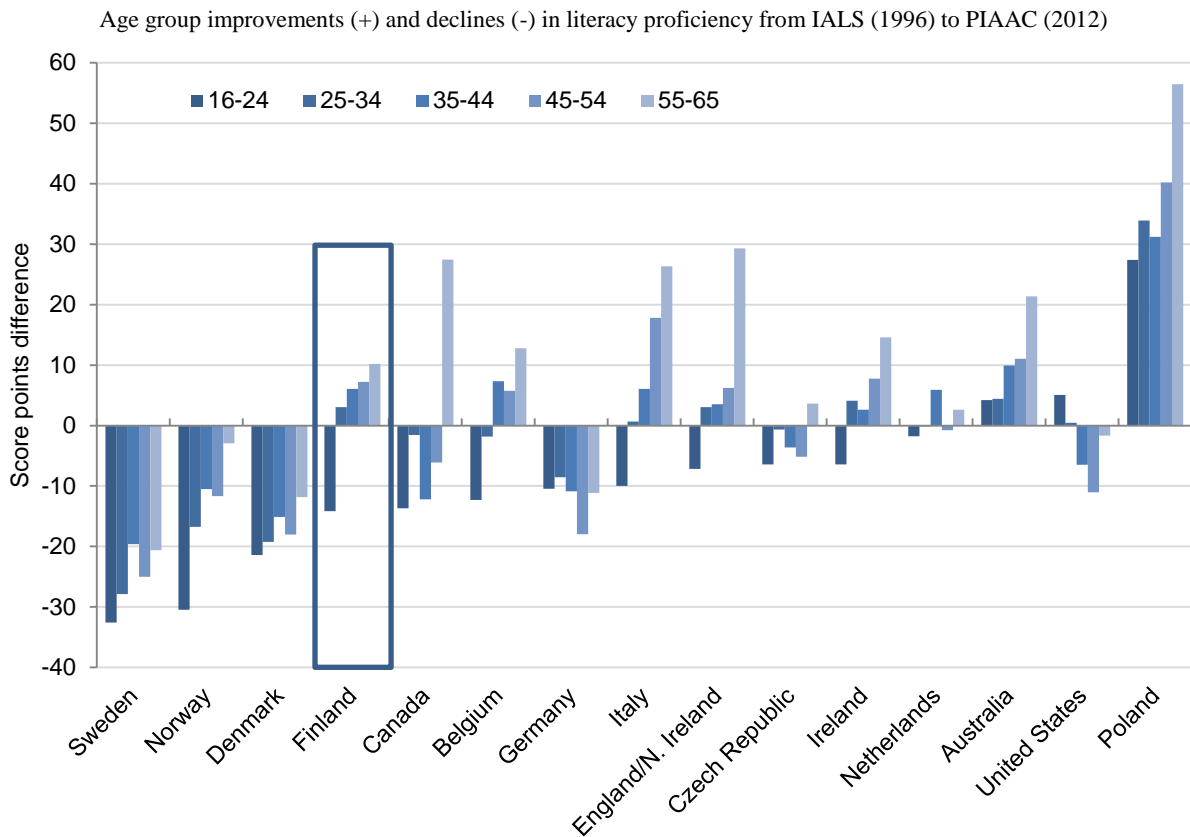
Age distribution of those with numeracy and/or literacy below level 2



Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

### *Better schooling has, until recently, driven improvements in adult skills*

In Finland, as in many countries, rising education attainment has driven better skills in the youngest age groups. The differences visible in Figure 5.1 (in Chapter 5) between the 55-65 age group and the rest of the cohorts reflect the introduction of the comprehensive school system in the 1970s. Indeed the percentage of 55-65 years-old with low foundation skills in Finland is the highest after Japan across countries, while the same percentage in the 25-35 age group is the second lowest across countries. Comparison of literacy skills of cohorts<sup>4</sup> assessed in 1998 in IALS and in 2012 in PIAAC shows that in Finland, most age cohorts between 25 and 65 in 2012 each had better literacy skills than those in the same age groups in 1996, but the 15-24 year olds in 2012 had weaker literacy skills than those who were the same age in 1996 (see Figure 5.4a in OECD (2013a) for trend scores in literacy by age (cohort effect) in selected countries including Finland). Improvement has therefore slowed down. There are different potential explanations: the young cohort in 2012 had received less formal education now than the equivalent cohort in 1996 – one explanation could be that people enter tertiary education later<sup>5</sup>. But the finding may also reflect some weakening in basic schooling reflected in the PISA results discussed below.

**Figure 1.5 In Finland, young people had weaker skills in 2012 than the same age group in 1996**

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database) and IALS (1996).

*The performance of Finland slipped slightly in PISA 2009 and then further in PISA 2012.*

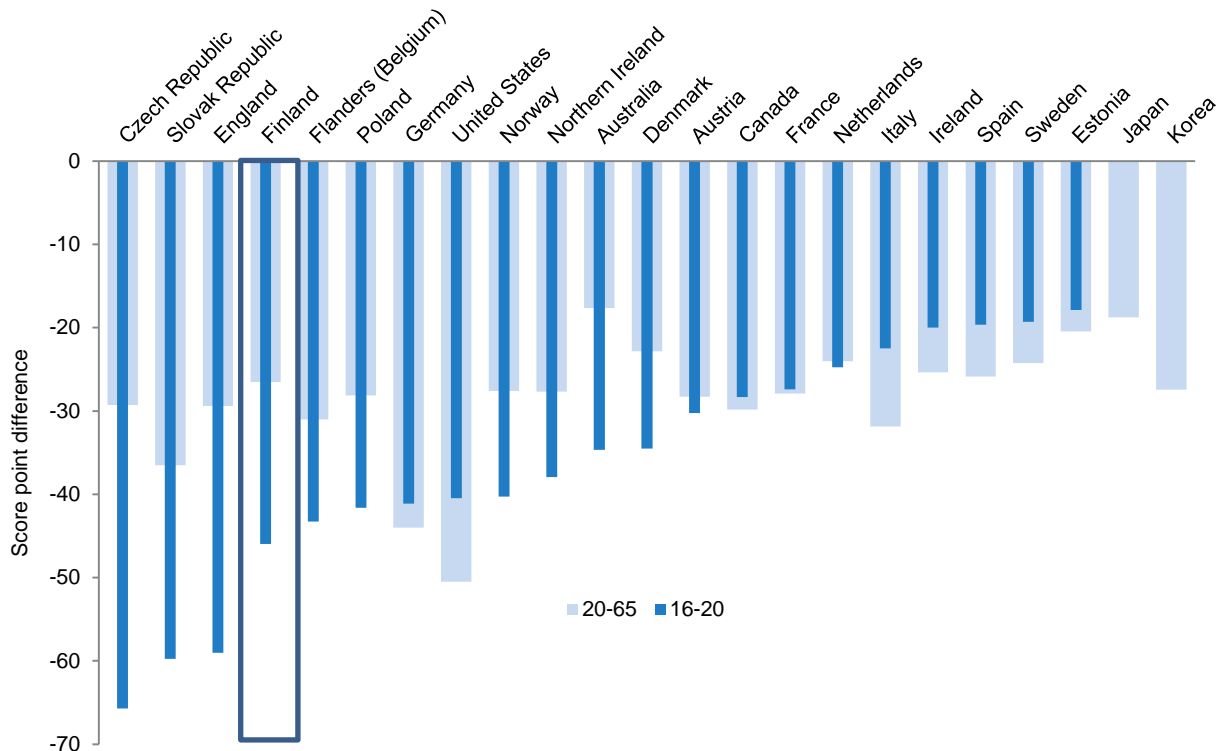
Between 2006 and 2012, Finland's PISA performance declined by 23 score points in reading literacy, 29 points in mathematical literacy and 18 points in scientific literacy (see Malin, 2014). Potential explanations include changes in student motivation, and in the school environment (Ministry of Education and Culture, 2013; Ministry of Education and Culture, 2015; Heller Sahlgren, 2015)<sup>6</sup>.

*Family background heavily influences foundation skills*

Good foundation skills are to a certain degree dependent on family background. In all countries, but to an unusually great extent in Finland, those with better educated parents tend to have stronger foundation skills as adults (see Figure 1.6). The effect of parental background on skills in Finland is also much stronger among young people than older cohorts. This latter finding could be explained by decreasing equity in school education over time, or because the effect of parental background diminishes later on in life.

**Figure 1.6 Especially among young people in Finland, foundation skills are related to parental education**

Score point difference in numeracy between (a) adults with no parents that have attained at least upper secondary education and (b) persons with at least one parent that has attained upper secondary education or above, by age group.



Note: Only statistically significant results are reported: in Japan and Korea parental education is not significantly associated with numeracy performance of 16-20 year-olds.

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

## Who are the low skilled in Finland?

### *Low skilled adults are a diverse group*

It is sometimes assumed that the majority of adults lacking foundation skills are dropouts from school outside the labour market. In fact, rather few meet this description. They are a surprisingly varied group, some with good qualifications (see Figure 1.7), half of them in work (see Figure 1.9), and include a number of migrants (see Figure 1.8) including some with good literacy skills in their mother tongues.

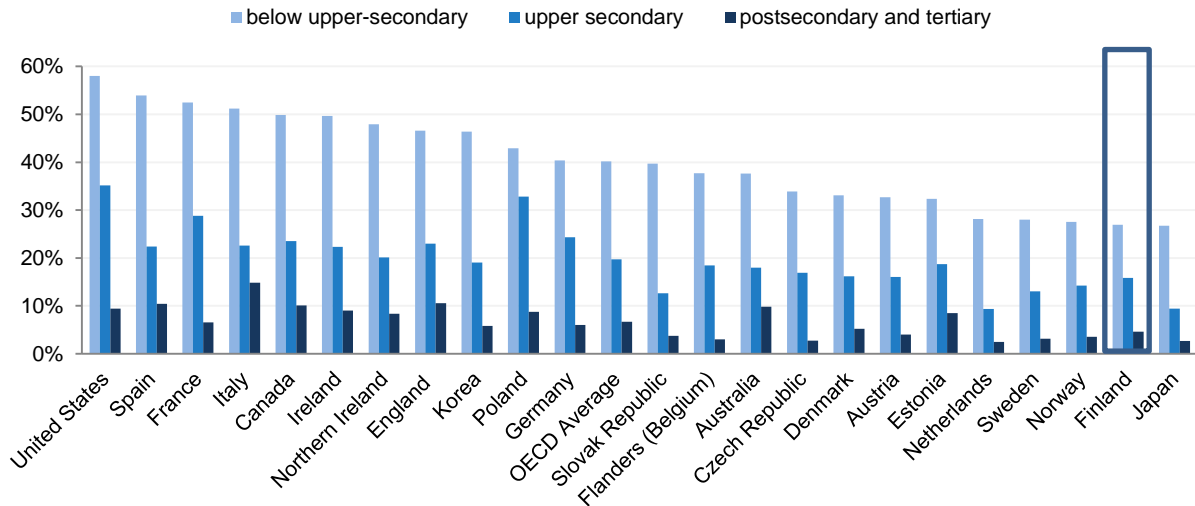
### *Weak foundation skills are not solely a problem of adults with low qualifications*

Unsurprisingly, 30% of those with less than upper secondary education have low foundation skills. But almost 20% of those *with* upper secondary education also lack these skills (see Figure 1.7). This could reflect the challenges that young Finns face in the transitions between basic and upper secondary school, but especially in the transitions from vocational upper secondary into tertiary education, or the labour market. Chapter 3 will analyse this issue. Putting foundation skills in the context of formal qualifications

provides information about the education system and its efficacy in conveying these skills to students. To this end, foreign qualifications were excluded from the analysis.

**Figure 1.7 Those without upper secondary qualifications frequently lack foundation skills, even in Finland**

Percentage of 16-65 year-olds at each educational level that have literacy or numeracy below Level 2



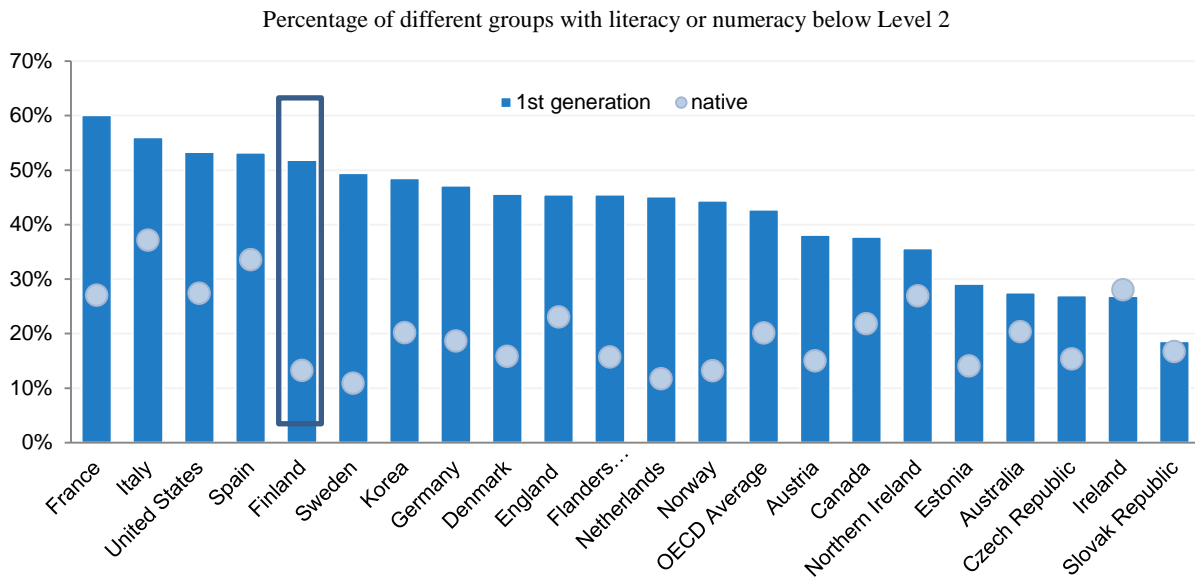
Note: Adults who obtained their highest qualification outside the country: those with foreign qualifications and 1st generation migrants, who obtained their highest qualification prior to entering the host country, are excluded.

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

### *One out of five of those with low foundation skills are first-generation migrants*

While the literacy and numeracy skills of migrants living in Finland are similar to those of migrants in other countries, they are more likely than the Finnish-born to lack foundation skills, and the gap is bigger in Finland than in most countries. In Finland, 55% of all first-generation migrants have low foundation skills, compared to 13% of the native-born<sup>7</sup> (see Figure 1.8). As a result, migrants account for one in five of those with weak foundation skills. 5% of the 16-65 year-olds are first-generation migrants (not born in the country and with at least one parent born abroad).

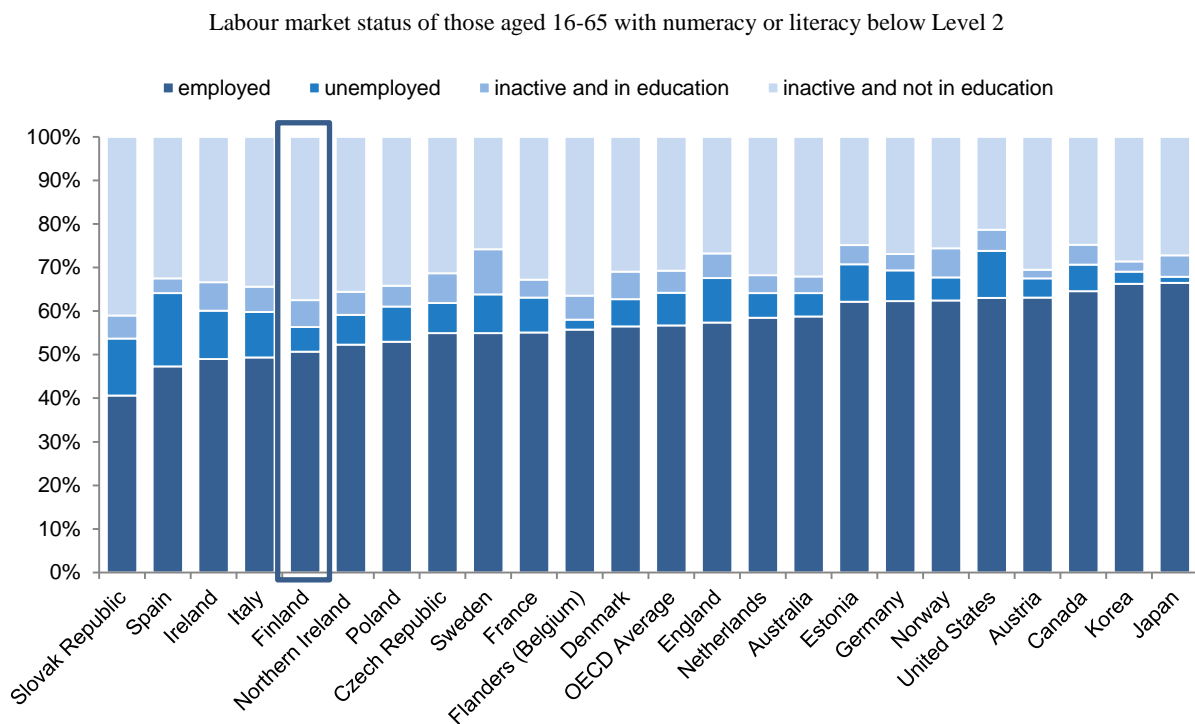
**Figure 1.8 In Finland, half of the first-generation migrants lack foundation skills**



Note: For some countries results are not reported due to insufficient number of observations.

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

**Figure 1.9 In Finland half of those with low foundation skills have jobs**



Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

*One out of five unemployed persons have low foundation skills*

In Finland just under half (47%) of those with weak foundation skills are in work; this is lower than the average in participating countries (almost 60%), probably reflecting the fact that the typical Finn with low foundation skills is older than counterparts in other countries (see Figure 1.9). In 2012, only 47%, less than in many other countries, of young people lacking foundation skills were employed. While those who are unemployed only represent 6% of all adults lacking foundation skills, those adults with low foundation skills corresponds to 20% of all unemployed persons. The Survey does not tell us whether the lack of foundation skills caused unemployment, or whether prolonged unemployment undermined the foundation skills that need to be refreshed in daily working life, or whether, as so often, the explanation is a bit of both. Chapter 3 looks at this issue.

*240 000 are neither in the labour market nor in education*

One third of those out of the labour force have weak foundation skills, compared to 11% of those employed. One out of five of those lacking foundation skills are in retirement<sup>8</sup>, reflecting the age composition of the low-skilled in Finland. Disability is more common among the low-skilled. 8% of low-skilled adults report being permanently disabled.

**Why do foundation skills matter?***Causes and effects are intertwined*

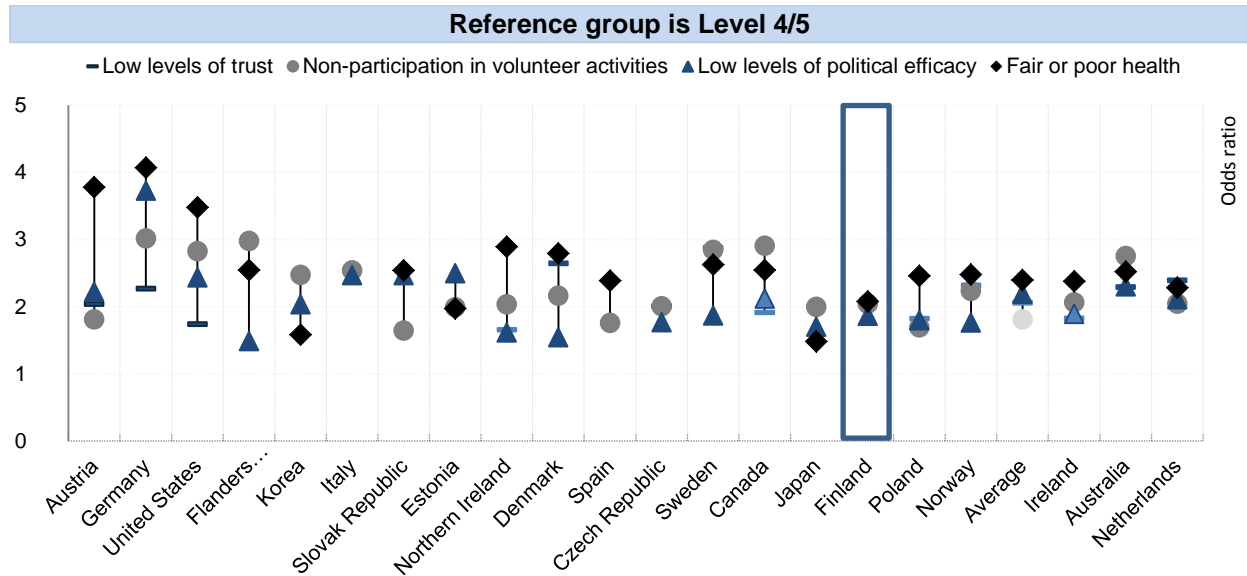
Weak literacy and numeracy skills may emerge from a culturally impoverished background, from a learning disability, from poor schooling, or from life experiences and working lives which have not supported the development of these skills. Causes and effects will often be mutually reinforcing, entrenching whole sets of disadvantages of which weak foundation skills will be no more than a component. Those with weak foundation skills will inevitably have less access to further education, fewer job opportunities, particularly in relation to jobs that allow for skills development.

*Literacy and numeracy practices help sustain and develop skills*

Skills are developed by use and in a pattern of mutual reinforcement, those with good skills get jobs that use and further develop those skills. Adults who engage more in reading at work tend to have better literacy skills, and a similar correlation is observable between numeracy skills and practice at work. Similarly those who more often use their foundation skills outside work have better skills in these domains than those who use them less often. Foundation skills are therefore self-sustaining. People who have them often get better jobs with more opportunities for self-development, which in turn improves the foundation skills. Secure jobs, major employers and full-time jobs are linked to better foundation skills, while unemployment, part-time employment or self-employment are associated with poorer results. In most countries people with better skills are more likely to be economically active, in employment and receive higher wages (see OECD, 2013a). Foundation skills are important for effective citizenship and personal well-being. In Finland, the odds of reporting “fair” or “poor” health<sup>9</sup> in the PIAAC background questionnaire are nearly two times higher for those with low literacy skills (below Level 2) than for those with strong skills (Level 4/5) (see Figure 1.10).

**Figure 1.10 Low-skilled adults have lower trust and political engagement levels and poorer health**

Odds ratio showing the likelihood of adults scoring below Level 2 in numeracy reporting low levels of trust<sup>10</sup> and political efficacy, fair or poor health, or of not participating in volunteer activities (adjusted)



Notes: Odds ratios reflect the relative likelihood of an event occurring for a particular group relative to a reference group. An odds ratio of 1 represents equal chances of an event occurring for a particular group vis-à-vis the reference group. Coefficients with a value below 1 indicate that there is less chance of an event occurring for a particular group compared to the reference group, and coefficients greater than 1 represent greater chances

Countries are ranked in descending order of the difference between the maximum and the minimum odds ratios for the four social outcomes. Estimates that are not statistically different from the reference group are not shown. Odds ratios are adjusted for age, gender, educational attainment and immigrant and language background.

Source: OECD (2013a), OECD Skills Outlook 2013: First Results from the Survey of Adult Skills Table A6.9 (L). <http://dx.doi.org/10.1787/888932899054>

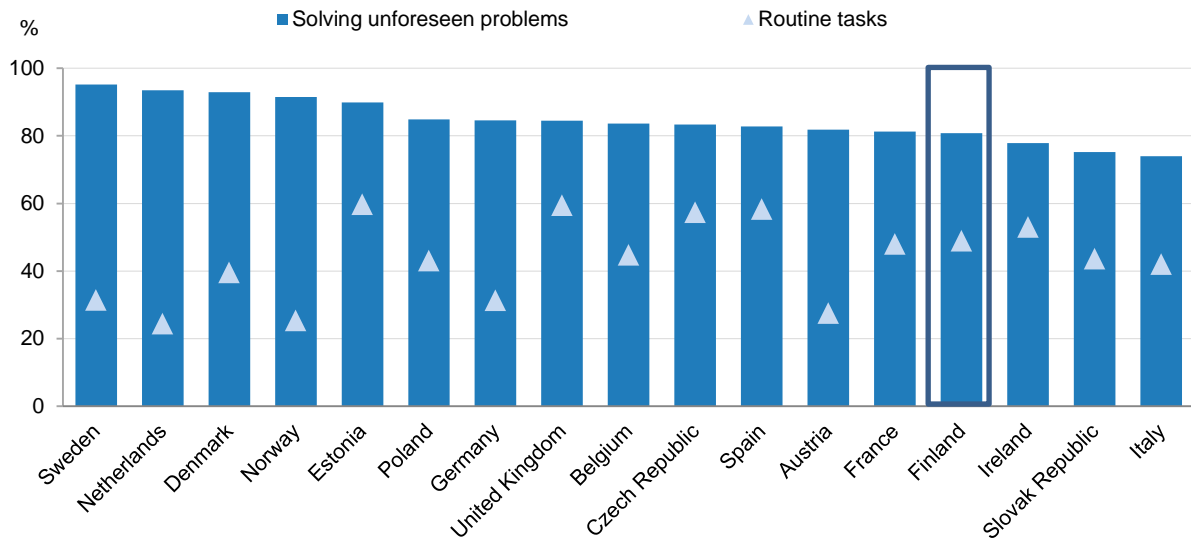
### Problem solving skills in technology-rich environments

#### *Problem solving at work and in daily life*

Problem solving is an important part of work and daily life and that importance is growing as our societies and economies continue to change rapidly. Problems are often defined by situations in which people do not immediately know what to do to achieve their goals due to obstacles or challenges of some kind. The growing importance of non-routine cognitive skills in the workforce means that a growing share of the workforce will encounter situations at work that require finding solutions to unforeseen problems (see Figure 1.11).

**Figure 1.11 Jobs requiring routine tasks or solving unforeseen problems**

Percentage of workers aged 16 to 74



Source: European Working Conditions Survey (2010) in OECD (2015b), Adults, Computers and Problem Solving: What's the Problem?, OECD Skills Studies, OECD Publishing, Paris.

### *Access to computers and internet in Finland is almost universal*

The importance of ICT in modern life is often described in terms of the diffusion of access to the technology itself. In Finland in 2011 85% of households had access to computers compared to 47% in 2000 (Table B1.1. in Annex B in OECD, 2015b) and 84% had access to the Internet at home compared to 30% in 2000 (Table B1.2 in OECD, 2015c), higher than the average of participating countries. Only 3% of adults indicate in the Survey that they had no prior experience with computers.

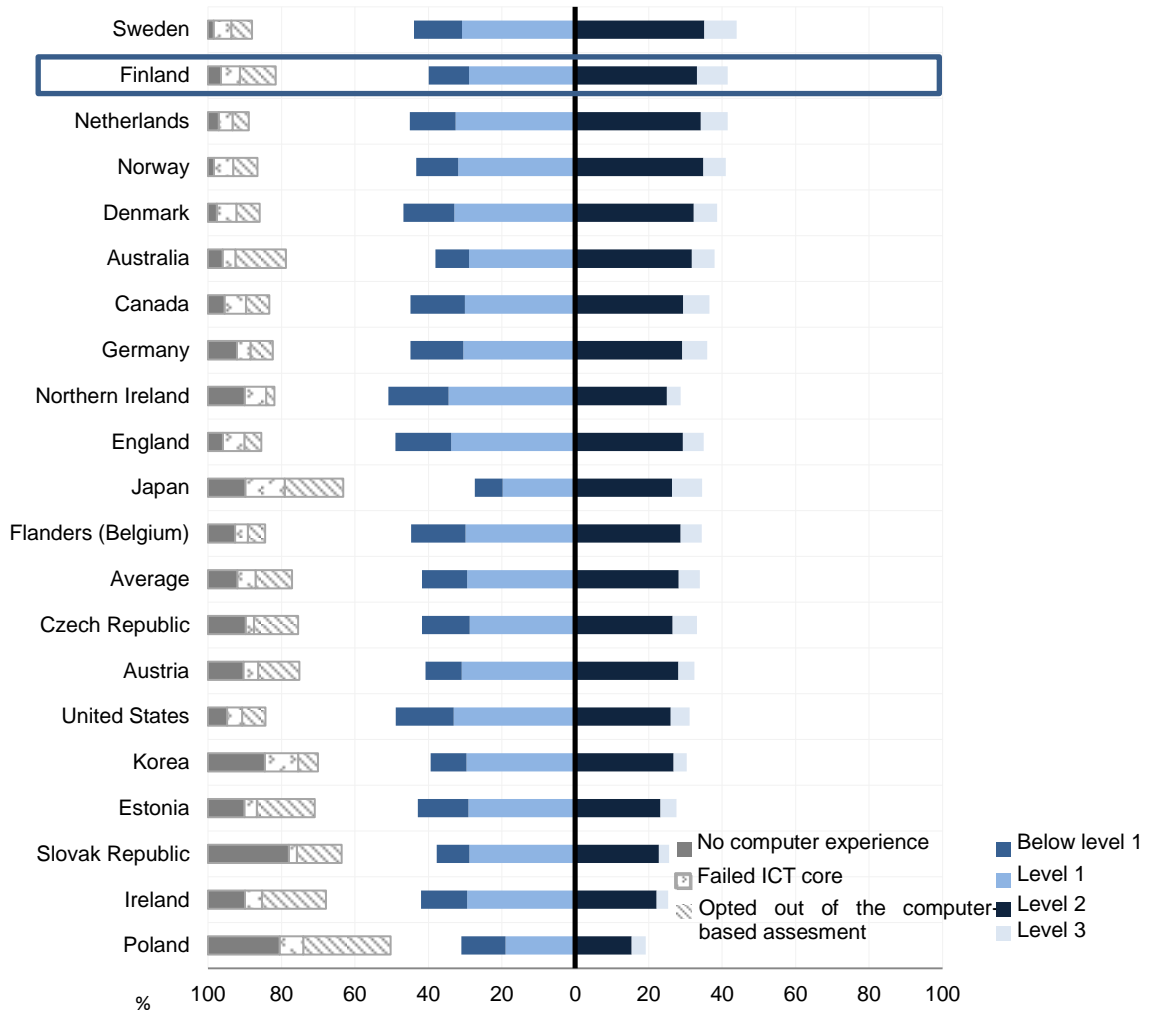
### *Almost one out of two adults score at the highest proficiency levels in computer skills*

The domain of problem solving in technology-rich environments in the Survey of Adult Skills captures the intersection between the set of cognitive capacities required to solve problems. Proficiency in this skill reflects the capacity to use ICT devices and applications to solve the types of problems adults commonly face as ICT users in modern societies (see Box 1.3)<sup>11</sup>. In Finland 42% of adults perform at the highest levels of problem solving, which is a lot higher than the average of participating countries (see Figure 1.12). Differences in the levels of Internet access and ICT use explain much of the variation in proficiency in problem solving in technology-rich environments across countries (OECD, 2015b).



**Figure 1.12 Proficiency in problem solving in technology-rich environments**

Percentage of those aged 16-65 at each level, and without scores



Source: OECD (2015b), Adults, Computers and Problem Solving: What's the Problem?, OECD Skills Studies, OECD Publishing, Paris.

### **Box 1.3 What adults can do at the different levels in problem solving in technology-rich environments**

The fourth proficiency level, Below Level 1, is used for those adults who cannot reliably perform the tasks at Level 1.

Tasks below Level 1 have clear goals, few steps and familiar environments. Adults who score below Level 1 in proficiency can successfully complete fewer than one in six Level 1 tasks. Adults at this level have passed the ICT core, which means that they can use basic computer functions, such as typing, manipulating a mouse, dragging and dropping content, and highlighting text.

At Level 1, adults can complete tasks in which the goal is explicitly stated and for which a small number of operations are performed in a single familiar environment. The tasks that are rated at this level involve locating an item in a spreadsheet and communicating the result by e-mail, using e-mail to send information to several people, and categorising e-mail messages into existing folders.

At Level 2, adults can complete problems that have explicit criteria for success, a small number of applications, several steps and operators, and occasional unexpected outcomes that need to be addressed. The tasks that are rated at this level involve organising information in a spreadsheet, categorising e-mail messages into new folders, evaluating search engine results according to a set of criteria, completing a multi-step consumer request using a website and e-mail, and evaluating multiple websites to identify the most trustworthy site.

At Level 3, adults can complete tasks involving multiple applications, a large number of steps, occasional impasses, and the discovery and use of ad hoc commands in a novel environment. The tasks that are rated at this level involve evaluating search engine results with a set of criteria, solving a scheduling problem by combining information from an Internet application and several e-mail messages, determining the proper folder destination for categorising a subset of e-mail messages, and transforming information in an e-mail message into a spreadsheet and performing computations with it.

*Source:* OECD (2015b), *Adults, Computers and Problem Solving: What's the Problem?*, OECD Skills Studies, OECD Publishing, Paris.

### *Problem-solving skills, as many types of skills, are developed through education*

Given that many types of skill, including problem-solving skills, are developed in education, it is reasonable to expect that higher levels of education will be associated with higher levels of proficiency in problem solving in technology-rich environments. In Finland, an adult with tertiary education is 30 percentage points more likely than an adult with less than secondary education to perform at Level 2 or 3 in the assessment of problem solving in technology-rich environments<sup>12</sup>. Educational attainment is also correlated with computer experience. Adults with less formal education are more likely to lack experience with computers than those with more education. Adult education and training, like initial education, can provide opportunities to develop proficiency in problem solving in technology-rich environments. Not surprisingly, recent participation in adult education and training activities is associated with greater proficiency in problem solving in technology-rich environments. In Finland, 48% of adults who participated in adult education and training during the previous year were proficient at Level 2 or 3 in this domain, compared to only 20% of adults who had not participated in adult education and training during that period (OECD, 2015b).

*Much of the difference is age-related*

Different cohorts of individuals were first exposed to digital technologies at very different ages. 16-24 year-olds can be considered to be “digital natives”, in that they were brought up in an environment in which digital technologies were in widespread use in homes and in school. At the other extreme, most adults aged 55-65 were first exposed to these technologies in their 30s, at the earliest. Given that familiarity with ICT is a precondition for displaying proficiency in problem solving in technology-rich environments, there is a strong correlation between age and proficiency in problem solving in technology-rich environments across participating countries, and Finland is no exception. On average, 62% of 16-24 year-olds, but only 9% of 55-65 year-olds, perform at Level 2 or 3 in the domain, a difference of 53 percentage points, which is the second biggest gap, after Korea. Finland, along with Denmark, the Netherlands, Norway and Sweden have larger proportions of adults who score at Level 2 or 3 in problem solving in technology-rich environments, with larger proportions of adults of all age groups who score at these levels compared to the average. This suggests that most adults in these countries generally had better opportunities to develop these skills, regardless of their age (OECD, 2015b).

## NOTES

- <sup>1</sup> Headlines in Helsingin Sanomat, in which the good performance of Finland compared to other countries was only briefly mentioned.
- <sup>2</sup> Since the scales between PISA and PIAAC studies are not comparable, the score point difference between female and male respondents cannot be compared either. Cohen's *d*, which expresses the size of the gender differences as the share of a standard deviation, was used in Malin (2015).
- <sup>3</sup> Note that they were not the same individuals, but the group of individuals was sampled from the same population.
- <sup>4</sup> Same than previously, note that they were not the same individuals, but the group of individuals was sampled from the same population. The analysis is carried out on native-born individuals only in order to net out the effect of immigration. Individuals in the three oldest age groups in PIAAC (35-44, 45-54 and 55-65 years of age) were selected. Based on the year in which each country participated in IALS, the age these individuals had at the time of IALS was computed.
- <sup>5</sup> According to Eurostat, the median age in tertiary education in Finland raised from 24.1 in 2001 to 25.0 in 2012. In Finland the years of education completed by individuals aged 16-24 decreased from IALS to PIAAC by 1.4 years.
- <sup>6</sup> Some have suggested that increased immigration may be an explanation. Immigrants to Finland certainly perform worse than the native-born in PISA: depending on subject, there was a 98 to 126 point disadvantage among first-generation migrants, and a 64 to 81 point disadvantage among second-generation immigrant pupils compared with native pupils in PISA 2012. But this is not the explanation of the weakened skills in all young adults discussed above, as migrant numbers remain relatively low.
- <sup>7</sup> Migrants in Finland took the PIAAC test in Finnish or in Swedish, so it is not possible to estimate to which extend low scores relate to low foundation skills in general, or low Finnish or Swedish language skills more particularly.
- <sup>8</sup> This percentage is the highest for Finland, in comparison to other countries. The official age of retirement in Finland is 65, like the OECD average. Effective age of retirement is 62 years for men and 60 for women, which is below OECD average (OECD, 2015a).
- <sup>9</sup> Survey respondents were invited to describe their own health status.
- <sup>10</sup> Adults were considered as having low level of trust if agree with the statement that “there are few people you can trust completely”.
- <sup>11</sup> In order to display proficiency in this domain, adults must have the basic computer skills needed to undertake an assessment on a computer: the capacity to type, manipulate a mouse, drag and drop content, and highlight text. The domain assesses adults' ability to use “digital technology, communication tools, and networks to acquire and evaluate information, communicate with others and perform practical tasks
- <sup>12</sup> However, a positive association between education and proficiency in these skills does not mean that formal education is directly responsible for the higher levels of proficiency observed. It is also likely that adults with higher levels of education have other experiences, such as work in particular occupations or training opportunities later on, that have a more direct impact on proficiency in this domain.

## References

- Fridberg, T. et al. (2015), *Adult Skills in the Nordic Region Key Information–Processing Skills Among Adults in the Nordic Region*, Nordic Council of Ministers.
- Heller Sahlgren, G. (2015), *Real Finnish Lessons – The True Story of an Education Superpower*, Centre for Policy Studies, London.
- IES (2015), Sample items, [nces.ed.gov/surveys/all/Items.asp?sub=yes&SectionID=2&CatID=2](https://nces.ed.gov/surveys/all/Items.asp?sub=yes&SectionID=2&CatID=2), (accessed on June 22th, 2015).
- Malin, A. (ed) (2014), “Associations between age and cognitive foundation skills in the Nordic countries” Nordic Council of Ministers.
- Ministry of Education and Culture (2013), “PISA 2012: Proficiency of Finnish youth declining”, <http://www.minedu.fi/OPM/Tiedotteet/2013/12/pisa.html?lang=en>.
- Ministry of Education and Culture (2015), *Tomorrow's comprehensive school*, Reports of the Ministry of Education and Culture [http://www.minedu.fi/OPM/Julkaisut/2015/tulevaisuuden\\_peruskoulu.html?lang=fi&extra\\_locale=en](http://www.minedu.fi/OPM/Julkaisut/2015/tulevaisuuden_peruskoulu.html?lang=fi&extra_locale=en).
- National Centre for Education Statistics (2015), “Sample Items”, <https://nces.ed.gov/surveys/all/Items.asp?sub=yes&SectionID=2&CatID=2>, accessed on 14 October 2015
- OECD (2015a), “Ageing and Employment Policies - Statistics on average effective age of retirement”, <http://www.oecd.org/els/emp/ageingandemploymentpolicies-statisticsonaverageeffectiveageofretirement.htm>, accessed 21 September 2015.
- OECD (2015b), *Adults, Computers and Problem Solving: What's the Problem?*, *OECD Skills Studies*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264236844-en>.
- OECD (2013a), *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*, OECD Publishing, Paris <http://dx.doi.org/10.1787/9789264204256-en>
- OECD (2013b), *Technical Report of the Survey of Adult Skills (PIAAC)*, [http://www.oecd.org/site/piaac/ Technical%20Report\\_17OCT13.pdf](http://www.oecd.org/site/piaac/Technical%20Report_17OCT13.pdf).
- Windisch, H. C. (2015), "Adults with low literacy and numeracy skills: A literature review on policy intervention", *OECD Education Working Papers*, No. 123, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jrxnjdd3r5k-en>

## Chapter 2

### Making learning meaningful for adults

*Finland's strong schools are complemented by a wide range of adult learning opportunities, and fewer young adults have weak foundation skills than in many other countries. Finland should build on these strengths and aspire to higher levels of numeracy and literacy for all, by helping the weakest for sure, but also encouraging adults to further improve on skills which are already good. Adults with weak foundation skills are often reluctant to identify themselves and seek help, and on these grounds a more explicit approach to numeracy and literacy in adult programmes would make it easier to tackle weaknesses. A 'contextual' approach is recommended, in which the need for strengthened foundation skills might sensibly be identified in the context of employment programmes or education courses, and in which such skills might then be developed by embedding them in practical vocational training or other educational programmes. This approach, involving the adjustment of teaching to individual needs for better foundation skills, would be consistent with Finland's commendable emphasis on personalised learning. Policies should be systematically evaluated, and data collection should be improved.*

## Challenge: strong foundation skills in Finland, but little explicit attention to their maintenance

### *The system does not always help adults improve their foundation skills*

#### *Even in Finland, there are still a significant number of people with weak foundation skills*

Underpinned by an exceptionally strong school system, Finland's adult population has an impressive level of foundation skills, as shown in Chapter 1. Given a modest decline in PISA results in recent years, one of Finland's main tasks is simply to maintain the strong performance of basic schools sustain the foundation of strong adult skills. But at the same time there are 600 000 working age adults with weak foundation skills in Finland. This includes a distinct group of older people, educated before the comprehensive system was introduced in the early 1970s and a small group of younger adults who appear to have slipped through the net, and missed out on foundation skills. As argued in Chapter 1, there are also good reasons to expand our concern with 'low' foundation skills to cover those reaching no more than level 2 in the Survey.

#### *Literacy and numeracy issues are not widely discussed*

It is striking that in Finland, where literacy and numeracy levels are generally very high, the issue of foundation skills has a relatively low profile. Schools achieve their outstanding results with very little in the way of high-stakes testing, or indeed national policies and programmes that target literacy and numeracy. These issues are not ignored, but instead are woven into the fabric of everyday school teaching. There are clearly huge strengths in this approach, which contrasts sharply with the approach of countries with extensive high stakes testing of literacy and numeracy, targeted policies, screening and remediation – many of these countries have much weaker foundation skills among young people than Finland.

### **Box 2.1 Adult education in Finland**

Finland has a long history of participation and promotion of adult education; according to PIAAC, 58% of adults participated in formal and/or non formal adult education and training in 12 months preceding survey<sup>1</sup>. The main emphasis of adult education is to upgrade and update competencies and to promote cultural development and enjoyment. This is based on the belief that general adult education responds to adults' self-development needs, offers learning opportunities catering for individual interests and preferences, and develops citizenship skills. The 2001 OECD review of adult education in Finland highlighted the many strengths of the system. The report praised the emphasis on personalization through individual study plans, the modularisation of courses and credit transfer arrangements, and the provision of skill tests. Quite often, teachers continued to be employed part-time in their own professional field, reinforcing their up-to-date knowledge and bringing training as close as possible to work. The review argued that some groups remained outside of any form of education and training, in particular the unemployed, older people and those living in the North and in the East of the country (OECD, 2001).

Source: Ministry of Education and Culture (2015), "Adult Education", Website [http://www.minedu.fi/OPM/Koulutus/aikuiskoulutus\\_ja\\_vapaa\\_sivistystyoe/?lang=en](http://www.minedu.fi/OPM/Koulutus/aikuiskoulutus_ja_vapaa_sivistystyoe/?lang=en), (accessed 14 July 2015); OECD (2001), "Country Note: Finland", Thematic Review of Adult Learning, <http://www.oecd.org/edu/skills-beyond-school/2697889.pdf>

*An impressive adult learning system gives limited attention to those lacking literacy and numeracy skills*

In Finland about 800 institutions provide diverse forms of further and continuing education for adults, and this is supplemented by more informal learning in contexts such as public libraries (see Box 2.1 and Table 2.1). Eurostat data show that 12% of adults in Finland gained an upper secondary qualification at age 25 or over - the highest of any EU country (European Commission/EACEA/Eurydice, 2015a). Programmes cover all levels of education, up to and including Open University courses, and those registered in employment offices may also study towards a qualification while retaining unemployment benefits. While the range and quality of the offer is very positive, few of these programmes give much explicit attention to the issue of weak foundation skills.

**Table 2.1 Participation is very high in the different adult learning programmes in Finland**

Educational institutions' adult education not leading to a qualification by type of education in 2013

Type of education	Participants (gross)	Women %	Teaching hours
Further vocational education, not apprenticeship training	100 628	43	404 917
Further vocational education, apprenticeship training	3 416	68	26 954
Employment training for adults	46 076	47	1 060 424
Courses ordered by the employer	193 113	44	307 698
Education organised as liberal adult education	1 682 138	73	2 951 003
Open polytechnic teaching	17 734	65	364 041
Open university teaching	45 249	77	66 018
Other education	111 321	51	267 631
Total	2 199 675	67	5 448 686

Notes: Individuals who participate in different types of programmes are counted several times.

Excl. adults enrolled in the programmes implemented by individual universities

Source: Official Statistics of Finland (OSF) (2015), “Adult education of educational institutions”, [http://www.stat.fi/til/oiop/2013/oiop\\_2013\\_2014-12-11\\_tie\\_001\\_en.html](http://www.stat.fi/til/oiop/2013/oiop_2013_2014-12-11_tie_001_en.html) (accessed on 19 September 2015).

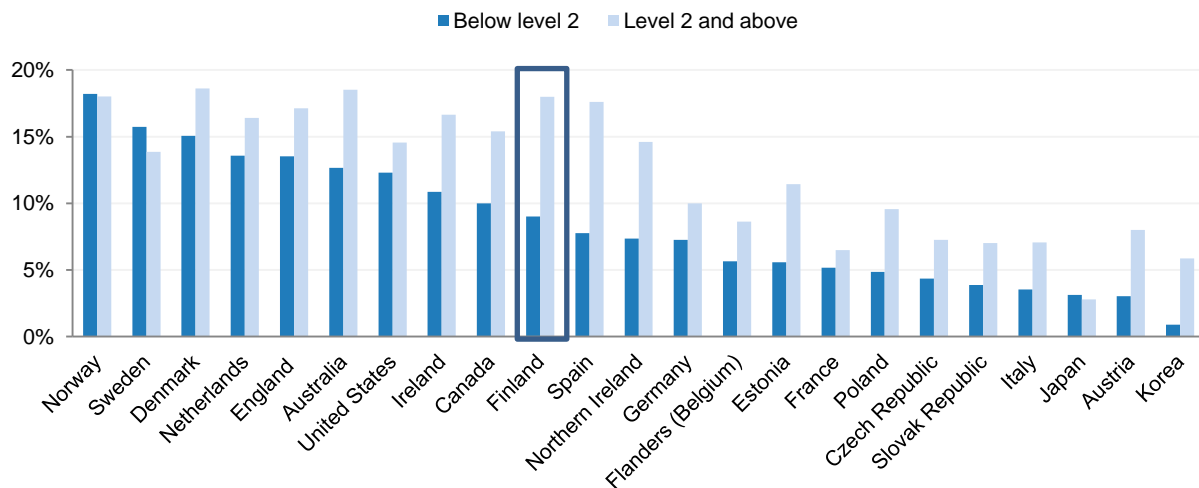


### *Provision is biased towards the well-educated*

Many formal adult learning options involve a formal or informal entry requirement, biasing provision, as in other countries, towards the well-educated. Even when programmes are open to all, (as in liberal adult education) participants are more often than not well-educated and skilled. Almost everywhere, those with low foundation skills are less likely to take part in education and training, and the difference in participation is amongst the highest in Finland compared to other countries (see Figure 2.1). Those with low qualification levels, those in low-skilled occupations, the unemployed and inactive and older people are less likely to participate in education and training. In Finland this pattern can be observed both in the Survey and through other data sources (see for example Lyly-Yrjänäinen, 2008, using data from the 4th European Working Conditions Survey, 2005<sup>2</sup>).

**Figure 2.1 In all countries, those with low foundation skills participate less in education and training**

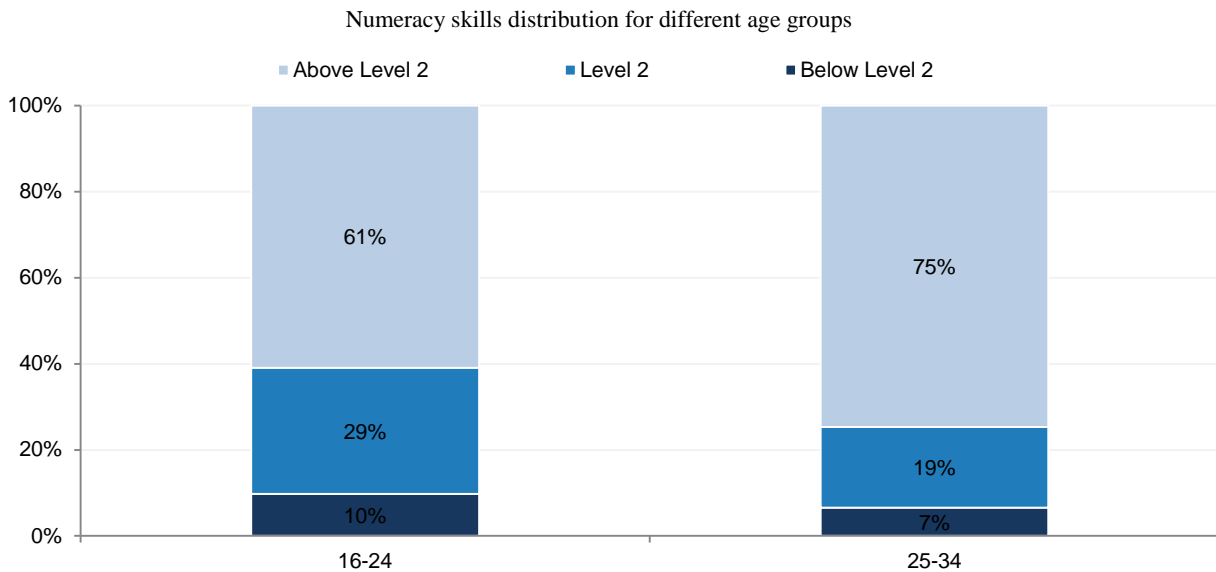
Percentage of adults participating in adult education and training by skills level (literacy or numeracy)



Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

### ***There are arguments for raising the bar of aspiration in respect of adult foundation skills***

Clearly the needs of those with the weakest foundation skills (below level 2) should be addressed, on grounds of equity, social inclusion and economic efficiency. But the prominence of this point has sometimes disguised the need for all adults, at every level of foundation skills, to continue to invest in, sustain and indeed improve these skills. In Finland there are arguments for raising the bar of aspiration for young adults and encouraging at least level 3 for all young Finns. 30% of 16-24 year-old Finns score at level 2 in numeracy, compared to less than 19% of those aged 25-34<sup>3</sup> (see Figure 2.2). Clearly encouraging at least Level 3 skills depends on individual needs and potential, in the context of a personalised approach: this means, for example, that someone who wishes to return to university in mid-career to obtain higher level qualifications may have numeracy and literacy needs at a much higher level than someone in a low-skilled job who wishes to attain a basic level of reading skill.

**Figure 2.2 Many young Finns achieved no more than level 2 numeracy in the Survey**

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

### ***Tackling literacy and numeracy weaknesses is hugely challenging***

*Programmes dedicated to remediation of foundation skills have not always been successful*

Free-standing programmes designed to teach foundation skills are a relatively recent invention: in 2010, Portugal developed a programme known as 'basic skills training' (*programa de formação em competências básicas*). Since 2006, Norway's 'basic competence in working life' (*Basiskompetanse i arbeidslivet*) programme has offered literacy, numeracy, ICT and oral skills (European Commission/EACEA/Eurydice, 2015a, 2015b). But evidence from a range of different countries suggests that this type of programme often finds it difficult to reach the low-skilled (Pont, 2004). In Finland, experience of the Noste programme – a programme offering vocational and ICT courses to low qualified adults – also showed the difficulties in getting adults to participate in training – even when this is provided free and in coordination with employers (Ministry of Education and Culture, 2010; see Box 2.2).

*Direct attempts to tackle serious literacy and numeracy weaknesses among adults face many obstacles*

The obstacles arise because the teaching task itself is difficult, and because even if accomplished successfully, the labour market returns from success are uncertain. Often those concerned will have done badly at school, and have a very negative perception of education and learning; they may often lack awareness of their deficiencies, and even if aware, are embarrassed to admit it (in respect of reading difficulties for example). Initial motivation is therefore a serious obstacle. Even for those interested in tackling their weaknesses, it may be hard to translate that interest into action. Adults with busy working and family lives find it hard to find space for learning; drop-out rates are usually very high. Although the employment benefits of basic skills acquired in early life are clear, the returns from mid-life learning are much less certain. Heckman (2008) and others have

argued convincingly that learning is a dynamic process, in which successive stages of learning depend on skills acquired previously, particularly foundation skills of literacy and numeracy. Strong basic skills therefore support a favourable career trajectory, through educational achievement, the acquisition of qualifications, and a good first job, which in turn support further upskilling and career development. At every stage in a career, foundation skills help to reinforce achievement, but they are also in their turn reinforced by the exercise of those skills. Conversely, weak foundation skills will limit initial learning, reduce career opportunities and lead to jobs that offer few opportunities for learning on the job, or other forms of upskilling. The implication is that career trajectories are much easier to launch favourably than to change for a more favourable trajectory in later life. The policy implication is that interventions may need to be linked to the life circumstances of individuals to stand the best chance of yielding real career enhancement.

### Box 2.2 The Noste programme in Finland

A very ambitious and well-resourced adult education programme, the *Noste* programme, ran from 2003 to 2009, providing poorly educated people between 30 and 59<sup>4</sup> with the chance to complete vocational secondary-level education and ICT-courses, alongside study counselling. The programme was targeted at individuals in employment, rather than the unemployed, and focused on three target groups including employees of small and medium-sized enterprises, immigrants, and older adults. The objective was to improve participants' employability.

**Table. Noste students**

Numbers of new students, share of women and unemployed (2005-2009)

	New students	Women		Unemployed	
		n	%	n	%
2005	5 528	2 291	41	251	5
2006	4 974	2 837	57	465	9
2007	4 860	2 940	61	606	13
2008	2 436	1 306	54	277	11
2009	1 039	582	56	147	14
Total	18 837	9 956	53	1 746	9

In total 26 000 people benefited from training through the *Noste* programme (compared with a target of 35 000), with almost half of the participants doing ICT-training. The evidence of success was not encouraging: there were difficulties in reaching the lowest skilled adults, large regional disparities in terms of participation<sup>5</sup>, and few measurable employability benefits for participants. But participants reported positive outcomes such as increased work motivation, higher self-esteem and sense of security in working life.

*Source:* Ministry of Education and Culture (2010), “*Noste Programme 2003-2009: Final Report*”, Reports of the Ministry of Education and Culture 2010:8, Helsinki. ; NALA (National Adult Literacy Agency) (2011), “*A Literature Review of International Adult Literacy Policies*”, National Adult Literacy Agency, Dublin.

### **Recommendation: increase the explicit attention given to literacy and numeracy**

Give more explicit attention to literacy and numeracy skills throughout the different contexts of adult learning.

- Alongside attention to those with the weakest foundation skills (below level 2 in the Survey of Adult Skills) aim over time to realise level 3 foundation skills for all Finnish adults
- Pursuing the admirable Finnish principle of personalised learning, identify and respond to diverse foundation skills requirements through tailored support and remediation
- Pursue a contextualised approach to foundation skills, identifying them in the context of employment and education programmes, and teaching and developing them in the context of vocational and other learning programme
- Evaluate existing policies, and collect data more systematically

### **Supporting arguments: raising the profile of foundation skills through personalization**

#### *Screening for weaknesses and more attention to foundation skills*

There are four arguments. First, this section will argue that a more explicit approach to weaknesses in foundation skills in the adult population is needed. Second, it will explain that it can be done through greater awareness and screening in adult learning institutions, including employment offices. Third, it will outline why this more explicit approach, relying on screening, fits with the principle of personalised learning. Fourth, this section will argue that screening, done sensitively, can yield positive outcomes without stigmatising adults.

#### *The needs of adults may not be identified without a more explicit approach*

The very strong Finnish adult education system may require some modification to address the needs of adults with weak foundation skills. While in Finland most school children who struggle with reading or mathematics would have their needs rapidly identified and addressed by professional teachers, the same is not necessarily true for adults, where weaknesses in foundation skills will often be unacknowledged by those concerned, and sometimes carefully hidden. With these points in mind, this review proposes some enhancement to the profile of numeracy and literacy issues in adult learning. Precisely because there are relatively few young people with low foundation skills, those concerned may experience some particular challenges in a society that is generally highly literate and numerate.

#### *Greater awareness – through screening - may help to address the challenge*

Research shows that many people cannot adequately assess their own literacy and numeracy weaknesses. Data from various UK cohort studies show that many people with weak basic skills do not recognise that they have difficulties, particularly in respect of numeracy; once people were aware of weaknesses in their basic skills, they tended to be

interested in improving them (Bynner and Parsons, 2006). An earlier study (Basic Skills Agency, 1997) found that a major barrier to taking up basic skills support was that many people did not know that foundation skills were essential to course completion, while some of those who know they have literacy and numeracy problems are reluctant to admit it. A stigma was attached to poor foundation skills, which then became a deterrent to foundation skills support. A literacy survey in Canada found that the correlation between self-assessed and actual test scores was only 0.42, and that individuals assess their literacy skills relative to a “local norm”, e.g. schoolmates, friends or colleagues, so they may be unaware of literacy problems shared by their local social network (Finnie and Meng, 2005). For all these reasons, raising awareness may in itself help to uncover the issue and open it to solution.

### *Screening for foundation skills fits naturally with personalised learning*

Given all the difficulties of persuading adults who may need help with numeracy and literacy to come forward and identify themselves, a more effective approach would be to screen for foundation skills in the context of other education or employment programmes. Study programmes in Finland are, as a matter of policy, intended to be ‘personalised’, meaning that their content should be adapted to the needs of each individual student. Attention to foundation skills alongside other competences fits very naturally into this approach, particularly given the importance of foundation skills in supporting self-motivated learning. Adults upon entry into educational programmes and when assessed by the social and employment services could be screened, to identify any issues related to gaps in literacy and numeracy skills, and/or learning difficulties, and those who need it could have access to targeted support. Participants in the Noste programme highlighted the importance of foundation skills as learning skills, and teachers also reported becoming increasingly aware of inadequate learning skills among adults. Several educational institutions adopted, for example, screening methods for learning difficulties and focused on strengthening learning skills (Ministry of Education and Culture, 2010). This personalised approach would involve identifying the foundation skills requirements of adults with varying existing skills, depending on the demands of their jobs, planned careers, and their learning aspirations.

### *Sensitive screening can avoid stigmatising learners*

Screening for literacy and numeracy gaps needs to be handled sensitively so that it is not seen as a barrier to entry, and does not demoralise potential learners, especially in the Finnish context, where there are reservations about high stakes testing. Box 2.3 gives an example of a screening method developed in England. In a context in which many of those lacking foundation skills may be hard to reach, those entering adult learning programmes, and registering at the employment offices are easier to identify and their shortcomings in foundation skills are easier to address. Given the impact of foundation skills on employability (see Chapter 5) testing people upon registration in the employment offices may be particularly relevant.

### **Box 2.3 In England, screening for weak foundation skills was pursued with caution**

The *Skills for Life* Strategy Unit developed a guidebook that is based on best practice in screening and initial assessment. Screening assesses whether an individual has a need for literacy, language or numeracy training. It should preferably be carried out by a practitioner trained in the use of the screening tool. Screening often involves a brief informal one-to-one interview to put learners at their ease, followed by a short series of tasks to establish literacy, language or numeracy needs. The initial assessment identifies a learner's skills against levels linked to national standards to help place learners in appropriate learning programmes. Ideally, initial assessment includes three elements: 1) an initial interview to gather background information from the learner; 2) provision of information about the range of possible programmes; and 3) a detailed diagnostic assessment which can reveal that learners may have different levels of reading, writing, numeracy and language skills (Department for Education and Skills, 2005).

*Source:* DfES (Department for Education and Skills) (2005), *Good Practice Guidelines in Screening and Initial Assessment*. For Literacy, language and numeracy teachers, subject support staff and adult learners supporters, Department for Education and Skills, Skills for Life Strategy Unit, London.

### ***Personalizing interventions for low-skilled adults***

There are three reasons why personalizing interventions for low-skilled adults make sense. Firstly, low-skilled adults are a diverse group, and the reasons for low skills equally so, so interventions need to be adapted accordingly. Secondly, given the role that literacy and numeracy play in supporting other forms of learning and indeed the completion of programmes, remediation in these skills should be pursued routinely for adults enrolled in adult learning institutions. Thirdly, some approaches to teaching based on personalization – particularly formative assessment - are both highly effective and designed to address diverse needs.

### ***Low skilled adults form a heterogeneous group***

In Finland, as in other countries, adult learners, especially low-skilled ones, form a very heterogeneous group. They include, for example, older people where weak foundation skills are the historic result of limited initial schooling, immigrants with good literacy skills in their mother tongue and young people who have dropped out of school because of a drug or mental health problem. Given this diversity, and the multiple causes involved, it may make little sense to search for interventions with very wide application. Such a course might represent the equivalent of seeking a common therapy for all patients who present themselves in the doctor's office complaining of fatigue. Although weak foundation skills are very much part of the problem, it does not necessarily follow that teaching these skills in isolation from other reinforcing interventions, will be the only or the most effective solution.

### ***Remediation in literacy and numeracy should be offered within all adult education options***

Given that good foundation skills are important for completion of all education and training programmes (see Box 3.3) and given that people willing to enter programmes are

already expressing motivation, Finland should develop ways of providing “foundation skills support” to all adults entering education and training programmes.

*Formative assessment is an effective teaching method for many adults*

Adult learners and children do not acquire basic numeracy and literacy skills in the same way, and research shows that teaching methods that work for children may not do so for adults (BMBF, 2012; MacArthur et al., 2010). Most adults who want to improve literacy and numeracy already have a range of skills and almost all can read or write to some extent (Wells, 2001). Some relatively simple tasks might defeat them, while they have no problem with other more complex tasks. Formative assessment – which implies adapting instruction to learner needs by means of regular assessment may be a particularly effective tool for adult learning (see Box 2.4).

### Box 2.4 Elements of quality formative assessment

In reviewing evidence on formative assessment in adult literacy, language and numeracy provision in nine European countries, Looney (Looney 2007; OECD 2008) identified the following principal elements of formative assessment in a learner’s journey: diagnosis of learning needs, and establishment of learners’ motivations and goals; the development of strong relationships within the classroom through dialogue and peer assessment; the use of assessment to provide information on learning and as feedback for instructors to modify teaching activities. Instructors develop effective questioning techniques, set tasks and challenges at the right level to help learners address gaps and track learner progress towards goals. Moreover, there is a focus on building learner autonomy, including skills to self-assess and to address everyday literacy and numeracy tasks.

As part of the OECD review *Teaching, Learning and Assessment for Adults* (OECD, 2008), Derrick and Ecclestone reviewed English-language evidence on formative assessment and identified the following elements in good formative assessment.<sup>6</sup>

- *Dialogue between teachers and learners*: teachers should structure learning as far as possible as dialogue between themselves and their students.
- *Communication skills*: teachers need to evaluate and extend their communication skills, particularly focusing on listening, understanding, asking questions, and giving feedback.
- *Feedback and marking*: feedback should focus on the task rather than the person, be constructive and practical, and be returned as soon as possible.
- *Developing an atmosphere conducive to learning*: students should feel secure to face challenges and take risks in asking questions that may reveal their lack of understanding.
- *Peer assessment and self-assessment*: self-assessment and peer-assessment should be central elements of all learning situations.
- *Collaborative learning activities*: discussions and collaborative activities have proven beneficial to many learners (OECD, 2008).

*Source*: Looney, J. (2007), “Formative assessment in adult language, literacy and numeracy”, *Assessment in Education*, Vol. 14(3): pp. 373-386 ; OECD (2008), *Teaching, learning and assessment for adults: Improving foundation skills*, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264039964-en>.

### *Developing a contextual approach*

The main challenge in developing interventions to tackle low foundation skills is that the target group is typically unmotivated, often unaware of their own weaknesses, and have bad memories of classroom teaching of numeracy and literacy. Against that background we here recommended a different approach of *learning in context*. Identifying weaknesses in literacy and numeracy in wider contexts – such as the search for a job, or an adult vocational programme - and then teaching these foundation skills in the context of learning an occupational skill, or in another context can be both motivating and improve job skills. Finally, other types of contextual approach, such as family programmes, can help address inter-generational effects.

#### **Box 2.5 Remediating basic skills weaknesses in US community colleges**

In the United States, community colleges play an important role in providing qualifications to young adults, and in most states, access to the system is relatively easy and affordable. Basic skills weaknesses among entrants are very common. Typically, community colleges screen entrants and offer remediation - 45% of first and second year community college students reported having to take remedial courses in English or mathematics. For example in Texas, students who do not meet the Texas Success Initiatives standards in math, reading and writing must take remedial courses. In Texas 21% of university entrants and 64% of community college entrants in 2007 were not college-ready in math, reading or writing.

Remedial interventions can work: a number of studies suggest that when students successfully complete remedial education, their outcomes in terms of credit attainment, graduation and transfer are similar to those who did not need remediation. But relatively few students referred for remediation end up completing: Among those who entered two-year institutions in fall 2005, of those who required remediation only 8% graduated within three years. Students with no remedial needs were more than twice as likely to complete credentials than those with high remedial needs. One multi-institutional study found that three out of four students do not complete remedial courses and these students have very weak outcomes: more than four in five do not complete a credential. Remedial efforts are also expensive. In Texas, the total estimated expenditures for remedial programmes in 2010-11 was USD 392 million, including state appropriations, and fees.

Source: Kis, V. (2011), Learning for Jobs. OECD Reviews of Vocational Education and Training. United States: Texas. <http://www.oecd.org/edu/skills-beyond-school/47150751.pdf>

### *Literacy and numeracy programmes in isolation may achieve little*

Good quality research on effective practice in adult literacy and numeracy teaching is limited (BIS, 2011; Binder et al., 2011). As weak literacy and numeracy skills are often only part of an interconnected nest of social disadvantages, teaching literacy and numeracy to adults in isolation may not be very productive. The Finnish experience with the Noste programme also shows the difficulties of improving both skills and labour market outcomes of adults (see Box 2.1). Windisch (2015) describes mixed international evidence on the impact of literacy and/or numeracy programmes on short-term employment or earning gains, with very little evidence of longer term gains. For example evidence from the US, where community colleges are a big provider of remedial courses



in literacy and numeracy skills, shows that overall these interventions are expensive and not very effective (see Box 2.5). Readers are referred to this review of the literature for full details of the research cited, alongside many further studies and country examples.

### *Embedding vocational and foundation skills can help motivate adults*

For adults with unhappy memories of the classroom, there is a real difficulty in pursuing traditional mathematics or literacy classes. One promising approach is to integrate basic skills with vocational training, so that literacy and maths skills are acquired in meaningful practical contexts. The literature indicates that 'retention rates and success rates are higher in vocational programmes where literacy and numeracy learning is embedded, as compared with non-embedded programmes' (Vorhaus et al., 2011). While research evidence (e.g. Jenkins, Zeidenberg and Kienzl, 2009; Kamil, 2003; NCTE, 2006) shows that integrating academic and vocational content can be effective, implementing such an approach is demanding. It requires a careful approach and good teamwork and professionalism in the teaching profession – and Finland can draw on its strengths in these areas to achieve the desired outcome (see Box 2.6).

#### **Box 2.6 Contextual learning of foundation skills in the United States: some examples**

The Integrated Basic Education and Skills Training (I-BEST) provides a strong example of a programme designed to improve labour market outcomes and entry rates to postsecondary career programmes among adults with low foundation skills. The programme, developed in Washington State, has proved successful and is now being introduced in other parts of the country. An I-BEST programme combines foundation skills teaching and professional training. Occupational training yields college credits and contributes to a certificate credential. These courses can only be provided in occupations in high demand. I-BEST programmes are available in every community and technical college. Individuals must score below a certain threshold on an adult skill test and qualify for adult basic education to participate in the programme. Studies measuring the impact of I-BEST in Washington State found that I-BEST students earn more credits and are more likely to complete a programme than a comparable group of students not participating in the programme. Evidence on the link between participation in I-BEST and earnings is less conclusive.

Team teaching is an important aspect of the US Accelerated Opportunity (AO) model which encourages equitable roles of the foundation skills teacher and the career and technical education (CTE) instructor in the class. The most common approach is “complementary-supportive” team teaching, where adult education instructors are present in CTE classes, help students when needed and often provide supplementary sessions that contextualise foundation skills teaching within the CTE content. About three-quarters of colleges use the “monitoring” teacher model of team teaching, in which one teacher is responsible for instructing the entire class and the other teacher circulates through the room to monitor students. Less than two-thirds of the colleges use “traditional” team teaching where the instructors actively share the instruction, with each teacher performing a different but equally important instructional task.

*Source:* Anderson, T., et al (2014), “The First Year of Accelerating Opportunity: Implementation Findings from the States and Colleges”, Urban Institute, Washington D.C. ; Kuczera, M. and S. Field (2013), *A Skills beyond School Review of the United States*, OECD Reviews of Vocational Education and Training, OECD Publishing. doi: <http://dx.doi.org/10.1787/9789264202153-en>

*Foundation skills may also be integrated into other learning activities*

Contextualisation may also take other forms. According to the British National Audit Office (NAO, 2008), adults are more likely to engage with maths when it is linked to helping children with maths, or relevant to managing household finances, or work-related. Finland could consider integrating foundation skills into the learning activities offered in particular in the liberal adult education centres, and in the libraries.

*Contextualised learning can improve employability skills*

As well as being effective as a way of teaching foundation skills, contextualised learning can improve employability skills, and the labour market outcomes of participants. For someone in mid-life, where weak literacy and numeracy skills are so often found in association with other social disadvantages, improved foundation skills may on their own not provide sufficient impetus to shift a career path. But foundation skills linked to occupational skills and work based learning could help low-skilled adults into a self-sustaining trajectory.

*Family programmes address inter-generational effects*

Family literacy and numeracy programmes address adults not only as learners in their own right, but also as a powerful influence on their children (see Box 2.7). Such programmes may require specially trained staff, separate as well as combined teaching sessions for parents and children and home visits, and offer parents progression routes to further learning. Well-designed programmes have been shown to promote literacy and numeracy among children and parenting capacity among adults. Reviewing 29 family literacy, and numeracy programmes in the UK and elsewhere, Brooks et al. (2008) found that both parents and children benefitted from participation. In this and other studies (such as one of 200 families in an urban area of Canada by Philips, Hayden, and Norris, 2006), evidence suggests that the benefits to the children were greater than those to their parents. Parents reported that they benefitted most in terms of their ability to help their children in schoolwork, parenting skills, and in terms of employment and self-confidence. For example *Actions éducatives familiales* in France have helped improve parents' engagement with their children's schoolwork (Carpentieri et al., 2011). While there is growing evidence of the positive effects of family literacy programmes on adult participants' self-efficacy (Rodriguez-Brown, 2004) and social capital (Anderson et al., 2010; Anderson and Morrison, 2007), more research on the long-term impact is needed to demonstrate sustained benefits (Anderson et al., 2010).

### **Box 2.7 The Family Literacy Project in Hamburg**

The Family Literacy Project by the UNESCO Institute for Lifelong Learning and the State Institute for Teacher Training and School Development in Hamburg (*Landesamt für Lehrerbildung und Schulentwicklung*) has offered intergenerational family literacy programmes for children and parents from deprived social and migrant backgrounds that promote linkages between the kindergarten or school and home-based learning since 2004. In 2010, the project was awarded the UNESCO King Sejong Literacy Prize thanks to its very positive results: The project has improved adult participants' communication skills, self-esteem, and integration into German society. As a result of the project, many schools in Hamburg have established family literacy rooms where parents can meet. Parental involvement in their children's education has strengthened family relationships and improved the children's literacy skills. Since many kindergarten and school teachers had no experience in teaching learners from different cultural backgrounds, the programme has helped enhance their intercultural teaching skills. Between 2004 and 2011, the programme benefited about 1000 parents and 1000 children annually.

Source: UNESCO (2014), "Family Literacy Project (FLY)", [www.unesco.org/ui/litbase/?menu=4&programme=67](http://www.unesco.org/ui/litbase/?menu=4&programme=67).

### ***Collect data more systematically and evaluate existing policies***

#### *More systematic collection and use of data*

More awareness of the implications of weak foundation skills, their links with other social factors and the need to tackle this challenge are in the interest of all, and a shared understanding of both the issues and the consequences of inaction are necessary to its solution. More and better data should be collected to understand the key socio-economic problems of adults with low foundation skills, and the outcomes of different types of programmes.

#### *Use careful appraisal of policies for adults with low foundation skills*

Given that the evidence base on programmes for adults is sometimes weak, it is necessary to use it carefully. This means undertaking a careful appraisal of policies in advance of their implementation, and linking this to evaluation of their impact. Policy appraisal is a systematic way of bringing evidence to bear on alternative policy options, weighing up costs and benefits, their distribution between different parties and over time, uncertainties and risks, as a way of assisting the development of policy (OECD, 2010).

#### *Better evaluation of existing policies*

Existing policies should be evaluated with regard to the problems and constraints faced by adults with low foundation skills. Measuring policy impact is more methodologically demanding than monitoring policy implementation, and requires good data. Objectives of programmes need to be measurable, and data collection integrated in the policy design. Outcome indicators might include: skills proficiency for participants, employment rates and earnings. indicators of costs and efficiency in delivering these benefits would include cost of the programme and dropout rates. Evaluation involves attributing causation, which requires that the effects of a policy be isolated and quantified. This can only be done rigorously if an appropriate counterfactual is identified. The ideal experimental context for an evaluation is where subjects are randomly assigned to treatment and control groups. Whilst programmes should ideally be designed with evaluation in mind, there are ways of evaluating existing initiatives in order to provide

evidence of efficiency and inform future policy decisions. All ongoing monitoring processes and available data sources should be identified and used as necessary when evaluating existing programmes in order to avoid duplication of effort (OECD, 2010).

## NOTES

- <sup>1</sup> This excludes 16-24 in initial cycle of studies.
- <sup>2</sup> The analysis shows that low-qualified workers are worse off than other categories of workers when it comes to opportunities to learn and grow at work and advance in their career. Low-qualified women report the least opportunities for development at work.
- <sup>3</sup> Among 16-24, 67% are still in education. But among low skilled 16-24 57% are still in education.
- <sup>4</sup> Those aged 25-29 were eligible, if they were seeking to complete the comprehensive school education.
- <sup>5</sup> Large regional disparities were observed. Some of the provinces succeeded in attaining and even exceeding the quantitative targets, while a few never managed to get the activities off the ground. The proportional shares in reaching the target group vary between 4 per cent and 12 per cent (Ministry of Education and Culture, 2010).
- <sup>6</sup> While these findings draw on evidence of which few are based on systematic research and many are small-scale studies and handbooks to support teachers, they have been repeated across a wide range of studies.

## *References*

- Anderson, J. and F. Morrison (2007), “A Great Program...for me as a Gramma: Caregivers Evaluate a Family Literacy Initiative”, *Canadian Journal of Education*, Vol. 30, pp. 68-89.
- Anderson, J. et al. (2010), “Taking stock of family literacy: Some contemporary perspectives”, *Journal of Early Childhood Literacy*, Vol. 10(1), pp. 33-53.
- Anderson, T. et al.(2014), "The First Year of Accelerating Opportunity: Implementation Findings from the States and Colleges, Urban Institute", Washington D.C.  
<http://www.urban.org/research/publication/first-year-accelerating-opportunity-implementation-findings-states-and-colleges>.
- Basic Skills Agency (1997), *Staying the Course. The Relationship between Basic Skills Support, Drop Out, Retention and Achievement in Further Education Colleges*, Basic Skills Agency, London.
- Binder, K. S. et al. (2011), “Dynamic Indicators of Basic Early Literacy Skills: An Effective Tool to Assess Adult Literacy Students?”, *Adult Basic Education and Literacy Journal*, Vol. 5(3), pp. 150-160.
- BIS (Department for Business, Innovation and Skills) (2011), “Review of Research and Evaluation on Improving Adult Literacy and Numeracy Skills”, BIS Research Paper Number 6, Department for Business, Innovation and Skills, London.
- BMBF (German Federal Ministry for Education and Research) (2012), “Alphabetisierung und Grundbildung Erwachsener: Abschlussdokumentation 2007-2012”.
- Brooks, G. et al. (2008b), “Effective and inclusive practices in family literacy, language and numeracy: a review of programmes and practice in the UK and internationally”, [CfBT Education Trust, Reading. http://cdn.cfbt.com/~media/cfbtcorporate/files/research/2008/r-effective-and-inclusive-practices-in-family-literacy-review-2008.pdf](http://cdn.cfbt.com/~media/cfbtcorporate/files/research/2008/r-effective-and-inclusive-practices-in-family-literacy-review-2008.pdf).
- Bynner, J. and S. Parsons (2006), *New Light on Literacy and Numeracy, National Research and Development*, Centre for Adult Literacy and Numeracy, London.
- Carpentieri, J. D. et al. (2011), *Family literacy in Europe: using parental support initiatives to enhance early literacy development*, NRDC, Institute of Education, London.
- DFES (Department for Education and Skills) (2005), *Good Practice Guidelines in Screening and Initial Assessment. For Literacy, language and numeracy teachers, subject support staff and adult learners supporters*, Department for Education and Skills, Skills for Life Strategy Unit, London.
- European Commission/EACEA/Eurydice (2015a), *Adult Education and Training in Europe: Widening Access to Learning Opportunities*, Eurydice Report, Publications Office of the European Union, Luxembourg, [http://eacea.ec.europa.eu/education/eurydice/documents/thematic\\_reports/179EN.pdf](http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/179EN.pdf).

- European Commission/ EACEA/ Eurydice (2015b), *Adult Education and Training in Europe: Programmes to Raise Achievement in Basic Skills, Eurydice Report*, Publications Office of the European Union, Luxembourg.
- Finnie, R. and R. Meng (2005), “Literacy and Labour Market Outcomes: Self-assessment Versus Test Score Measures”, *Applied Economics*, Vol. 37, No. 17, pp. 1935-1951.
- Heckman, J. (2008), “Schools, Skills, and Synapses.” *Economic Inquiry* 46 (3): 289–324. <http://dx.doi.org/10.1111/j.1465-7295.2008.00163.x>.
- Jenkins, D., M. Zeidenberg and G. S. Kienzl (2009), Educational outcomes of I-BEST, Washington State Community and Technical College System’s Integrated Basic Education and Skills Training Program: Findings from a multivariate analysis (CCRC Working Paper No.16), Columbia University, Teachers College, Community College Research Center, New York.
- Kamil, M. L. (2003), *Adolescents and Literacy: Reading for the 21st Century*, Alliance for Excellent Education, Washington, DC.
- Kis, V. (2011), *OECD Reviews of Vocational Education and Training: A Learning for Jobs Review of the United States, Texas 2011*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264114029-en>.
- Kuczera, M. and S. Field (2013), *A Skills beyond School Review of the United States*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264202153-en>.
- Looney, J. (2007), “Formative assessment in adult language, literacy and numeracy”, *Assessment in Education*, Vol. 14(3): pp. 373-386.
- Lyly-Yrjänäinen, M. (2008), *Who Needs Up-Skilling? Low-skilled and Low-Qualified Workers in the European Union*, European Foundation for the Improvement of the Working and Living Conditions, Eurofound, Dublin.
- MacArthur, C.A. et al. (2012), “Reading Component Skills of Learners in Adult Basic Education”, *Journal of Labour Disabilities*, Vol. 43 (2), pp. 108-121.
- Ministry of Education and Culture (2015), “Adult Education”, Website [http://www.minedu.fi/OPM/Koulutus/aikuiskoulutus\\_ja\\_vapaa\\_sivistystyoe/?lang=en](http://www.minedu.fi/OPM/Koulutus/aikuiskoulutus_ja_vapaa_sivistystyoe/?lang=en), (accessed 14 July 2015)
- Ministry of Education and Culture (2010), “Noste Programme 2003-2009: Final Report”, *Reports of the Ministry of Education and Culture 2010*, Helsinki.
- NALA (National Adult Literacy Agency) (2011), “A Literature Review of International Adult Literacy Policies”, *National Adult Literacy Agency*, Dublin.
- NAO (National Audit Office) (2004), “Skills for Life: improving adult literacy and numeracy”, HC 20 Session 2004-2005, London.
- NCTE (2006), “Adolescent Literacy A Policy Research Brief produced by The National Council of Teachers of English”, NCTE, <http://www.ncte.org/library/NCTEfiles/Resources/Magazine/Chron0907AdLitBrief.pdf>.

- OECD (2010), *Learning for Jobs*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264087460-en>.
- OECD (2008), *Teaching, Learning and Assessment for Adults: Improving Foundation Skills*, OECD Publishing, Paris.  
DOI: <http://dx.doi.org/10.1787/9789264039964-en>.
- OECD (2001), “Country Note: Finland”, Thematic Review of Adult Learning, <http://www.oecd.org/edu/skills-beyond-school/2697889.pdf>.
- Official Statistics of Finland (OSF) (2015), “Adult education of educational institutions”, [http://www.stat.fi/til/oaiop/2013/oaiop\\_2013\\_2014-12-11\\_tie\\_001\\_en.html](http://www.stat.fi/til/oaiop/2013/oaiop_2013_2014-12-11_tie_001_en.html) (accessed on 19 September 2015).
- Phillips, L., R. Hayden and S Norris (2006), *Family Literacy Matters: A Longitudinal Parent-Child Literacy Intervention Study*, Detslig Press, Calgary.
- Pont, B. (2004), “Improving Access to and Participation in Adult Learning in OECD Countries”, *European Journal of Education*, Vol. 39(1).
- Rodriguez-Brown, F. (2004), “Project Flame: A Parent Support Family Literacy Model”, in B. Wasik (ed.), *Handbook of Family Literacy*, pp. 213-229, Laurence Erlbaum, Mahwah.
- UNESCO (2014e), “Family Literacy Project (FLY)”, [www.unesco.org/uii/litbase/?menu=4&programme=67](http://www.unesco.org/uii/litbase/?menu=4&programme=67).
- Vorhaus, J. et al. (2011), *Review of Research and Evaluation on Improving Adult Literacy and Numeracy Skills*, Department for Business, Innovation and Skills, London.
- Wells, A. (2001), “Basic Skills-25 Years on”, in *Adults Learning*, 09552308, Vol. 12, Issue 10.
- Windisch, H. C. (2015), "Adults with low literacy and numeracy skills: A literature review on policy intervention", *OECD Education Working Papers*, No. 123, OECD Publishing, Paris. <http://dx.doi.org/10.1787/5jrxnjdd3r5k-en>.





### *Chapter 3*

#### **The transition from education to work**

*In Finland, although few young people lack foundation skills, those few face significant disadvantages, often dropping out of education and having a weak attachment to the labour market. Since most young people in Finland are well-educated and highly skilled, young people without foundation skills face an increasing risk of marginalisation into inactivity or unemployment, with lasting damage to their prospects. Upper secondary vocational students face some particular obstacles in transitions, as tertiary programmes are often over-subscribed and because Finland lacks the kind of short cycle postsecondary vocational programmes found in many other countries. Strengthened literacy and numeracy skills among vocational students would help, as these are fundamental both to employability and further learning.*

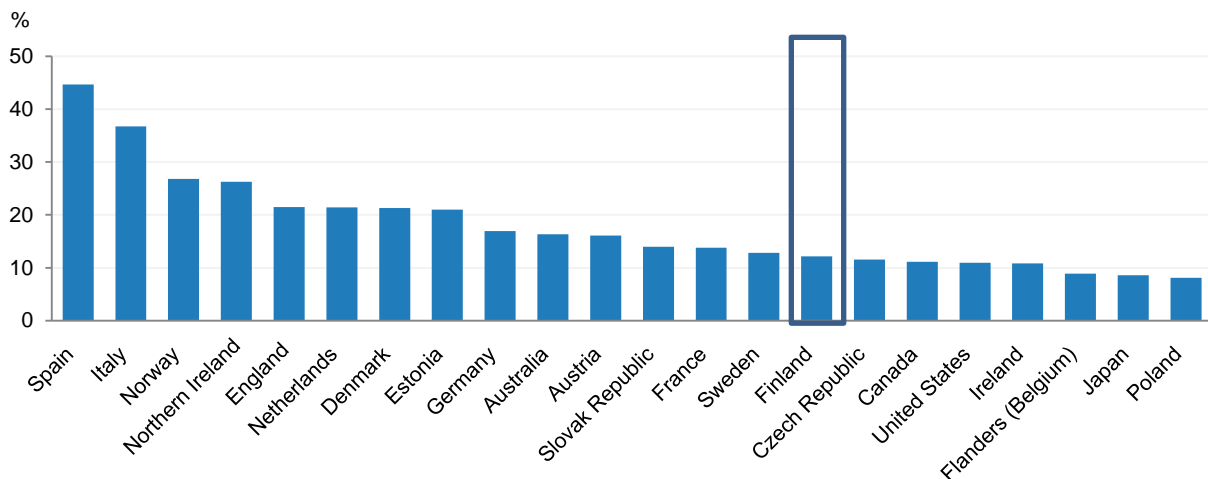
## Challenge: obstacles in transitions to work and further education

### *More than 100 000 young people lack upper secondary qualifications*

While most young people in Finland cope well in the transition from education to work, an increasing minority run into problems of dropout, unemployment, or otherwise becoming ‘NEET’ (not in education, employment or training). About 12 per cent of 20-28 year olds, or around 110 000 people, have completed only basic education and lack upper secondary qualifications<sup>1</sup> (see Figure 3.1). While the proportion of young people involved is small by international standards, the numbers have been growing. The number of “lost ones”, (a term used to describe those who are disengaged from both education and work, not registered at either a local employment office or an education institution), is around 25 000. Fighting such exclusion is a social imperative, and an economic necessity: such exclusion among the young has been estimated to cost the state approximately 300 million euros a year (Ministry of Education and Culture, 2012).

**Figure 3.1 Finland has fewer unqualified young people than most countries – but still around 100 000**

Percentage of 20-28 year-olds without an upper secondary degree and who are not in education, 2012



Note: Adults with foreign qualifications and 1st generation migrants who obtained their highest qualification prior to entering the country are excluded.

For some countries results are not reported due to insufficient number of observations.

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

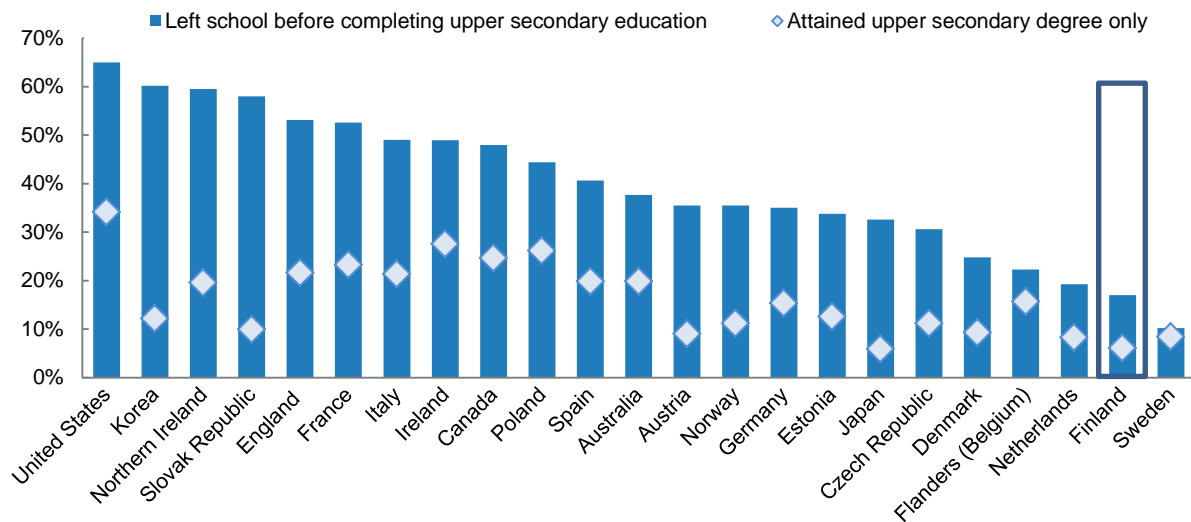
### *Low foundation skills are both cause and consequence of school dropout*

Of those who have not completed upper secondary school, 17% have low numeracy skills, compared to 6% of those with such qualifications (see Figure 3.2). Those who struggle to acquire foundation skills are more likely to drop out of school (amongst the 20-28 with low numeracy skills, 30% have not completed upper secondary); and will subsequently have few opportunities to develop or sustain these skills. The performance difference between those who finished upper secondary and those who did not is relatively large in Finland by international standards, and may indicate that low skilled

individuals combine more handicaps, and face lesser life chances when the vast majority of their peers that have relatively good skills.

**Figure 3.2 Some early school leavers lack numeracy skills**

Percentage scoring below Level 2 in numeracy among (a) those aged 20-28 without upper secondary education, (b) those whose highest qualification is at upper secondary level



Note: Adults with foreign qualifications and 1st generation migrants who obtained their highest qualification prior to entering the country are excluded, 16-65 year olds

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

## ***Integration into the labour market***

### ***Youth unemployment is relatively high in Finland***

The youth unemployment rate is about 20%, two and a half times higher than the all-age unemployment rate (OECD, 2015a). While two thirds of better skilled young people have jobs, only around half of those with weak foundation skills do so – a lower proportion than in many other countries.

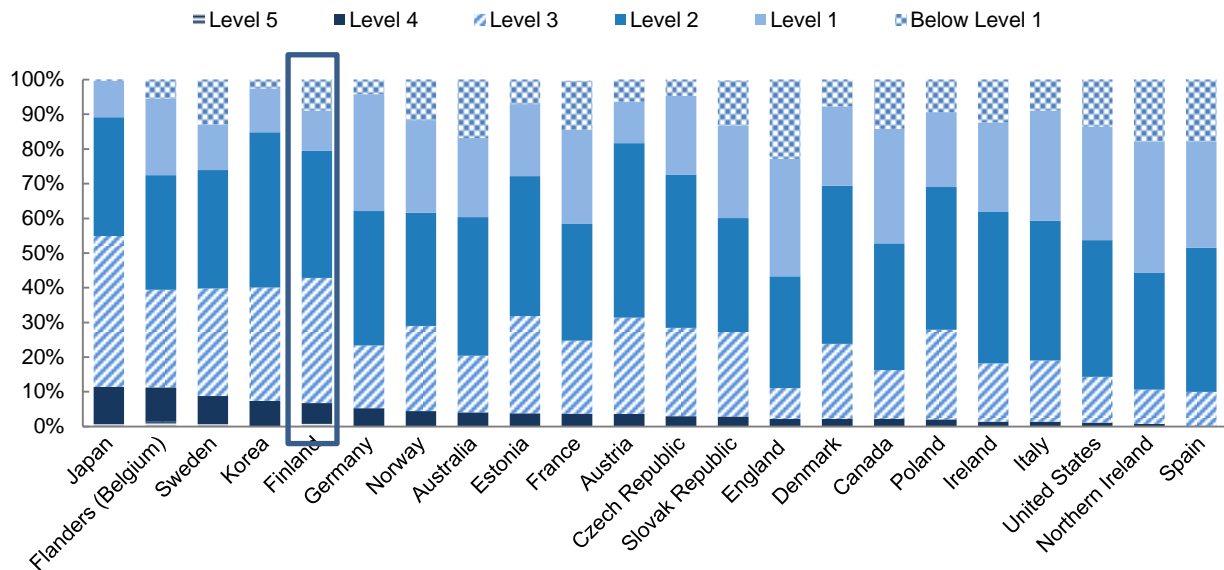
### ***More than one in ten young persons are not in education, employment or training (NEET)***

Both educational attainment and foundation skills influence the likelihood of becoming a ‘NEET’. In Finland, 12% of 16-29 year olds are NEET, and although they have stronger foundation skills than in many countries (see Figure 3.3), weak foundation skills are closely linked to NEET status. Almost 40% of those under level 2 in literacy among 16-29 year olds are NEET compared to less than 10% of those with better foundation skills (see Figure 4.7 of OECD, 2015b). More than half of the NEETs aged 16-29 are inactive as opposed to unemployed, more than the OECD average (see Figure 4.11 in OECD, 2015b) so that they are not even seeking work. Three times as many

young people with low foundation skills were out of the labour force than better skilled young people (18% as compared with 6%) (OECD, 2015b). Spells of unemployment or benefit dependence early on can have damaging longer term effects, commonly referred to as ‘scarring’.

**Figure 3.3 In Finland, young NEETs have better numeracy scores than in many other countries**

All NEET 16-29 year-olds. Percentage breakdown by numeracy skills level



Note: For some countries results are not reported due to insufficient number of observations.

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

### ***Those with vocational upper secondary qualifications face challenges in subsequent transitions***

#### *Initial VET programmes are school-based*

In Finland, initial vocational education and training is mainly school-based, but with mandatory periods of work-based learning<sup>2</sup> representing one sixth of the programme, about 6 months (Finnish National Board of Education, 2010). Participation in initial VET has been on the increase since the beginning of the 2000s, and about 40% of students completing basic education now enter vocational tracks. In some institutions, students can also choose to study simultaneously a vocational qualification, and a general upper secondary qualification (Ammattiosaaja, 2015). The share of young people in apprenticeship training has been relatively low, approximately 5%. Vocational upper secondary programmes have a dropout rate of about 9%, more than double the rate for students in general programmes (Stenström and Virolainen, 2014).

### *Labour market outcomes are relatively poor*

Graduates from upper secondary vocational programmes have, at 13%, double the unemployment rates of polytechnics (7%) and universities (6%) (Stenström and Virolainen, 2014) (see Figure 3.4). They are also twice as likely to be NEET as their general upper secondary counterparts (20% versus 10%, see Figure 3.5) The number of NEETs may reflect the bumpy road into upper secondary programmes, as some young people are unable to secure a study place in the education programme of their choice, and therefore are left out<sup>3</sup>. Efforts are being made to address this issue by creating additional places in vocational schools (see Box 3.1) and reforming the way schools can select students.

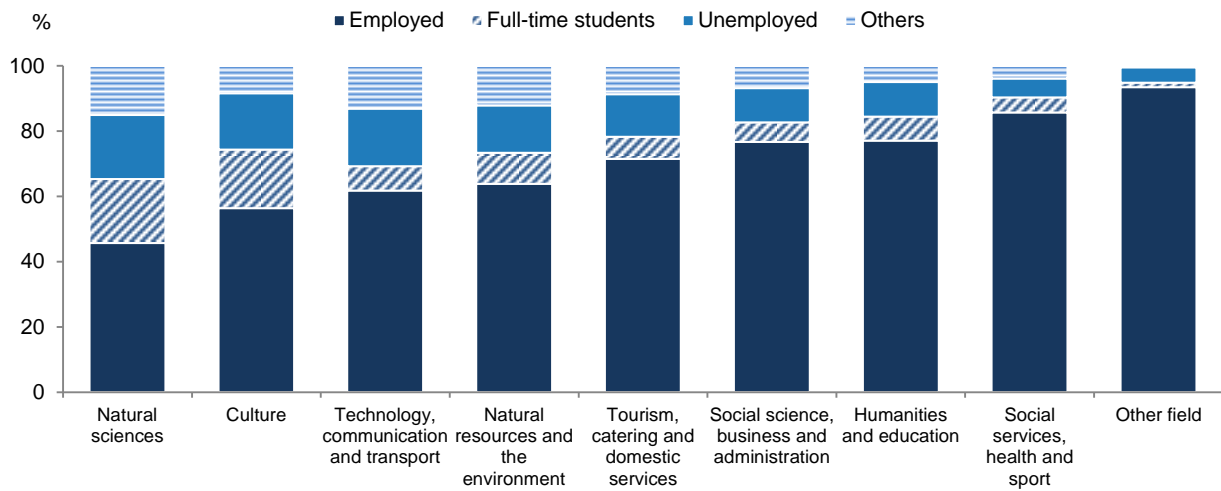
#### **Box 3.1 The Youth Guarantee Programme in Finland**

The Youth Guarantee offers everyone under the age of 25, as well as recent tertiary graduates under 30, a job, a study or training place, or a place in a rehabilitation programme within three months after becoming unemployed. Young people are provided with support throughout the programmes, by mental health services, social workers, and specific job centre staff. In that framework, and under the Young Adult Skills programme, young people under the age of 30 with no upper secondary qualification are given the opportunity to complete a vocational qualification or a part of it. An additional 1 700 study places have been created in vocational education in areas where there were fewer study places for people in this age group. This makes it easier for young people to move into vocational training and education. The selection criteria in vocational education are undergoing a change, with those who have completed comprehensive school and those without upper level vocational qualification being given priority to study for such a qualification. At the end of 2014, the number of entrants was estimated to have been about 8,000 students, of which about 500 were in apprenticeships.

The programme has been implemented in around 60 educational institutions so far. Many education providers have been surprised about how numerous are the problems – educational, and in many cases social and psychological – that face Young Adults’ Skills Programme students.

*Source:* Ministry of Education and Culture (2012), “The Youth Guarantee in Finland”, [http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2013/liitteet/The\\_Youth\\_Guarantee\\_in\\_Finland.pdf?lang=en](http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2013/liitteet/The_Youth_Guarantee_in_Finland.pdf?lang=en) ; Hyvönen (2015), “How is it going with the Young Adults' Skills Programme?”, Blog post, [http://www.nuorisotakuu.fi/en/youth\\_guarantee/information/news/guaranteed\\_for\\_youth!\\_blog/how\\_is\\_it\\_going\\_with\\_the\\_young\\_adults\\_skills\\_programme.117505.blog](http://www.nuorisotakuu.fi/en/youth_guarantee/information/news/guaranteed_for_youth!_blog/how_is_it_going_with_the_young_adults_skills_programme.117505.blog) (accessed 24 June 2015); Prime Minister’s Office (2015), “Finland, a land of solutions”, Strategic Programme of Prime Minister Juha Sipilä’s Government [http://vnk.fi/documents/10616/1095776/Ratkaisujen+Suomi\\_EN.pdf/c2f3123a-d891-4451-884a-a8cb6c747ddd?version=1.0](http://vnk.fi/documents/10616/1095776/Ratkaisujen+Suomi_EN.pdf/c2f3123a-d891-4451-884a-a8cb6c747ddd?version=1.0)

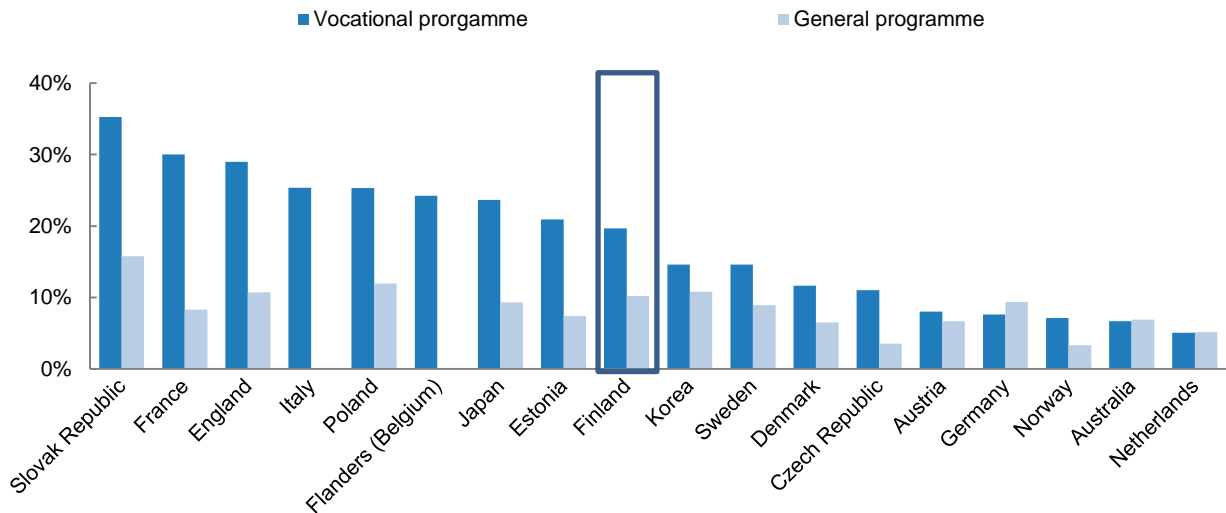
**Figure 3.4 What are VET graduates doing one year after finishing upper secondary education?**  
by field of study, 2012



Source: Statistics Finland, 2014 in Stenström and Virolainen (2014), “The Current State and Challenges of Vocational Education and Training in Finland”, The Finnish Country report 1B, Nord-VET - The future of Vocational Education in the Nordic countries, Country reports.

**Figure 3.5 In Finland young vocational graduates are twice as likely to be NEET as graduates from general programmes**

Percentage of different upper secondary graduate groups (18-26) who are NEET by programme orientation



Notes: Upper secondary VET includes programmes classified as ISCED 3C long, ISCED 3B and ISCED 3A identified by countries as vocationally oriented.

For some countries results are not reported due to insufficient number of observations.

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

*There are barriers to transition from vocational programmes*

Why do vocational programmes in Finland face challenges in the transition of young people from education into work or into further education? There could be different explanations: relatively weak foundation skills; obstacles in the transition into postsecondary education; or lack of the kind of work-based learning that might have assisted them in making a successful transition into work.

*Those with vocational qualifications tend to have weaker foundation skills*

As in other countries, those aged 16-34 with upper secondary vocational education as their highest qualification<sup>4</sup> have weaker foundation skills than those with general academic upper secondary qualifications (see Table 3.1). Among younger graduates aged 16-34 10% of upper secondary VET graduates scored under level 2 in numeracy, compared with only 3% of graduates from the general track. A further 34% scored at level 2 (see Figure 3.6). The weaker foundation skills of those with vocational qualifications may reflect how vocational students were selected or selected themselves<sup>5</sup> –those with stronger academic skills often choosing to pursue more general qualifications. The Finnish Education Evaluation Centre is collecting at regular intervals longitudinal data on mathematics skills of students from grade 2 to the end of upper secondary education, which will allow a comparison of the role of general and vocational upper secondary education in the development of these skills<sup>6</sup> (See Finnish Education Evaluation Centre, 2014, for information about the longitudinal data and trends between Grade 2 and end of basic education). But whatever their origin, these weaknesses still need to be addressed. Graduates of these programmes typically enter jobs involving changing technical and professional skills. Any underlying weakness in foundation skills may reduce both the capacity to enter more highly skilled jobs, and the ability to pursue further training or education. Tackling these weaknesses would help with all the transitions.

**Table 3.1 The foundation skills of Finnish VET graduates compare well internationally**

Numeracy performance in score points of those aged 16-34 with upper secondary as highest qualification, (standard errors in brackets)

	Numeracy		Literacy	
	Academic	VET	Academic	VET
Australia	279 (3)	266 (3)	294 (3)	274 (3)
Austria	311 (4)	274 (2)	307(3)	272 (2)
Denmark	299 (3)	278 (3)	300 (2)	269 (3)
Estonia	294 (2)	264 (3)	297 (2)	269 (3)
Finland	311 (2)	280 (2)	319 (2)	290(2)
France	285 (2)	248 (2)	295 (2)	260 (2)
Germany	306 (3)	268 (3)	308 (2)	267 (3)
Norway	293 (3)	276 (3)	319 (2)	286 (2)
Netherlands	314 (2)	279 (2)	294 (2)	275 (3)
Spain	270 (2)	254 (7)	278 (2)	258 (5)
Sweden	297 (3)	281 (3)	299 (2)	281 (3)

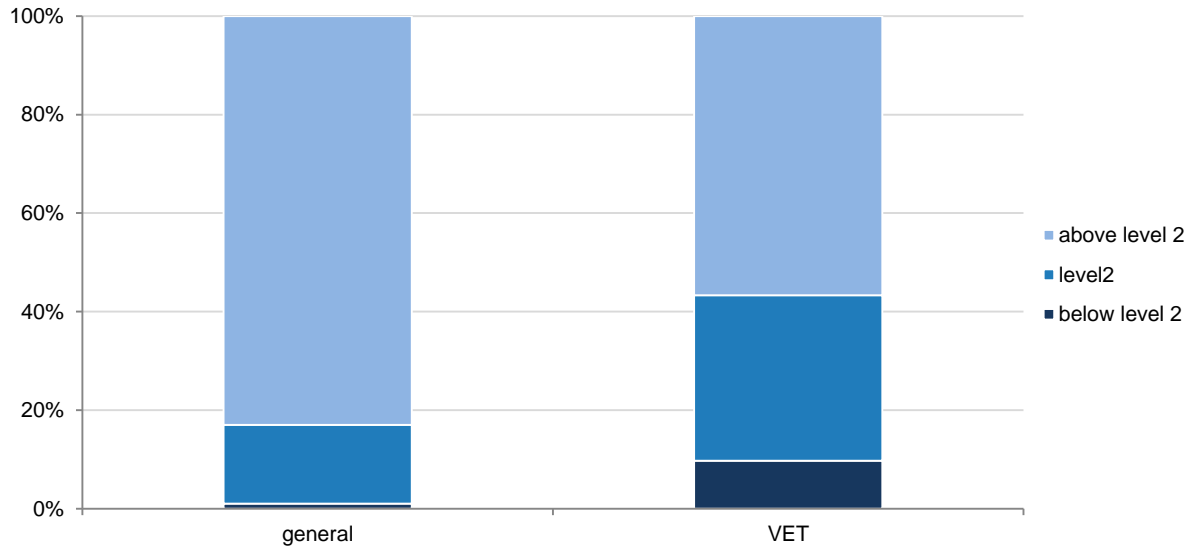
Note: Adults who obtained their highest qualification outside the country, those with foreign qualifications and 1<sup>st</sup> generation migrants who obtained their highest qualification prior to entering the host country are excluded.

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).



**Figure 3.6 In Finland, VET graduates more often have weak numeracy skills than general programme graduates**

Those aged 16-34 whose highest qualification is at upper secondary level: distribution of numeracy performance



Note: Adults with foreign qualifications and 1st generation migrants who obtained their highest qualification prior to entering the country are excluded, 16-34 year olds

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

*Upper secondary vocational graduates have fewer options to continue in postsecondary programmes than graduates from general programmes*

As the employment prospects of those from the vocational track are variable (see Figure 3.4) the risk is that some of those who cannot pursue postsecondary education may become NEET. In many countries, vocational graduates can continue into shorter postsecondary professional programmes, but in Finland such programmes, which existed until around 2000, were gradually displaced by the universities of applied science, as these institutions started to offer full bachelor's degrees (see International Bureau of Education, 2001, and Stenström and Virolainen, 2015). While some postsecondary specialist vocational qualifications remain, these can be taken only as competence-based qualifications, and are intended for adults with work experience rather than young upper secondary school-leavers (Eurydice, 2015a; Finnish National Board of Education, 2015).

*A lack of places in tertiary education has caused a backlog of applications*

In 2007, there were 125 000 applicants for the 45 000 places in tertiary education. Applicants who are not admitted to their preferred course queue, waiting to re-sit entrance exams, and may remain in that queue for several years before they are admitted. During this time most young people work, while also studying for the entrance exam (OECD, 2008). One outcome is that only 40% and 28% of the students accepted to universities and universities of applied science, respectively, had matriculated the same year (Virolainen and Stenström, 2015). Students spend a long time in education (4.5 years on average in polytechnics, and 5.5 years, in universities (Statistics Finland, 2014 in Virolainen and Stenström, 2014), and only around 40% of students therefore graduate in

less than 6 years. Many students work part-time while studying, but the backlog means transition into the labour-market is delayed, a significant inefficiency. Some reforms in these domains are now under way (see Box 3.2).

### **Box 3.2 Recent reforms in Finnish higher education**

From 2009 to 2014 the number of higher education institutions (universities and polytechnics) declined from 48 to 38 through mergers. Measures have been taken to reduce the matriculation backlog and to improve the throughput and transition from secondary education to higher education and to the labour market.

- New entry rules have been introduced to favour first-time applicants to higher education;
- The higher education selection system has been reformed with a national online application system, including a common admission system for both university and polytechnics programmes;
- The funding models for both universities and polytechnics have been reformed (in 2013 and 2014, respectively), giving financial incentives to institutions for degree completion;
- The students' financial support system has been reformed in order to promote full-time studies and faster completion of studies.

Provision in the university and the polytechnic sector has been increased with 3 000 additional study places for the period of 2014–2015.

*Source:* Technopolis Group (2015), "Towards a future proof system for higher education and research in Finland", Report commissioned by the Ministry of Education and Culture.

### *Entrance into the different university sectors is difficult for vocational graduates*

During the 1980s and 1990s, the general education component of the initial VET curriculum was enhanced so as to allow vocational graduates to enter applied science universities when they were established. Vocational graduates are authorised to enter higher education programmes, but these graduates may face obstacles gaining entry. The 25 universities of applied science<sup>7</sup> and 10 traditional universities organise their own admission processes, commonly including entrance examinations. In 2010-2011 27% of applicants to polytechnics were graduates of the vocational track, but only about one third of these applicants were admitted, so that they ended up representing less than 10% of new entrants. In 2004–2005, only two percent of students in traditional universities had VET as their only former qualification (Virolainen and Stenström, 2015).

### *Competence-based qualifications do not always integrate foundation skills*

Competence-based qualifications do not routinely include foundation skills, although some programmes give them some emphasis - for example the laboratory technician qualification includes some testing of numeracy skills. But foundation skills are not only a key part of the skillset required in any job, they are also tools for further learning, supporting the acquisition of the further skills and qualifications that are increasingly sought by students and needed by employers.

**Recommendation: sustain foundation skills and improve pathways from vocational education**

- Ensure that all programmes, including vocational programmes, offer sufficient attention to literacy and numeracy skills to support further learning and career mobility
- Improve transition from school to meaningful employment, through good quality apprenticeship and other quality vocational programmes
- Continue the reforms of entrance into tertiary education, while developing postsecondary vocational programmes
- Maintain efforts to reach out to low-skilled young people through the Youth Guarantee, and the Young Adults' Skills programme in particular

**Supporting arguments: strengthening progression*****All programmes should ensure good foundation skills******Foundation skills support adaptation to new employment requirements***

As work evolves in response to technical and economic change, some jobs will disappear completely, while others will change radically. Foundation skills play a central role in allowing workers to adapt to change as well as advancing further within their chosen professions. Some non-routine low-skilled jobs (such as elderly care workers), may not be very affected by computerisation. But other workers with certain routine and craft skills may find their jobs are replaced or diminished by computers (Levy and Murnane, 2004; Smits, 2007). Many low-skilled workers will need to acquire new skills to succeed in a changed working environment or in wholly new jobs. A study of workplace literacy requirements in Central and Eastern Europe argues that most marketable competences are developed through skills closely tied to literacy (Köllő, 2006). Strong literacy and numeracy skills are also associated with entrepreneurship and success in business activities, and with a lowered risk of poverty (World Bank, 2012).

***Weak foundation skills are linked to unemployment and poor jobs***

Weak foundation skills are one cause of unemployment, as seen by analysing PIAAC data, but this may be as much because initially low foundation skills have led to a sequence of insecure poor quality jobs as because recruiting employers are directly concerned with literacy and numeracy weaknesses. Since skills decay through lack of use, low foundation skills may also be partly the result of long term unemployment, or an extended period of years in which poor and insecure jobs which do not promote foundation skills alternate with periods of unemployment. Someone who starts their career with low foundation skills may therefore become entrenched in a career trajectory in which their pattern of employment both reinforces, and is reinforced by low skills.

### Box 3.3 Attention to foundation skills can reduce dropout

A study from England explored the relationship between basic skills support and drop-out, retention and completion rates in further education (FE) colleges. It drew on data from 19 FE colleges on withdrawal, retention, completion and achievement, as well as demographic and student characteristics and basic skills provision within each college.

In the study over 15 000 students were assessed and over 4 400 were identified as in need of basic skills support, 90% of them in a vocational course. The study followed up these students – less than half of them received literacy and numeracy support, while the majority did not get any additional support with basic skills.

**Reasons for not taking up support.** Some students were not told the results of the basic skills assessment or did not understand what the results meant. Others could not take up support because of their timetable. In fact take-up was higher where support was offered as part of the course rather than as an optional extra. But the most important barrier was attitude – young adults in particular were reluctant to take up support because of the stigma attached to poor basic skills. Also many were not aware of the need to improve their basic skills to get through their course.

**Forms of basic skills support.** Basic skills support was available through workshops offering drop-in and timetables support for individuals and groups. Some colleges developed partnership-teaching, in which basic skills specialists and course tutors worked together to offer support as part of a course. This approach had two advantages: it allowed to support those who were reluctant to attend targeted workshops, and it related basic skills development to the student's course.

**Did basic skills support make a difference?** Those who received basic skills support were three times less likely to drop out. They also had better completion (those on a two-year course) and qualification rates (those on a one-year course) than those who did not receive support.

#### How did students do?

	Drop-out	Completed the year / achieved a qualification		
	Withdrawal rate	Completed/achieved	Not completed	Not assessed/results not known
Support	10%	75%	16%	10%
No support	30%	54%	33%	13%

Source: Basic Skills Agency (1997), *Staying the Course. The Relationship between Basic Skills Support, Drop Out, Retention and Achievement in Further Education Colleges*, Basic Skills Agency, London.

#### *Foundation skills should be developed for all vocational students*

As argued in Chapter 2, foundation skills may be effectively taught in conjunction with practical skills. In practice this means administering a test of numeracy and literacy on entry to adult education programmes, and to clients of employment services to determine needs and offering targeted help for those with the weakest skills. Requirements vary – programmes designed to upskill established professionals will have a different approach to those designed for adults re-entering the labour market. For vocational students, the evidence shows that interventions to tackle weak foundation skills can reduce dropout (see Box 3.3). Strong literacy and numeracy will be particularly

important for vocational graduates who wish to pursue further academic qualifications; in this case strong foundation skills should help to underpin transition to, and articulation with, academic education (OECD, 2014b). So the issue here goes wider than just supporting a minimum level of foundation skills. It is also about ensuring that adults with better levels of skills have sufficient levels of literacy and numeracy to fully realise their potential.

***Improve transition from school to meaningful employment, developing work-based learning and postsecondary programmes***

*Finland should develop short postsecondary vocational options alongside the existing university programmes*

While Finland offers excellent foundation skills through basic schooling, subsequent transitions raise some challenges, reflected in shortages of vocational skills in some sectors of the labour market, the late entry into tertiary education following matriculation, the high age of university graduates and high unemployment rates in some regions. In many countries postsecondary professional programmes provide an effective way to help vocational graduates to gain more technical expertise, and management and other skills as well as sustaining and developing literacy and numeracy. Sweden has been successful at creating such a programme from scratch, and rapidly attracting growing numbers of students (see Box 3.4).

*Short postsecondary vocational programmes are needed by the labour market*

Many professional and technical jobs require no more than one or two years of career preparation beyond upper secondary level, and in some countries as much as one-quarter of the adult workforce have this type of qualification (OECD, 2014b). Nearly two-thirds of overall employment growth in the European Union is forecast to be in the “technicians and associate professionals” category - the category most closely linked to this sector (CEDEFOP, 2012). In the United States, around 12% of the labour force has a post-secondary “certificate” as their highest qualification, and certificate graduation rates are burgeoning – tripling in recent years; a further 10% have associate degrees. In France, in 2010-2011 almost 360 000 students were enrolled in two-year professional programmes (Brevet de technicien supérieur and Diplôme universitaire de technologie), representing one-third of the students entering post-secondary education (OECD, 2014b).

*Pathways of future progression are key features of successful upper secondary programmes*

One of the main features of the most successful vocational systems is the existence of higher level vocational qualifications to which graduates of initial vocational programmes can progress (OECD, 2014b). Entrants to vocational programmes need to have the promise of opportunities for further upskilling beyond their initial qualification, partly because that is what students increasingly want and expect, and partly because that is what the labour market will need and demand from graduates of initial vocational programmes (Dunkel and Le Mouillour, 2009). Upper secondary vocational programmes therefore need to be designed not only for labour market entry but also to prepare students for further education. Clearly attention to foundation skills is an important part of this process. Pathways for upper secondary vocational students can be enhanced both by ensuring all graduates of these programmes have strong foundation skills, so that they can

readily continue in further education, and by ensuring sustained attention to foundation skills within shorter postsecondary programmes.

#### **Box 3.4 The Swedish system of higher vocational education (HVE)**

Higher vocational education (previously called advanced vocational education and training) was established in 2001 with enrolment increasing rapidly to reach 31 000 (compared with 140 000 enrolments in professional bachelors and masters programmes). Most programmes require between six months and two years of full-time study with 70% of programmes lasting two years. There appears to be demand from students, support by employers, and interest among bodies wishing to run courses. 80-90% of graduates report being in work one year after graduation. Many different bodies can provide HVE if they comply with the established requirements. In 2011, out of 242 institutions providing HVE, roughly half were private while the rest belonged to local and regional authorities. All HVE programmes are publicly funded, with no tuition fees.

The model fosters a bottom-up and entrepreneurial approach within a publicly funded framework. Workplace training is obligatory in two-year HVE programmes and represents one-quarter of the programme duration. This structure builds partnership with employers into the design of the system, since it is only possible to seek funding for an HVE programme when a partnership with employers willing to offer the workplace training is already in place. Each HVE programme in every institution has a steering group including employers; employers provide training to students and also advise on provision and programme content. To launch a programme an education provider has to show that there is labour market demand for the skills provided by the programme, and that it has a framework to engage employers. The National Agency for Higher VET is responsible for the sector, and the social partners are part of a council that advises the Agency on the future demand for skills and on how this might be met.

*Source:* Kuczera, M (2013), A Skills beyond School Commentary on Sweden, OECD Reviews of Vocational Education and Training, [www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnSweden.pdf](http://www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnSweden.pdf); Ministry of Education and Research Sweden (2013), Skills beyond School. OECD Review of Vocational Education and Training. Background Report from Sweden, [www.oecd.org/edu/skills-beyond-school/SkillsBeyondSchoolSwedishBackgroundReport.pdf](http://www.oecd.org/edu/skills-beyond-school/SkillsBeyondSchoolSwedishBackgroundReport.pdf).

#### *More work-based learning would help to smooth transition into the labour market*

Developing more work-based VET, enhancing the ties between working life and school-based vocational training, as well as bridging the gap between “theory” (emphasised in the vocational schools) and “practice” (emphasised by employers and working life) have all become topical issues in Finland. Apprenticeships have gained renewed attention as a method for integrating young people with special learning and employment challenges, as well as a more general alternative to the prevailing school-based VET system (Spangar, 2012). A wide range of international experience suggests that work-based learning plays an essential role in high quality vocational programmes. Quintini and Manfredi (2009) for example, note that in countries with regulated labour markets and strong apprenticeship systems, such as Germany, about 80% of school leavers succeed in integrating into the labour market, a marked contrast to countries without strong work-based training such as Italy and Spain. But work-based learning is not only a powerful tool for developing both hard and soft skills and transitioning students into employment, it is also key to engaging employers and linking the mix of provision to employer needs. It is too often neglected, partly because education and training organisations find it easier to work on their own without having to involve employers, and partly because employers do not recognise the potential returns from

offering work placements to students (see OECD, 2010). The Youth Guarantee (see Box 3.1) could provide a framework for the development of apprenticeships.

## NOTES

- <sup>1</sup> Estimates calculated using demographic data from Statistics Finland (2015).
- <sup>2</sup> Students have reported relatively high satisfaction levels regarding their work placement, but with disparities between sectors (Virtanen, 2015).
- <sup>3</sup> Some of the 5,000 comprehensive school graduates who do not apply for or are not admitted to education leading to a qualification choose to continue their studies, for example, in preparation courses for vocational education or in folk high schools (Ministry of Employment and the Economy, 2012).
- <sup>4</sup> Initial vocational training programmes, at the upper secondary level, take four years to complete, usually in specific vocational schools. The programmes consist of 180 credits, including at least 35 credits of on-the-job learning, which is compulsory in all programmes: 135 credits of vocational studies, 35 credits of core subjects and 10 credits of free-choice studies (Eurydice, 2015b).
- <sup>5</sup> Of course comparison of PIAAC scores between track orientation need to take into account that those in pre-vocational tracks at age 15 have much weaker performance in maths and literacy than their peers in general tracks, as shown in PISA (Kuczera, 2008). For example in Austria those 15 year olds in the apprenticeship track have PISA maths scores around 100 points lower than those in gymnasiums. These are massive differences, which would yield large outcome differences even if the subsequent treatment effects of ‘VET’ versus ‘general’ were identical.
- <sup>6</sup> One of the aims in this longitudinal study has been to follow the educational pathways of pupils and students with weak performance (to e.g. find evidence about the factors and measures that seem to support their learning. The results are expected to be published in early 2016.
- <sup>7</sup> In that respect, it can be noted that the Finnish Education Evaluation Centre is undertaking a study on student pathways between vocational tracks, and university of applied science programmes. The evaluation results will be published in late 2015 (Finnish Education Evaluation Centre, 2015).



## *References*

- Ammattiosaaja (2015), Vocational School + Upper Secondary School, Website <http://www.ammattiosaaja.fi/en/qualifications-and-occupations/vocational-school-%2B-upper-secondary-school> (accessed on 21 September 2015).
- Basic Skills Agency (1997), *Staying the Course. The Relationship between Basic Skills Support, Drop Out, Retention and Achievement in Further Education Colleges*, Basic Skills Agency, London.
- CEDEFOP (2012), “Future skills supply and demand in Europe: Forecast 2012”, Research Paper No. 26, Publications Office of the European Union, Luxembourg.
- Dunkel, T. and I. Le Mouillour (2009), “Through the looking glass: diversification and differentiation in vocational and training and higher education” in CEDEFOP (2009), *Modernising Vocational Education and Training, Fourth Report on Vocational Training Research in Europe, Background Report, Vol. 2.* [www.cedefop.europa.eu/EN/publications/5073.aspx](http://www.cedefop.europa.eu/EN/publications/5073.aspx).
- Eurydice (2015a), “Organisation of Post-Secondary Non-Tertiary Education”, Website [https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Finland:Organisation\\_of\\_Post-Secondary\\_Non-Tertiary\\_Education](https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Finland:Organisation_of_Post-Secondary_Non-Tertiary_Education) (accessed on April 1<sup>st</sup> 2015).
- Eurydice (2015b), “Teaching and Learning in Vocational and Technical Upper Secondary Education”, Website, [https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Finland:Teaching\\_and\\_Learning\\_in\\_Vocational\\_and\\_Technical\\_Upper\\_Secondary\\_Education](https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Finland:Teaching_and_Learning_in_Vocational_and_Technical_Upper_Secondary_Education), (accessed on April 1<sup>st</sup> 2015).
- Finnish National Board of Education (2010), *Vocational Education and Training in Finland. Vocational Competence, Knowledge and Skills for Working Life and Further studies*, Website [http://www.oph.fi/download/131431\\_vocational\\_education\\_and\\_training\\_in\\_finland.pdf](http://www.oph.fi/download/131431_vocational_education_and_training_in_finland.pdf) (accessed May 11<sup>th</sup> 2015).
- Finnish Education Evaluation Centre (2014), “Perusopetuksen Matematiikan Oppimustulosten Piktittäisarviointivuosina 2005-2012”, Report, <http://karvi.fi/app/uploads/2014/09/OPH-0113.pdf>.
- Finnish Education Evaluation Centre (2015), “Educational paths between vocational education and training (VET) and universities of applied sciences as well as working life cooperation”, <http://karvi.fi/en/event/educational-paths-between-vocational-education-and-training-vet-and-universities-of-applied-sciences-as-well-as-working-life-cooperation/> (accessed September 21<sup>st</sup> 2015).
- Finnish National Board of Education (2015), “Näyttötutkintojärjestelmä 20 Vuotta Historia ja vaikuttavuus”, Report, [http://www.oph.fi/download/166215\\_nayttotutkintojarjestelma\\_20\\_vuotta.pdf](http://www.oph.fi/download/166215_nayttotutkintojarjestelma_20_vuotta.pdf).
- Hyvönen, H. (2015), “How is it going with the Young Adults' Skills Programme?”, Blog post,

[http://www.nuorisotakuu.fi/en/youth\\_guarantee/information/news/guaranteed\\_for\\_you\\_th!\\_blog/how\\_is\\_it\\_going\\_with\\_the\\_young\\_adults\\_skills\\_programme.117505.blog](http://www.nuorisotakuu.fi/en/youth_guarantee/information/news/guaranteed_for_you_th!_blog/how_is_it_going_with_the_young_adults_skills_programme.117505.blog) (accessed on 24 June 2015).

- International Bureau of Education (2001), “The Development of Education: National report of Finland”, Report, [http://www.ibe.unesco.org/National\\_Reports/ICE\\_2001/Finland.pdf](http://www.ibe.unesco.org/National_Reports/ICE_2001/Finland.pdf).
- Köllő, J. (2006), “Workplace Literacy Requirements and Unskilled Employment in East-Central and Western Europe”, Budapest Working Papers on the Labour Market 2006/07, Institute of Economics, Hungarian Academy of Sciences, Budapest.
- Kuczera, M (2013), *A Skills beyond School Commentary on Sweden*, OECD Reviews of Vocational Education and Training, <http://www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnSweden.pdf>.
- Kuczera, M. (2008), “VET in PISA: Results from PISA 2003 and 2006”, <http://www.oecd.org/edu/skills-beyond-school/41538731.pdf>.
- Levy, F. and R.J. Murnane (2004), “Education and the Changing Job Market”, Educational Leadership.
- Ministry of Education and Culture (2012), “The Youth Guarantee in Finland”, [http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2013/liitteet/The\\_Youth\\_Guarantee\\_in\\_Finland.pdf?lang=fi](http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2013/liitteet/The_Youth_Guarantee_in_Finland.pdf?lang=fi).
- Ministry of Education and Research Sweden (2013), *Skills beyond School. OECD Review of Vocational Education and Training. Background Report from Sweden*, <http://www.oecd.org/edu/skills-beyond-school/SkillsBeyondSchoolSwedishBackgroundReport.pdf>.
- Ministry of Employment and the Economy (2012), “Young people guarantee 2013”, [http://www.tem.fi/files/34025/Social\\_guarantee\\_for\\_young%20people\\_2013.pdf](http://www.tem.fi/files/34025/Social_guarantee_for_young%20people_2013.pdf).
- OECD (2015a), Unemployment rate (indicator). doi: 10.1787/997c8750-en (Accessed on 17 September 2015) .
- OECD (2015b), OECD Skills Outlook 2015: Youth, Skills and Employability, OECD Publishing. <http://dx.doi.org/10.1787/9789264234178-en>.
- OECD (2014), Skills beyond School: Synthesis Report, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264214682-en>.
- OECD (2010), Learning for Jobs, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, doi: <http://dx.doi.org/10.1787/9789264087460-en>.
- OECD (2008), OECD Economic Surveys: Finland 2008, OECD Publishing, Paris. DOI: [http://dx.doi.org/10.1787/eco\\_surveys-fin-2008-en](http://dx.doi.org/10.1787/eco_surveys-fin-2008-en).
- Prime Minister’s Office (2015), “Finland, a land of solutions”, Strategic Programme of Prime Minister Juha Sipilä’s Government [http://vnk.fi/documents/10616/1095776/Ratkaisujen+Suomi\\_EN.pdf/c2f3123a-d891-4451-884a-a8cb6c747ddd?version=1.0](http://vnk.fi/documents/10616/1095776/Ratkaisujen+Suomi_EN.pdf/c2f3123a-d891-4451-884a-a8cb6c747ddd?version=1.0).
- Quintini, G. and T. Manfredi (2009), “Going Separate Ways? School-to-Work Transitions in the United States and Europe”, OECD Social, Employment and

Migration Working Papers, No. 90, OECD Publishing.  
<http://dx.doi.org/10.1787/221717700447> .

- Smits, W. (2007), “Industry-specific or Generic Skills? Conflicting Interests of Firms and Workers”, *Labour Economics*, No. 14, pp. 653-663.
- Spangar, T. (2012), “The German Dual Training System from a Finnish Perceptive: Peer review“, ‘The dual training system – Integration of young people into the labour market’, European Community Programme for Employment and Social Solidarity.
- Statistics Finland (2015), Population by age group, end-2014, [http://www.stat.fi/tup/suoluk/suoluk\\_vaesto\\_en.html](http://www.stat.fi/tup/suoluk/suoluk_vaesto_en.html) (accessed on 23 June 2015).
- Statistics Finland (2014), Progress of studies 2012, [http://tilastokeskus.fi/til/opku/2012/opku\\_2012\\_2014-03-20\\_tie\\_001\\_en.html](http://tilastokeskus.fi/til/opku/2012/opku_2012_2014-03-20_tie_001_en.html) (accessed on 23 June 2015).
- Stenström, M.-L. and M. Virolainen (2014), “The Current State and Challenges of Vocational Education and Training in Finland”, The Finnish Country report 1B. Nord-VET - The future of Vocational Education in the Nordic countries, Country reports. Retrieved from [http://nord-vet.dk/indhold/uploads/report1b\\_fi.pdf](http://nord-vet.dk/indhold/uploads/report1b_fi.pdf).
- Technopolis Group (2015), “Towards a future proof system for higher education and research in Finland”, Report commissioned by the Ministry of Education and Culture.
- Virolainen, M. and M.-L. Stenström (2015), “Recent Finnish VET Reforms and Innovations: Tackling The Current Challenges”, The Finnish Country report 1C. Nord-VET - The future of VET in the Nordic Countries. Country reports. Retrieved from [http://nord-vet.dk/indhold/uploads/report1c\\_fin.pdf](http://nord-vet.dk/indhold/uploads/report1c_fin.pdf).
- Virtanen, A. (2015), “Students’ experiences of workplace learning in Finnish VET”, Institute for Educational Research, University of Jyväskylä.
- World Bank (2012), *World Development Report 2013: Jobs*, World Bank, Washington DC, doi: <http://dx.doi.org/10.1596/978-0-8213-9575-2>.

## Chapter 4

### Programmes for migrants

*Migrants are a small but growing group in Finland, and as in other countries they face integration challenges, with high rates of unemployment, and 55 % have low foundation skills, when tested in Finnish or Swedish. In Finland's impressively systematic approach, an integration plan, including a substantial training programme, is prepared for each migrant. This approach could be enhanced through a more personalised approach to training to take account of the diversity of need, while giving more emphasis to language learning and targeted vocational training. Part-time provision, particularly in language skills, could be developed. Language skills could also be developed in combination with vocational skills, and through the workplace. Migrants might also be assisted by better recognition of the skills and qualifications acquired abroad, and through family literacy programmes.*

The Statistical data for Israel are supplied by and under the responsibility of the relevant Israeli Authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israel settlements in the West Bank under the terms of International law.

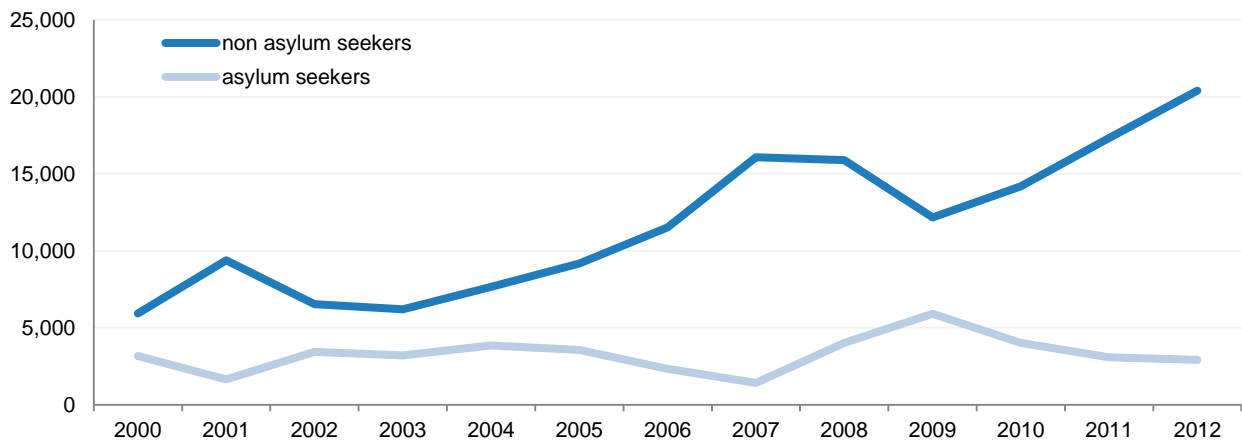
## Challenge: weak foundation skills among some migrants

### *Immigration is a relatively recent phenomenon*

For most of its history Finland has been a country of emigration. Genuine immigration only began in the early 1990s, after which the migrant population grew very fast, particularly after 2005 (see Figure 4.1). Almost 40% of migrants in Finland have been in the country for less than 5 years (OECD, 2014a). But the migrant share of the population is still relatively low, at about 5%, compared to an average of 12% in OECD countries. Finland has a rapidly ageing population, with falling numbers of young people entering the workforce and some emerging skills shortages in particular sectors. Effective policies to integrate migrants might therefore not only contribute to social inclusion but also benefit the economy by adding a new source of young skilled people (see Hanhijoki et al., 2012). A central element in the effective integration of migrants is the acquisition of good Finnish alongside other foundation skills.

**Figure 4.1 Migrant inflows have been increasing**

Annual inflows of migrants to Finland including asylum seekers, 2000-2012



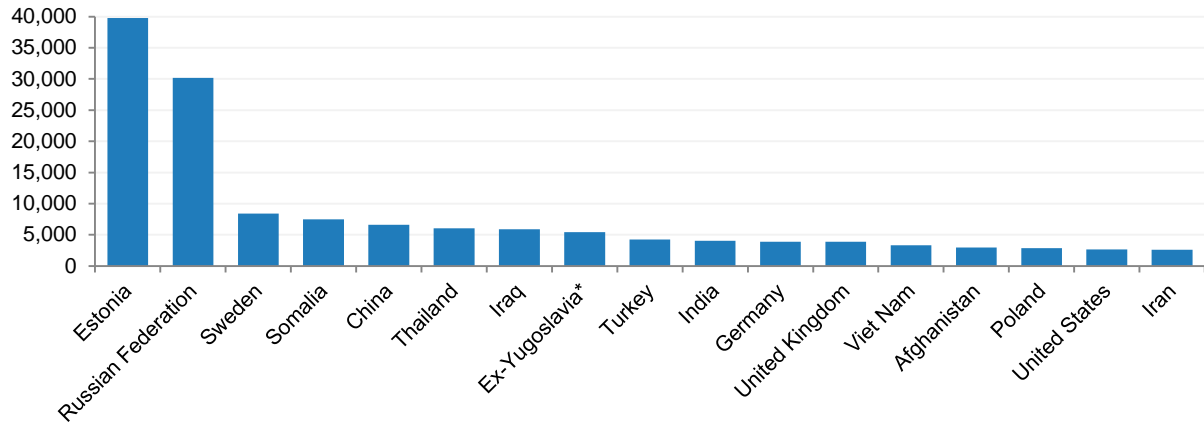
Source: OECD International Migration Database, <https://stats.oecd.org/Index.aspx?DataSetCode=MIG>

### *The composition of Finland's foreign-born population is diverse*

The profile of migrants is very different from those in many other OECD countries, with few work migrants (see Figure 4.3). The largest migrant group is Estonians who share strong linguistic and cultural links with Finland (as well as geographical proximity) followed by Russians of Finnish ancestry (Ingrians and Karelians) who began arriving after the collapse of the Soviet Union in 1991 (see Figure 4.2). Western European migrants typically reside in Finland for work or family/marriage reasons and include many Swedes. Finally, there are humanitarian migrants from the Horn of Africa, former Yugoslavia, Iran and Iraq. This often quite disadvantaged group faces many integration challenges (OECD, 2008 ; Sarvimaki, 2010). Humanitarian migrants and family reunion migrants often tend to have more difficulties integrating into the labour market than work migrants (Koskela, 2014 ; Damos de Matos and Liebig, 2014)<sup>1</sup>.

**Figure 4.2 Many migrants in Finland come from Estonia and the Russian Federation**

Stock of foreign population in Finland by nationality, 2012



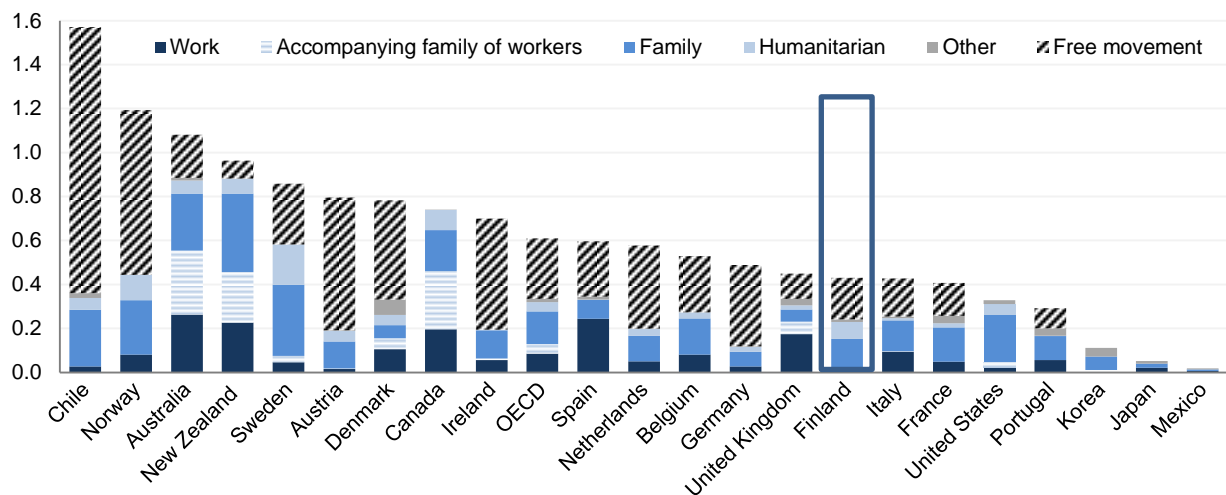
Note: Ex-Yugoslavia includes Serbia, Montenegro, Croatia, Bosnia and Herzegovina and Former Yug. Rep. of Macedonia

Source OECD International Migration Database, <https://stats.oecd.org/Index.aspx?DataSetCode=MIG>

**Figure 4.3 Finland has almost no work migrants**

Permanent immigration to Finland by category of entry, 2012

% of total population



Note: “Free movement” migrants –coming from other EU countries are authorized to work in Finland – and many do work.

The values are based on standardised data. The OECD average is the unweighted average of the countries presented in the figure. The European Union values refer to the European Union countries included in the figure.

Source: OECD (2014a), International Migration Outlook 2014, OECD Publishing, Paris, [http://dx.doi.org/10.1787/migr\\_outlook-2014-en](http://dx.doi.org/10.1787/migr_outlook-2014-en).

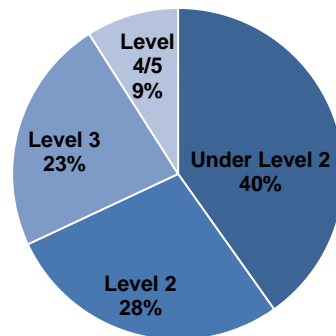
## *Education and skills of migrants in Finland*

### *Migrants are on average less educated and have weaker foundation skills*

In Finland 40% of migrants have weak skills in either literacy or numeracy (under level 2), compared to 11% of the native-born, and 28% at level 2, although some also have very high skills; almost 10% of migrants in Finland score at level 4/5 (see Figure 4.4). One estimate suggests that 60% of the immigrants arriving in Finland between 2000 and 2005 had little education beyond the basic level (OECD, 2008). Bonfanti and Xenogiani (2014), using the Adult Skills Survey, found that immigrants have – on average – lower foundation skills than their native-born counterparts in all countries, including Finland, independently of formal education levels.

**Figure 4.4 How do migrants in Finland perform in numeracy?**

Share of migrants at different levels in numeracy



Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

### *Migrants take time to learn a new language and acquire literacy skills*

In Finland, as in other countries, foreign-born adults have weaker literacy skills than native-born adults (see Figure 1.8). The score difference in literacy is 51 points, which is the second highest in all participating OECD countries, reflecting a relatively disadvantaged migrant population, at least in respect of a test administered in Finnish or Swedish. Research shows, as might be expected, that migrants who are illiterate in their native language are much less likely to acquire literacy skills in a new language (Dustmann, 1994 in Germany; Ingersoll, 2011 in the US; Fanta-Vagenshtein, 2011 in Israel). It takes time to learn a language: recent immigrants to Finland score badly: at or near the bottom of Level 1, on average; while longer-established migrants have significantly higher scores (Bonfanti and Xenogiani, 2014). This last finding may also reflect some changes in the composition of immigration over time.

### *A key issue is whether second generation migrants make progress relative to their parents*

Evidence from both PISA and the Survey of Adult Skills shows that across countries, the children of immigrants tend to have lower educational outcomes than their peers

whose parents are not migrants. The finding may not be surprising for children who have themselves immigrated, particularly those who arrive towards the end of the obligatory schooling age. Yet, even the native-born children of immigrants show lower educational outcomes in Finland than in many other countries, even when taking into account differences in SES (OECD, 2013b). The children of immigrants are overrepresented among NEETs in Finland, by a factor of more than two (see Figure 2.15 in Liebig and Huddleston, 2014).

***Poor labour market performance of migrants, in part explained by weak foundation skills***

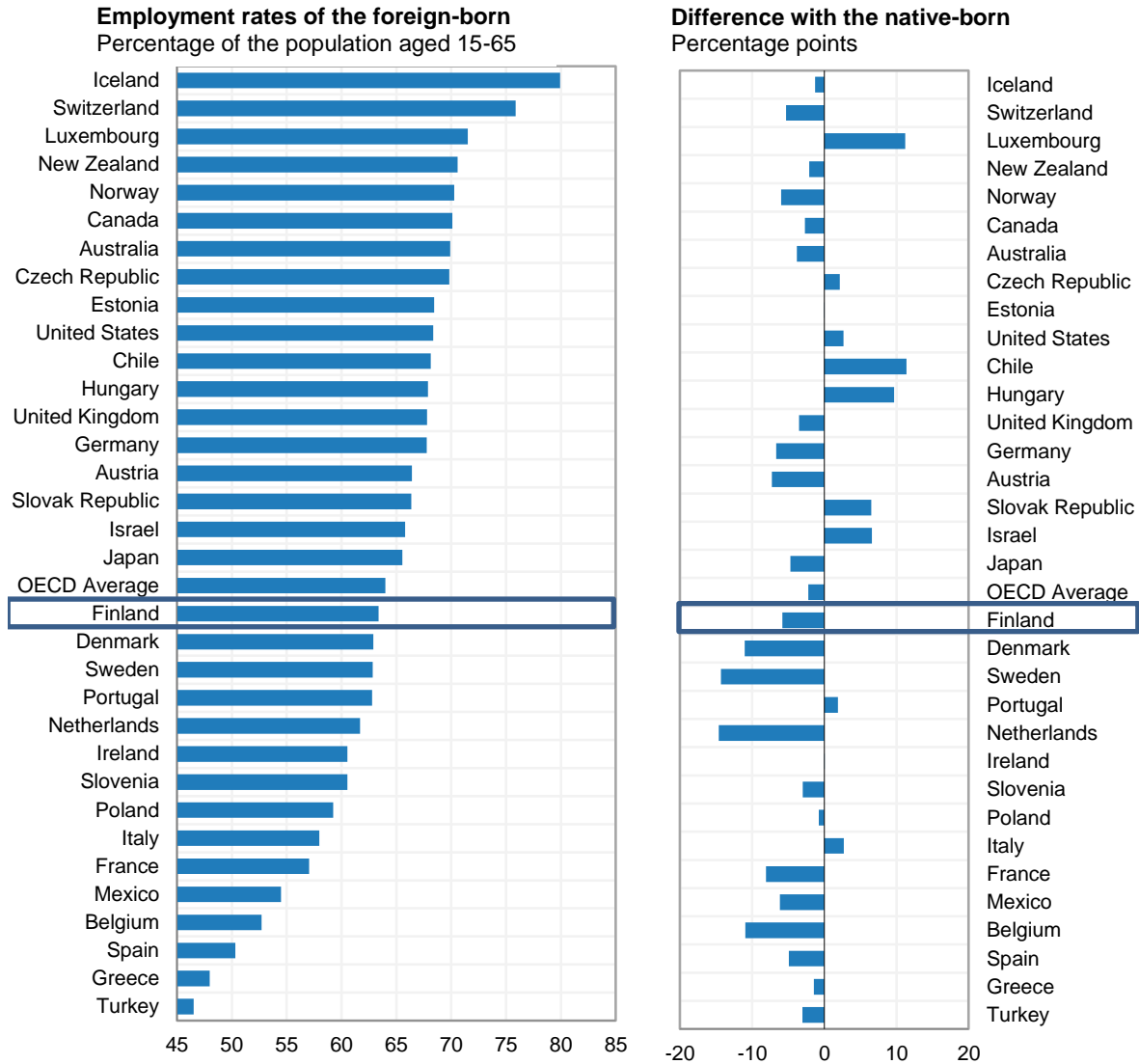
*Migrants have an unemployment rate three times higher than the native-born*

In Finland, as in most countries, most (63%) of the migrants have jobs, only slightly less (69%) than the native-born (see Figure 4.5). But the unemployment rate of migrants is two times higher than that of the native population (see Table 2.A1.12 in OECD, 2014a). In all OECD participating countries, including Finland, literacy and numeracy is correlated with both the probability of employment and wages. Although migrant employment rates rise with their education levels, they do so to a lesser degree than those of the native-born, meaning that the employment gap widens with educational attainment (see Bonfanti and Xenogiani, 2014, for more information about this).



**Figure 4.5 In Finland migrants have a lower employment rate than the native-born**

Employment rates of the foreign-born in contrast to those of the native-born, 2013



Source: OECD (2014a), International Migration Outlook 2014, OECD Publishing, Paris, [http://dx.doi.org/10.1787/migr\\_outlook-2014-en](http://dx.doi.org/10.1787/migr_outlook-2014-en) .

Note: The Statistical data for Israel are supplied by and under the responsibility of the relevant Israeli Authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israel settlements in the West Bank under the terms of International law

*Only migrants from OECD countries eventually attain the wage levels of the native-born*

Using longitudinal administrative Finnish panel data, Sarvimaki (2010) found that upon arrival migrant employment rates start low and then gradually increase. But among the different migrant groups, only the earnings of migrant men from other OECD countries converged to the earnings of comparable natives within 20 years of arrival.

Parallel studies in other countries have reached similar results (see for example, Chiswick and Repetto, 2000, on Israel; and Ferrer et al., 2006 on Ontario, Canada).

*Migrant workers are concentrated in certain economic sectors*

While the number of foreign workers in Finland has been increasing, total numbers still remain relatively small. The foreign-born workers are concentrated in the “other service sector” (which excludes the health, retail and hospitality sectors but does include the domestic help sector). There is also a sizable proportion in the mining, manufacturing and energy sectors. Another notable feature of foreign-born workers is the prominence of temporary and part-time employment. Around a third of all foreign-born workers are engaged on a temporary basis, double the rate of native-born workers (OECD, 2008). These factors explain, at least partly, weak labour market outcomes. For any given level of education, migrant employees are more often to be found in low-skilled or low-quality jobs than the native-born. This may reflect the fact that many arrivals with university degrees are humanitarian immigrants. While some country-specific skills do not transfer to Finland, other potentially valuable skills may simply not be certified and recognised by Finnish employers (Liebig and Huddleston, 2014).

***Integration in Finland may not take sufficient advantage of the skills of the migrants***

*Migrants are currently offered an ‘integration plan’*

When granted residence permits, all immigrants are provided with information about Finnish society and their rights and obligations, and are entitled to a basic assessment of their situation and need for integration services<sup>2</sup>. This assessment is usually undertaken at the employment office or by the local municipal authorities, and can include language testing. Based on this assessment, an integration plan can be drawn up between the migrant and the employment office or the municipality. The plan typically covers between one and three years, and the plan is monitored and updated as necessary. In some cases the plan can go up to 5 years<sup>3</sup> (Heinonen, 2013).

*The core of the plan is integration training*

Training is usually managed by the local employment authorities and delivered in an adult education institution over 1-2 years. The content is variable – as it depends on the municipality, but the main contents are normally Finnish/Swedish language<sup>4</sup> communication, ICT and study skills, and skills for working and civic life. Students can be guided towards basic, slow or fast track pathways, according to their assessed skills levels (Finnish National Board of Education, 2012). In an education provider, this will translate into full-time programmes that last 240 days for the basic track, and 270 days for the slow track (see Tampere Adult Education centre, 2015). Migrants participating in the integration training are provided with information and feedback about their vocational skills and suitability for the Finnish labour market (Finnish National Board of Education, 2012). But the emphasis is primarily familiarisation with Finnish work culture, rather than specific occupational skills. Integration training also includes a job placement of at least 6 weeks.

*International experience suggests that integration should emphasise labour market training*

A review of migrant integration policies in a range of OECD countries found that training offered to migrants needs to account for different needs and should be geared towards labour market integration – including the provision of language training relevant to target occupations, ideally on-the-job. Immigrants are also more likely to be motivated by language training if it is adapted to their career needs (OECD, 2014a). But with minor adjustments migrants could be better equipped with the labour market skills that would most assist their integration. Evaluation of the impact of integration plans on labour market inclusion among male migrants in Finland showed that participation in plans substantially increased employment and annual earnings, and reduced dependency on social benefits, probably because very often integration plans led to, but did not directly include, labour market training programmes (Sarvimäki and Hämäläinen, 2011).

*Other programmes are available for migrants*

These include:

- Pre-primary and basic education programmes for migrants with Finnish/Swedish language or other skills insufficient to study in a pre-primary or basic education group (Finnish National Board of Education, 2009).
- Preparatory education programmes for migrants designed to improve language and other skills up to the level required for vocational and general upper secondary studies. These take between six months and a year (Finnish National Board of Education, 2011).
- Literacy programmes (Finnish National Board of Education, 2012).

*Education providers reported meeting well the needs of migrants*

A recent evaluation found that education providers at all education levels and the students were generally satisfied with the way programmes for migrants were designed, and education institutions reported that they meet the needs of migrant students well – the exception being the providers with larger groups (more than 50) of migrant students; these providers reported more difficulties. But provision was considered insufficient in areas with large migrant populations and many migrant students experience difficulties in the transition between basic education and upper secondary education, especially into vocational tracks. This evaluation did not cover programmes targeting adult migrants including integration training (Finnish Education Evaluation Centre, Pirinen, 2015)

*The integration programmes do not adapt sufficiently to the variable needs of migrants*

The extensive educational programme for migrants is commendable, and was praised in the OECD 2012 Migration Outlook (OECD, 2012). But while the integration programmes are impressively systematic, they are relatively rigid. Apart from the initial choice between the three tracks, the programmes follow a standard length and content – rather than being personalised to reflect diverse individual needs. They are quite long and therefore resource intensive and not available part-time. Many participants apparently drop out before the end of the programme to find employment which in some ways is

positive, but may leave the migrants lacking some relevant skills. The literacy programmes are at least one year long. Although all migrant groups are in theory eligible for the integration training, for those who start working, there is no alternative provision of language courses for migrants and so they have to drop out (Koskela, 2014).

*Finnish language training for migrants is inflexible and sometimes in short supply*

Finnish language skills are a basic requirement for working life as well as for further education. The starting point for migrants learning Finnish varies greatly according to the type of mother tongue and level of literacy in that language, familiarity with the roman alphabet, and study skills (Seppelin, 2010). The target level of Finnish for an individual migrant depends on their prior qualifications and their intended occupation. So language courses need to be more diverse and responsive to individual characteristics than is currently the case. This is especially a problem for those who are not registered as unemployed, and for those who are in employment. Observers of the system (see for example Koskela, 2014) and stakeholders during the OECD mission to Finland highlight insufficient provision: waiting lists of between six months and one year are reported (Helsinki Times, 2015).

**Recommendation: Personalise training for migrants, emphasising language and vocational skills**

- Personalise training programmes for adult migrants to reflect the needs of individuals, allowing part-time provision, and emphasising language provision and employability skills.

**Supporting arguments: building flexibility into integration training**

*Migrants would benefit from more personalised learning*

Migrants in Finland are very heterogeneous (and almost 10% of migrants are highly skilled – see Figure 4.4). This means that some could skip some of the steps of the integration training programme, saving resources, while others would benefit from a more specific focus on either Finnish language skills or other foundation skills such as numeracy, or employability skills. More training should be offered to migrants part-time and in the evening to serve those in employment.

*Better language skills can lead to better labour market integration*

Most immigrants have jobs, but the employment rates especially of highly educated migrants are lower than those of their native counterparts. And, even when they are employed, they have an almost 50% higher chance than non-migrants of being overqualified for their job. According to OECD calculations, immigrants who report language difficulties have over-qualification rates that are 25 percentage points higher than similar immigrants with stronger language skills (see Damas de Matos and Liebig, 2014). In the absence of relevant language skills, other skills and competences cannot be mobilised. Migrants to Spain who gained Spanish language proficiency earn 49 percentage points more if they are highly educated and 21 percentage points more if they are poorly-educated (Budría and Swedberg, 2012). For immigrant men from developing

countries in Norway, attending language courses enhanced both Norwegian proficiency and access to employment but had no measurable effect on earnings (Hayfron, 2001). Similarly, an assessment in Sweden of the long-term impact of language training on young migrants shows that it increases the likelihood of finding a job and of reaching a certain minimum income (Bonfanti and Nordlund, 2012).

*Given the good evidence on labour market returns, language training should be a priority*

Expectations of good quality jobs provide migrants with a strong incentive to attend language training, and a strong incentive for countries to offer them. This chapter recommends that in Finland such courses be made available on a flexible basis, outside the frame of integration training, targeted as a priority to people with good educational qualifications in their native countries, and young people, as returns are the highest for these two groups (see Chiswick, 1991, for evidence from the US; see Dustmann and Fabbri, 2003, for evidence from the UK). The voluntary sector could play an operational role in the delivery of these programmes. Illiteracy in the mother tongue creates particular challenges for migrants (Rinta, 2005). If this is seen as an obstacle in Finland, one option is literacy programmes in the migrant's native tongue (see Box 4.1). However this type of programmes needs to be weighed against more Finnish education in context of limited resources, as the relative pay-off of mother-tongue education in terms of integration into the Finnish labour market and society may not be evident.

#### **Box 4.1 A mother-tongue literacy programme for migrants in Israel**

Israel has a well-established Hebrew as a Second Language training system for new migrants called Ulpan, which is based on intensive language courses. But this system was designed mostly for literate and educated migrants, the majority of migrants to Israel. However, while the system is relatively successful with other migrants, it did not succeed with Ethiopian immigrants, who were mostly from rural areas, and very often illiterate in their mother tongue. Therefore, the study looks at an alternative model for teaching Hebrew to this population. This model was developed with the community to include materials, topics that are relevant to them and to be taught in hours and locations most suitable to their community. This model was piloted with 60 participants and has shown remarkable outcomes both in process indicators like attendance and in results of improving reading and writing skills, in both the migrants' native and second languages.

*Source:* Fanta-Vagenshtein, Y. (2011), "Literacy and second language intervention for adult Hebrew Second Language (HSL) Learners", *Journal of Language and Literacy Education*, Vol 7 (1), pp. 79-94.

*Consider programmes that combine language training, vocational skills and work experience*

A number of OECD countries are seeking to integrate migrants through the prioritisation of labour market integration, linked to language training (OECD, 2012). Following these examples, Finland could usefully give more attention in its integration policy to vocational and language skills. Research shows that programmes that combine language instruction and vocational training can help increase participants' interest, motivation and learning outcomes (McHugh and Challinor, 2011; also see Chapter 2 on the benefits of contextualised learning). Migrants learn a new language not only in the

classroom but also by using it, particularly in the workplace (see Wolf and Evans, 2011). But the speed of picking up a new language depends on features of home and work environment and how conducive they are to learning the language. One approach is to provide language training relevant to particular occupational sectors, ideally on-the-job. Tests of reading performance a year and two years after a 30-hour workplace course in England showed that English as a second language (ESL) learners had improved their reading skills more than native English speakers (Wolf and Evans, 2011) (see also Box 4.2 for an example of combined employment and language courses for newly arrived migrants in Sweden).

### *Foreign qualifications and skills could receive better recognition*

Effective procedures for recognising foreign qualifications are extremely important for migrants. Recent analysis suggests that highly educated migrants who have their qualifications assessed and formally recognised have better jobs – independent of their field of study and migrant category (Damos de Matos and Liebig, 2014). In Austria, Belgium, Germany, Ireland, the Netherlands and Sweden at least three quarters of tertiary-educated immigrants who sought recognition of their foreign qualifications were successful. In Finland there is a recognition system for foreign qualifications (Finnish National Board of Education, 2015). Also the competence-based qualifications for adults represent an ideal framework to take stock and make evident the skills of migrants; this should allow not only for recognition of foreign qualifications but also for recognition of informal prior learning (see Finnish National Board of Education, 2013, for a description of how migrants use this system). But little information is available on how many migrants actually prepare and pass the test<sup>5</sup>. In many countries few immigrants seem to benefit from such mechanisms possibly because the procedures involved in recognition of foreign qualifications can be obscure (Liebig and Huddleston, 2014).

#### **Box 4.2 “Step-in” jobs for migrants in Sweden**

A special labour market scheme called “Step-in” jobs was introduced in Sweden in 2007 to promote the integration of newly arrived immigrants in to the labour market. Step-in jobs are subsidised jobs in the public or the private sector offering newly arrived migrants the opportunity to combine language training with part-time employment. The wage subsidy amounts to 75 percent of the gross salary, and the salary is fixed in accordance with collective agreements in the labour market.

The Government’s ambition for 4,000 step-in jobs per month had failed to materialise in 2013, with the number in recent years hovering around 2,500. One reason is believed to be that step-in jobs compete with other forms of job subsidies that are more attractive for employers. A cap was implemented on the competing scheme in 2015.

Acknowledging the methodological difficulties<sup>6</sup> of evaluation, the Swedish National Audit Office shows that a step-in job increases the likelihood of getting into other types of subsidised employment, leading to the newcomer eventually approaching the regular labour market. The results, however, in whole or in part, may be because it is the most resourceful newcomers who have both the best chance of getting step-in jobs, and who later also have the best chance of getting regular jobs.

*Source:* OECD (2015), OECD Economic Surveys: Sweden 2015, OECD Publishing, Paris. [http://dx.doi.org/10.1787/eco\\_surveys-swe-2015-en](http://dx.doi.org/10.1787/eco_surveys-swe-2015-en) ; SNAO (2013), Ett steg in och en ny start – hur fungerar subventionerade anställningar för nyanlända? (One Step In and One Step Out – How Does Subsidised Employment for Newly Arrived Immigrants Work?), RiR 2013:17, Stockholm. [http://www.riksrevisionen.se/PageFiles/20054/summary\\_2013\\_17.pdf](http://www.riksrevisionen.se/PageFiles/20054/summary_2013_17.pdf) ; OECD (2014b), “Finding the Way: A Discussion of the Swedish Migrant Integration System”, Synthesis report, <http://www.oecd.org/els/mig/swedish-migrant-integration-system.pdf>

*Alternatives could be developed*

Family literacy and numeracy programmes, where children and parents develop their foundation skills together, seem to have multiple benefits. As explained in Chapter 2, well-designed programmes have been shown to promote child literacy and motivation and parents' capacity to support them.

## NOTES

- <sup>1</sup> 30% arrived as family migrants, 20% humanitarian migrants, and almost 50% free movement.
- <sup>2</sup> The Ministry of Employment and the Economy is responsible for the integration of immigrants. Regionally, responsibility for integration lies with the Centres for Economic Development, Transport and the Environment (public employment centres). The Ministry of Education and Culture, through its agency the National Board of Education, determines the curriculum of integration training, and other types of programmes specifically for migrants.
- <sup>3</sup> If the foreigner is in need of social benefits, the integration plan is the basis for benefits, and there is a possibility that social benefits will be reduced if the integration plan is not followed.
- <sup>4</sup> According to the Integration Act, the objective of integration training is for students to achieve skills level B1.1 in the Finnish/Swedish language (Finnish National Board of Education, 2012).
- <sup>5</sup> Statistics about adults enrolled in competence-based qualifications tell us that in 2012 4140 adults who were not Finnish or Swedish native speakers – about 5% of all participants - prepared for competence-based qualifications. However not much more information is available about them and their trajectories in Finland.
- <sup>6</sup> To determine the extent to which step-in jobs have contributed, one must compare the results for those who have had step-in jobs with a group of otherwise comparable individuals who have not had step-in jobs. When step-in jobs for new arrivals were introduced, the Government chose an arrangement wherein no comparison groups are created.



## *References*

- Bonfanti, S. and T. Xenogiani (2014), “Migrants' skills: Use, mismatch and labour market outcomes – A first exploration of the International Survey of Adult Skills (PIAAC)”, in OECD/European Union, Matching Economic Migration with Labour Market Needs, *OECD Publishing*. <http://dx.doi.org/10.1787/9789264216501-11-en>.
- Bonfanti, S. and M. Nordlund (2012), “Does ‘Swedish For Immigrants’ (SFI) Matter? A Longitudinal Assessment of the Impact of SFI on Migrants’ Position in the Swedish Labour Market”, *Economic Science Department Working Paper*, No. 24/2012, University of Florence.
- Budría, S., and P. Swedberg (2012), “The impact of language proficiency on immigrants' earnings in Spain”, (No. 6957) *IZA Discussion Paper Series*.
- Chiswick, B. R. (1991), “Speaking, reading, and earnings among low-skilled immigrants”, *Journal of Labor Economics*, 149-170.
- Chiswick, B. R., and G. Repetto (2000), “Immigrant adjustment in Israel: literacy and fluency in Hebrew and earnings”, *IZA Discussion paper series* n° 177.
- Damas de Matos, A. and T. Liebig (2014), "The qualifications of immigrants and their value in the labour market: A comparison of Europe and the United States", in OECD and European Union, Matching Economic Migration with Labour Market Needs, OECD Publishing, Paris.  
<http://dx.doi.org/10.1787/9789264216501-9-en>.
- Dustmann, C. (1994), “Speaking fluency, writing fluency and earnings of migrants”, *Journal of Population economics*, 7(2), 133-156.
- Dustmann, C., and F. Fabbri (2003), “Language proficiency and labour market performance of immigrants in the UK”, *The Economic Journal*, 113(489), 695-717.
- Fanta-Vagenshtein, Y. (2011), “Literacy and second language intervention for adult Hebrew Second Language (HSL) Learners”, *Journal of Language and Literacy Education*, Vol 7 (1), pp. 79-94.
- Finnish National Board of Education (2015), “Recognition and International Comparability of Qualifications”, <http://www.oph.fi/english/services/recognition>.
- Finnish National Board of Education (2013), “Competence-Based Qualification Guide”, Appendix 5, [http://www.oph.fi/download/156393\\_Compotence-based\\_qualification\\_guide\\_2.pdf](http://www.oph.fi/download/156393_Compotence-based_qualification_guide_2.pdf).
- Finnish Board of Education (2012), “National Core Curriculum for Literary Training for Adult Migrants”,  
[http://www.oph.fi/download/140756\\_national\\_core\\_curriculum\\_for\\_literacy\\_training\\_for\\_adult\\_immigrants\\_2012.pdf](http://www.oph.fi/download/140756_national_core_curriculum_for_literacy_training_for_adult_immigrants_2012.pdf).
- Finnish National Board of Education (2012), “National Core Curriculum for Integration Training for Adult Migrants”,

[http://www.oph.fi/download/140755\\_national\\_core\\_curriculum\\_for\\_integration\\_training\\_for\\_adult\\_immigrants\\_2012.pdf](http://www.oph.fi/download/140755_national_core_curriculum_for_integration_training_for_adult_immigrants_2012.pdf)

- Finnish National Board of Education (2011), “Preparatory Instruction and Guidance”, [http://www.oph.fi/download/132290\\_brochure\\_preparatory\\_instruction\\_and\\_guidance.pdf](http://www.oph.fi/download/132290_brochure_preparatory_instruction_and_guidance.pdf).
- Finnish National Board of Education (2009), “National Core Curriculum for Instruction Preparing for Basic Education”, [www.oph.fi/download/138886\\_national\\_core\\_curriculum\\_for\\_instruction\\_preparing\\_for\\_basic\\_education\\_2009.pdf](http://www.oph.fi/download/138886_national_core_curriculum_for_instruction_preparing_for_basic_education_2009.pdf).
- Hanhijoki, I. et al. (2012), “Education, Training, and Demand for Labour in Finland by 2020”, Publication n° 16, Finnish National Board of Education, Helsinki.
- Hayfron, J. E. (2001), “Language training, language proficiency and earnings of immigrants in Norway”, *Applied Economics*, 33(15), 1971-1979.
- Heikkilä, E. (2012), “Labour Market Participation of Immigrants in Finland and its Regions”, Paper presented at the European Social Science History Conference, Glasgow, Scotland, UK, 11–14 April 2012.
- Heinonen, M. (2013), “Immigrant Families, Well-Being and Social Justice: a Finnish Perspective”, *PowerPoint Presentation presented at the Conference on Adapting to Changes in Family Migration: the Experiences of OECD Countries*, Washington DC.
- Helsinki Times (2015), “Immigrants face long wait for language courses”, newspaper article published on March 11th 2015., Accessed on June 8th 2015 at <http://www.helsinkitimes.fi/finland/finland-news/domestic/13278-immigrants-face-long-wait-for-language-courses.html>.
- Ingersoll, C. (2001), “Meeting the Language Needs of Low-Literacy Adult Immigrants in Washington, DC and Suburban Northern Virginia”, *ERIC Documents* <http://files.eric.ed.gov/fulltext/ED456676.pdf>.
- Koskela, K. (2014), “Integration Policies Finland Country Report”, INTERACT – Researching Third Country Nationals’ Integration as a Three-way Process - Immigrants, Countries of Emigration and Countries of Immigration as Actors of Integration, INTERACT Research Report 2014/29.
- Liebig, T. and Huddleston, T. (2014), *Labour Market Integration of Immigrants and their Children: Developing, Activating and Using Skills*, in OECD, *International Migration Outlook 2014*, OECD Publishing, Paris. [http://dx.doi.org/10.1787/migr\\_outlook-2014-5-en](http://dx.doi.org/10.1787/migr_outlook-2014-5-en).
- McHugh, M., and A. Challinor (2011), “Improving immigrants’ employment prospects through work-focused language instruction”, *Migration Policy Institute*.
- OECD (2015), *OECD Economic Surveys: Sweden 2015*, OECD Publishing, Paris. [http://dx.doi.org/10.1787/eco\\_surveys-swe-2015-en](http://dx.doi.org/10.1787/eco_surveys-swe-2015-en).
- OECD (2014a), *International Migration Outlook 2014*, OECD Publishing, Paris, [http://dx.doi.org/10.1787/migr\\_outlook-2014-en](http://dx.doi.org/10.1787/migr_outlook-2014-en).
- OECD (2014b), “Finding the Way: A Discussion of the Swedish Migrant Integration System”, Synthesis report, <http://www.oecd.org/els/mig/swedish-migrant-integration-system.pdf>.

- OECD (2013a), *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*, OECD Publishing, Paris.  
<http://dx.doi.org/10.1787/9789264204256-en>.
- OECD (2013b), *PISA 2012 Results: Excellence Through Equity: Giving Every Student the Chance to Succeed (Volume II)*, PISA, OECD Publishing, Paris.  
<http://dx.doi.org/10.1787/9789264201132-en>.
- OECD (2012), *International Migration Outlook 2012*, OECD Publishing, Paris.  
 DOI: [http://dx.doi.org/10.1787/migr\\_outlook-2012-en](http://dx.doi.org/10.1787/migr_outlook-2012-en).
- OECD (2008), “Accessing and integrating foreign labour”, in OECD Economic Surveys: Finland 2008, OECD Publishing, Paris.. [http://dx.doi.org/10.1787/eco\\_surveys-fin-2008-9-en](http://dx.doi.org/10.1787/eco_surveys-fin-2008-9-en).
- Pirinen, T. (2015), “Learners with immigrant backgrounds within the Finnish education system – Evaluation on the access to education and the support during studies”, Finnish Education Evaluation Centre,  
[http://karvi.fi/app/uploads/2015/06/KARVI\\_1715.pdf](http://karvi.fi/app/uploads/2015/06/KARVI_1715.pdf).
- Rinta, L. M. (2005), “Literacy for Special Target Groups Migrants”, UNESCO Institute for Education.
- Sarvimäki, M. and K. Hämäläinen (2011), “Assimilating Immigrants The Impact of an Integration Program” Discussion Paper No. 2011-15, Norface Migration.
- Sarvimäki, M. (2011), “Assimilation to a Welfare State: Labor Market Performance and Use of Social Benefits by Immigrants to Finland”, *the Scandinavian Journal of Economics*, 113: 665–688. doi: <http://10.1111/j.1467-9442.2011.01652.x>.
- Seppelin, M. (2010), “Finnish Integration Policy: Act on the Integration of Immigrants and Reception of Asylum Seekers”, Paper Prepared in the Framework of Peer Review “Making Success of Integrating Immigrants into the Labour Market”, Norway.
- SNAO (2013), “Ett steg in och en ny start – hur fungerar subventionerade anställningar för nyanlända? (One Step In and One Step Out – How Does Subsidised Employment for Newly Arrived Immigrants Work?)”, RiR 17, Stockholm.  
[http://www.riksrevisionen.se/PageFiles/20054/summary\\_2013\\_17.pdf](http://www.riksrevisionen.se/PageFiles/20054/summary_2013_17.pdf).
- Tampere Adult Education centre (2015), “Integration training for adult migrants”, Website  
[http://www.takk.fi/koulutus/koulutukset/integration\\_training\\_for\\_adult\\_migrants.html](http://www.takk.fi/koulutus/koulutukset/integration_training_for_adult_migrants.html)  
 (accessed 27 May 2015).
- Wolf, A. and K. Evans (2011), *Improving Literacy at Work*. Routledge, Abingdon.

## *Chapter 5*

### **Addressing the needs of older people**

*It is estimated that more than 800 000 people in Finland over the age of 55 (including those over 65 who were not covered by the Survey) have low foundation skills, potentially excluding them not only from the labour market, but also from civic participation. In the face of a rapidly ageing population, Finland aims to increase the labour market participation rate among older people. In support of this objective, both the foundation and digital skills of older Finns need to be sustained and if possible enhanced. The benefits would be, first, increased labour force participation, and second, better access to public services, where online provision is of growing importance. The workplace itself can be an important venue for the delivery of such training.*

## Challenge: an older generation with weak foundation skills

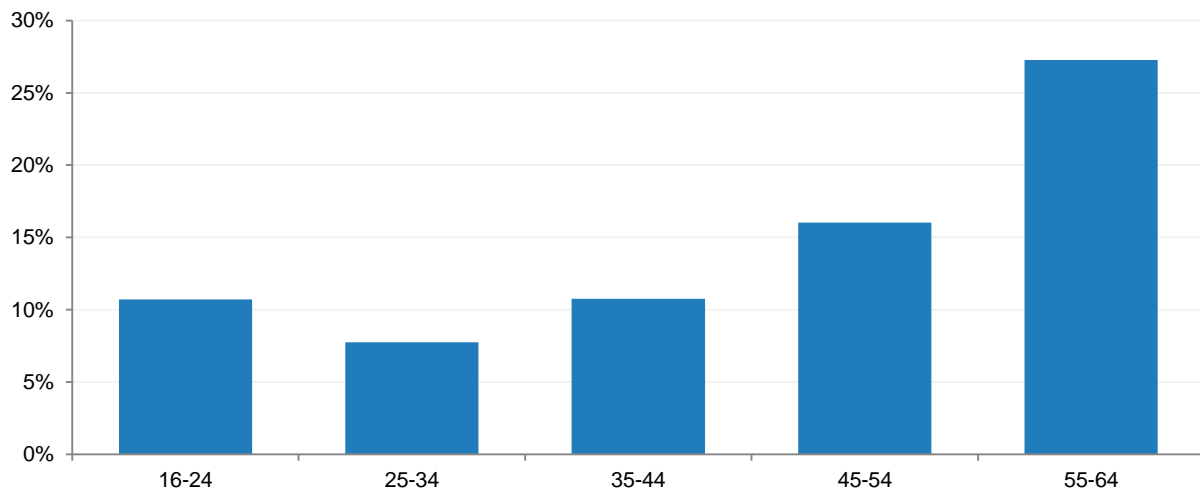
### *Foundation skills and employability*

*More than 800 000 people over 55 in Finland have low foundation skills*

Fully half of those aged 16-65 with low foundation skills are between 55 and 65 – this means 300 000 individuals. The population age 65 and over is not covered by the survey but it may be estimated that half of those over 65 have low foundation skills (based on what the survey tells us about those aged 55-65, and taking into account the fact that those over 65 have less formal education and that cognitive proficiency declines with age). This implies an additional 540 000 low skilled individuals over 65<sup>1</sup>. As shown by Figure 5.1, 27% of the 55-65 year olds, and 16% of the 45-54 year olds have low foundation skills. One implication is that approaching three quarters of all those with weak foundation skills are over 55.

**Figure 5.1 In Finland, more than one quarter of older people have low foundation skills**

Percentage of persons with numeracy or literacy below Level 2 in each age group



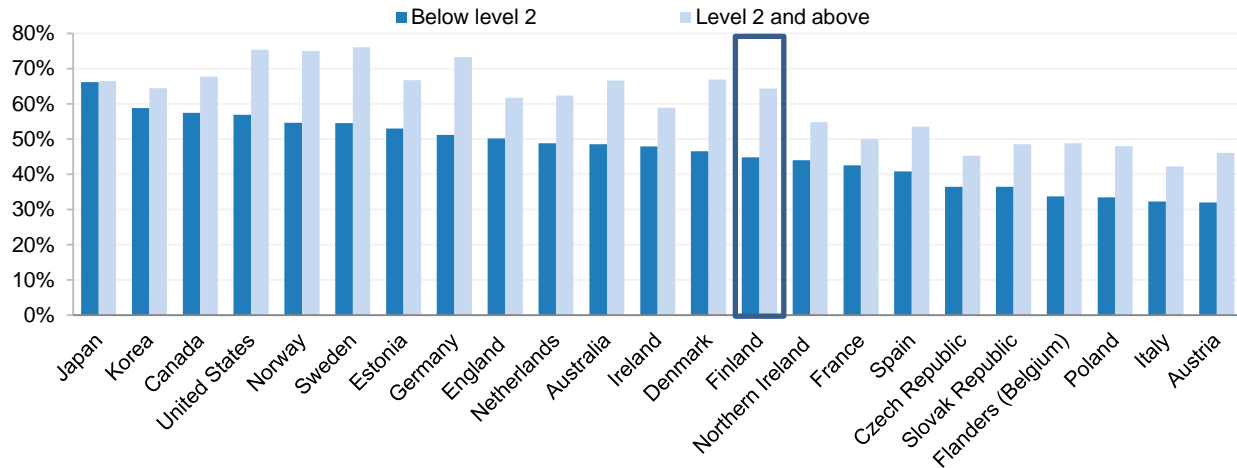
Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

### *Older people with weak foundation skills are less likely to be employed*

Of those aged 55-65 with low foundation skills, 42% are employed, 3% are unemployed, and 55% are out of the labour force. As shown by Figure 5.2, older workers with stronger foundation skills are much more likely to participate in the labour force with the difference being high by OECD standards (see Figure 5.2). So although this is correlation rather than causality, there is some evidence that strengthened foundation skills among older people would improve labour force participation

**Figure 5.2 Older workers with better skills tend to be more active in the labour market**

Percentage of labour market actives (employed and unemployed) 55-65 year-olds by skill level (literacy or/and numeracy)



Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

### *Unemployed older workers are often in long term unemployment*

Older workers (55+) are the most likely of any age category to be in long term unemployment, sometimes reflecting skills limitations<sup>2</sup>, limited access to training programmes, few digital skills and inadequate job search skills. But perceptions of older workers are also a barrier: they are seen, rightly or wrongly, as having few digital skills and lacking openness to new ideas<sup>3</sup> (OECD, 2014).

### **Digital skills**

#### *Despite extensive computer use in Finland, many older workers have limited digital skills*

About 80% of workers use computers at work in Finland (compared with an OECD participating countries average of 70%). Alongside email, half of the adult workforce uses spreadsheets at work at least once a month, and two thirds said that they use word processing at least once a month (OECD, 2015). Older workers are not always well-equipped to deal with these requirements: 18% of those aged 55-65 report no experience with a computer or failed the ICT core test, and only 9% scored at the highest levels of proficiency on digital skills (Level 2 and 3), implying that they do not have the skills needed for many ICT tasks that have become everyday tasks (OECD, 2015). This 9% compares to fully two thirds of the 16-34 year olds. These measures are consistent with how older workers perceive their own skills<sup>4</sup>. 10% of workers in Finland said that they lack the computer skills necessary for their jobs, more than the OECD average of 7%. But 20% of 55-65 year-olds and 15% of the 45-54 year-olds expressed this concern, compared to only 4% of those aged 25-34<sup>5</sup>. These questions involve self-reports which might be influenced by cultural factors; in some countries where computer use at work is not as common as in Finland, those who lack computer skills may feel (perhaps correctly) that they do not need them.

*Adults with low digital skills participate less in the labour market*

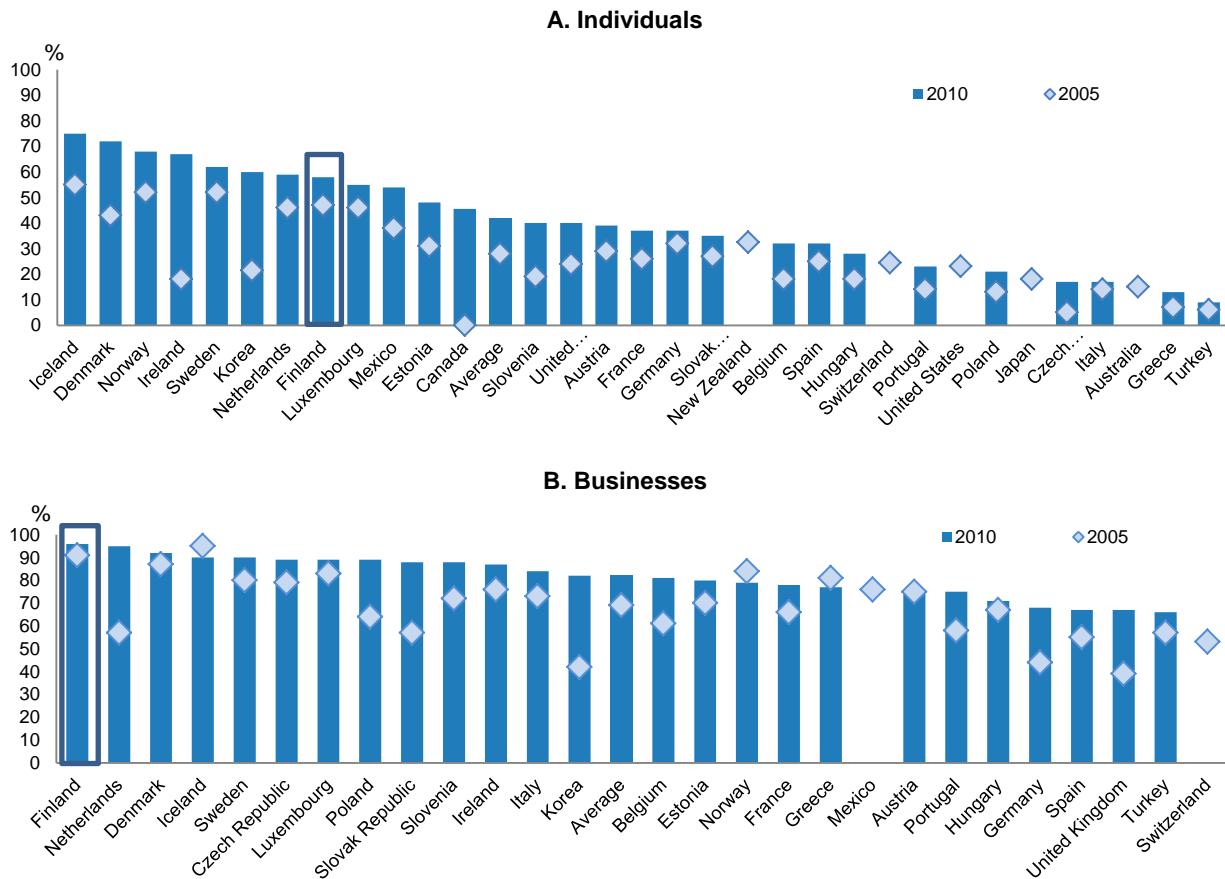
In Finland only one third of those with no computer experience, and 60% of those who failed the ICT core test participate in the labour market, compared with more than 90% of adults who have good digital skills<sup>6</sup>. The proportion of adults without *any* computer experience is of particular concern; in the 55-65 age bracket 11% were in that situation. Lack of computer experience is associated with substantially lower labour force participation and wages, even after accounting for other relevant factors including age (OECD, 2015). There remains some uncertainty on the extent to which computer skills have a direct influence on employment prospects, or are a correlate for factors like age and education attainment, and also other unobservable characteristics, such as motivation.

*As workplaces change and e-government develops, those with weak digital skills fall behind*

More than half of the workers in Finland reported that new processes or technologies had been introduced in their current workplace during the previous three years (with important differences between the different occupational categories), meaning that workers need to have the skills – including learning skills – to be able to adapt to change (PIAAC database). As work evolves to entail fewer routine tasks and more use of ICT, adults with weak digital skills will find it increasingly difficult to maintain their employability. Older people are also at risk when public services are provided online. 58% of citizens and 96% of businesses in Finland interacted with public authorities via the Internet in 2010, as shown in Figure 5.3.

**Figure 5.3 Finland is a leader in e-government**

Percentage of individuals and businesses using the Internet to interact with public authorities, 2005 and 2010



Notes: For Australia, Japan and the United States 2005 data refer to 2003. For Switzerland, 2005 data refer to 2004. For Denmark, Germany, France, Spain and New Zealand 2005 data refer to 2006. For Canada and Mexico, 2010 data refer to 2007. For Iceland 2010 data refer to 2009.

In Panel A, 2005 data is missing for Canada and 2010 data is missing for Australia, Japan, New Zealand, Switzerland and the United States. In Panel B, 2005 data is missing for Australia, Canada, Japan, New Zealand and the United States and 2010 data is missing for Australia, Canada, Japan, Mexico, New Zealand, Switzerland and the United States. Countries with missing data for both years in the same panel have been removed.

Source: OECD (2013), *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*. Figure 1.2 <http://dx.doi.org/10.1787/888932900251>

### ***Participation in training***

#### *Older people and those with low foundation skills are less likely to pursue adult learning*

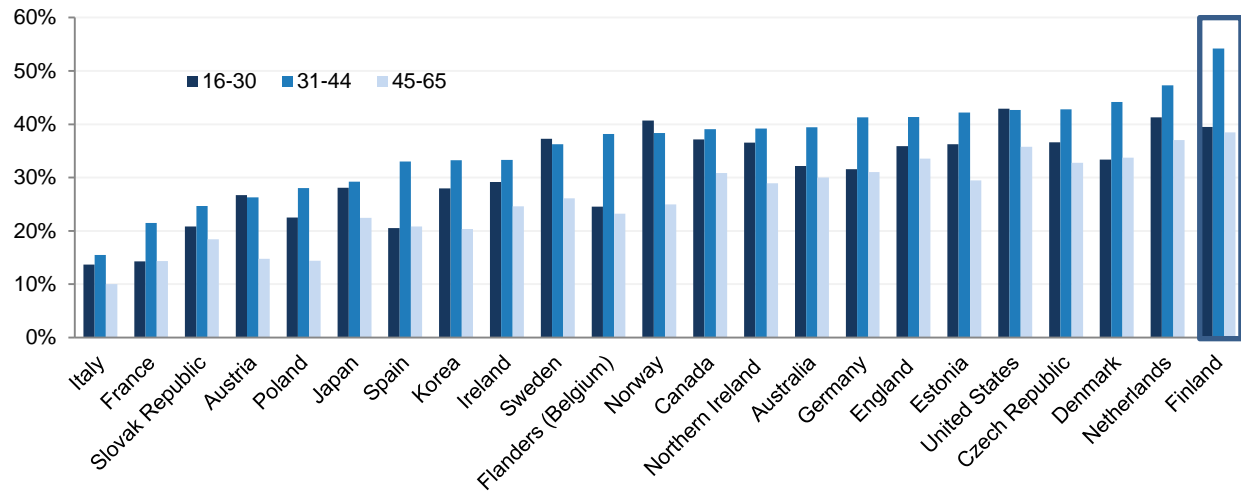
In Finland 10% of 35–65 year-olds participate in formal adult education, compared with one third of younger adults (OECD, 2013). Also, whereas almost half of the workers that do not have low foundation skills participate in on-the-job training, it is only the case for 20% of those with low foundation skills (see Figure 5.5). Similarly, adults with low



foundation skills participate less in adult education and training than those with better skills, and the difference in participation rates amongst the two groups is higher in Finland than it is in most countries (see Figure 2.1). There are also differences in participation rates by age in on-the-job training: participation is very high for 31-44 year olds but it is not the case for younger and especially for older workers (see Figure 5.4).

**Figure 5.4 Older workers participate less on average in training**

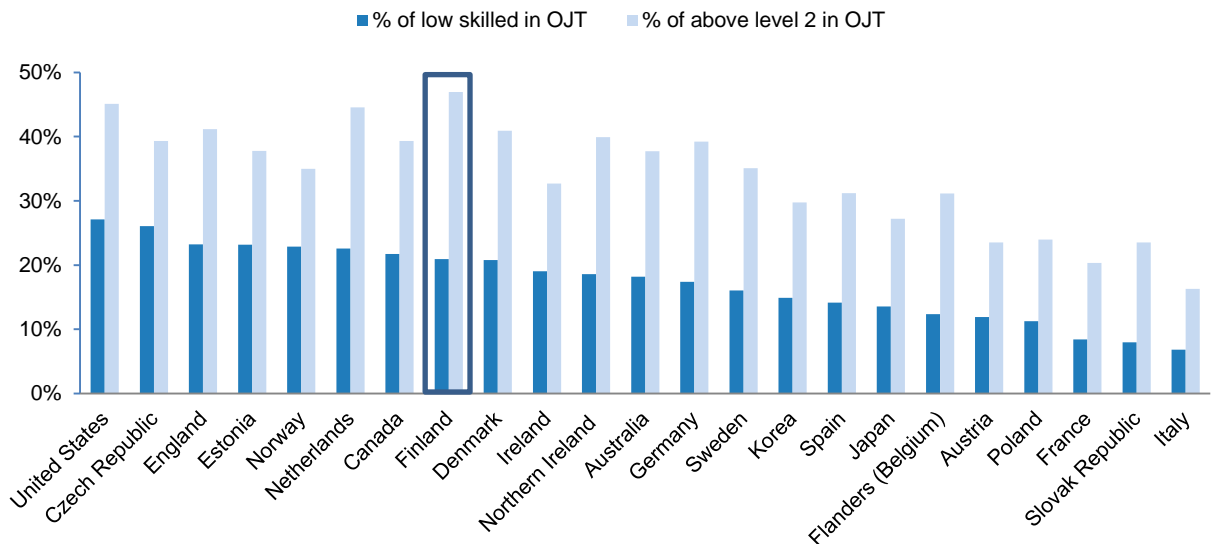
Percentage of adults participating in on-the-job (OJT) training by age



Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

**Figure 5.5 Those with low foundation skills are less likely to participate in on-the-job training**

Percentage of adults participating in on-the-job (OJT) training by skills level (literacy or numeracy)



Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

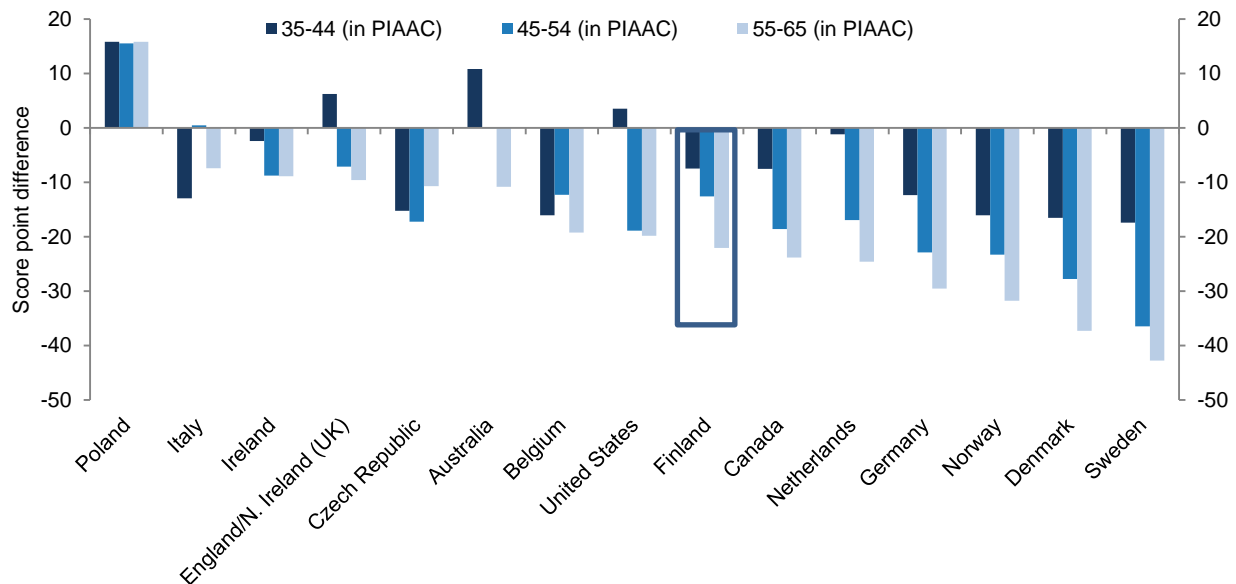
## Demographic pressures

*Finland's population is set to age rapidly and skills and productivity may decline with age*

Ageing will also put pressure on public finances (see OECD, 2014) and increase the tax burden on working adults. Both pressures could be alleviated by higher levels of labour force participation particularly among older people. Despite an increase in the labour force participation of those aged 55-65 to about 60%, the employability of older workers needs to be improved further. Foundation skills are relevant to this, since they support employability but are also at risk of decline with age (see Figure 5.6).

**Figure 5.6 How skills decline with age**

Changes in literacy proficiency observed over 16 years in particular age cohorts, comparing PIAAC to IALS.



Note. The analysis is carried out on native-born individuals only in order to net out the effect of immigration. Individuals in the three oldest age groups in the Survey (35-44, 45-54 and 55-65 years of age) were selected. Based on the year in which each country participated in IALS, the age these individuals had at the time of IALS was computed.

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) and IALS (1996) (database).

### *The observed cognitive decline with age may be a mix of social and biological factors*

Figure 5.6 shows a comparison of those aged 55-65 in PIAAC in 2012 with the equivalent cohort, then aged 39-49, in IALS 16 years earlier, showing a decline of about 25 score points in literacy. Overall the pattern supports the hypothesis that adult literacy skills deteriorate, particularly after the age of 40. While some of the cognitive decline may reflect inescapable biological change, much will also relate to factors which can be affected by policy measures. The incentives to pursue education and training decrease for older workers, because the returns must be realised over a shorter period; the opportunities to learn and maintain skills for many people also decrease as they grow older.

## Recommendations: give more attention to digital and foundation skills among older people

- Modify government-supported labour market training so that it more effectively meets the individual needs of older workers, focusing when needed on digital and foundation skills, sustaining participation in the labour market.
- Encourage adult education providers to provide support in foundation and digital skills to older people, especially to those out of the labour market, particularly given the role played by digital skills in accessing public services online.

## Supporting arguments: skills for employability and citizenship

### *Strengthening workers' foundation skills*

#### *Finland aims to increase the labour force participation of those over 55*

This policy objective is designed to mitigate the negative economic and social impacts of ageing populations. In an ideal world and a world of infinite public resources, foundation skills courses and ICT training would be available for all older adults. But, as mentioned in Chapter 2 few countries have major successes to report in terms of indiscriminate interventions with older adults. Most evidence suggests that the most effective interventions are those tailored to the needs of the groups concerned. Targeted interventions, including remedial training in foundation skills, can lead to changes in the way these skills are used, increasing skills levels, and promoting confidence and self-esteem, which in turn can lead to longer working lives.

#### *Investing in education and training for older people can be worthwhile for the public purse*

It has been argued, notably by Heckman, that the most cost-effective education interventions are early on in life (including early childhood) which means that returns to education decrease with the age of the learners (see a summary of arguments in Heckman, 2008). While this may be true as a generality, training that effectively postpones retirement could yield large benefits. Finland has an extensive labour market training system which could be further mobilised for the training of older workers (see Box 5.1). The transition from work to retirement is influenced by many factors, including age, health status, level of education and skills and household structure, as well as workplace conditions, spouse's employment status and pensions and disability schemes (Aubert et al., 2006, Borghans and Weel, 2002, Luna, Stenberg and Westerlund, 2008). For example Hakola and Määttänen (2007) calculated that the 2005 pension reform in Finland increased the average labour market exit age by 8.5 months.

### Box 5.1 Labour market training in Finland

Fifteen Regional Centres for Economic Development, Transport and the Environment are in charge of anticipating and analysing the labour market and the skills needs and supply. The Employment and Economic Offices manage labour market training, in some cases jointly with employers. Vocational training is primarily intended for adults who are unemployed or at risk of losing their jobs and who have completed their compulsory education. It does not typically include a focus on literacy and numeracy, but in some cases remediation in foundation skills is offered to those who have not completed basic education. Training is provided by vocational adult education centres, higher education institutions or private educational institutions based on a procurement contract. It is free of charge for individuals and unemployed people get unemployment benefit and a small subsidy for expenses during the training period. The offices also organise the integration training for adult migrants. The total budget for labour market training was 213 million euros in 2013, of which about 50 million was for training for migrants.

The role of employers has been increased: the “joint purchase” arrangements mean that in addition to the Employment and Economic Development Office, one or more companies can participate in the procurement and planning of the training. In this case, the costs are shared, and the employers pay between 20 and 50% and depends of the type of training, and the employers’ size.

The need for training must be based on labour market needs; improving the availability of work force, lengthening careers, securing employment, and preventing unemployment. Personnel training under the responsibility of the employer, such as introductory training for their employees or general maintenance of professional skills cannot be funded as joint purchase education.

Jobseekers are also given the possibility to retain unemployment benefits for a maximum length of 24 months while studying towards a formal qualification in a university or a polytechnic, if this qualification is expected to improve their vocational skills and chances of finding a job.

Other labour market activation policies include: (a) pay subsidies for older workers and other vulnerable groups; (b) since 2014, financial incentives have been offered to companies that provide training for their employees. The tax deduction is 50 per cent of the average wage cost of the training days, for companies that do at least three days of training per employee per year. (c) career guidance services.

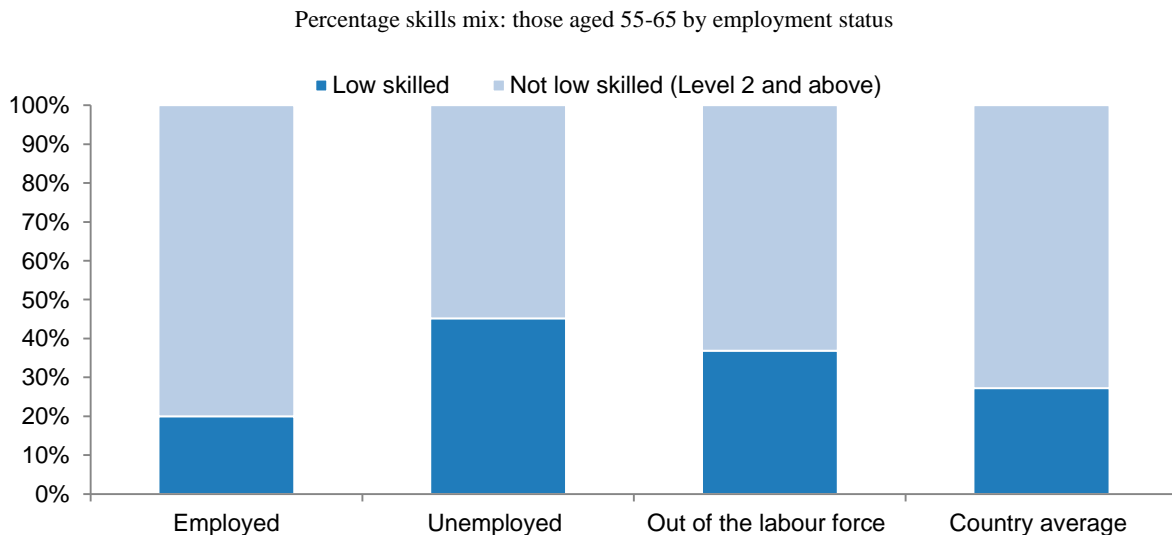
Student feedback is collected on each training programme provided. Of those who took part in training in 2014 83 per cent gave the training the general grade 'good' or 'excellent' and 84 per cent felt that what they had learnt would be useful in working life. 88 per cent rated the skills of the teachers or trainers being “good”. In 2013 34% of participants found employment three months after the course.

*Source:* Porkka, P. (2015), “Labour market training in Finland”, Background document prepared for the review of Adult Learning and Skills in Finland, Ministry of Employment and the Economy ; TE Services (2015), “Vocational labour market training”, [http://www.te-services.fi/te/en/jobseekers/career\\_education\\_training/vocational\\_labour\\_market\\_training/index.html](http://www.te-services.fi/te/en/jobseekers/career_education_training/vocational_labour_market_training/index.html) (accessed on 18 September 2015) ; Maunu T. and Sardar P. (2015) “Työvoimapolitiikan palveluilta sijoittuminen vuonna 2013” TEM analyseja. Työ- ja elinkeinoministeriö.

### *Adults with better skills tend to stay in work longer*

In Finland as in most other OECD countries, employment rates for older people are higher among people with strong foundation skills (see Figure 5.7), and the more skilled can anticipate remaining in work for longer. Strengthened foundation skills may improve employability directly but they are also a correlate for factors like good education and high status white collar jobs that are linked to later retirement. But empirical evidence from the US suggests that high skilled older workers are less likely to leave full-time employment (Peracchi and Welch, 1994, using US data), and are more closely attached to the labour market and less sensitive to labour market shocks (Blau and Goodstein, 2006). Once older workers leave their jobs, foundation skills may decline very fast. Skills are developed and maintained through practice, and some studies suggests that retirement may directly lead to a decline in cognitive skills (Bonsang, Adam and Perelman, 2012; Mazzonna and Peracchi, 2012). The policy implication is that it is very important to maintain employment among older workers, since labour market re-entry may be very difficult.

**Figure 5.7 In Finland, older people still working tend to have stronger foundation skills**



Source: OECD calculations based on the Survey of Adult Skills (PIAAC) (2012) (database).

### *Investing in training may delay retirement*

In principle training might sustain the skills of older workers and delay retirement. Correcting for self-selection into training, older workers who do participate in on-the-job training are less likely to retire early (Schils and Fouarge, 2007, using the European Community Household Panel). So, although the relationship may involve some two-way causality, the evidence suggests that training could be helpful in postponing retirement.

### *Health is one possible link between skills and age of retirement*

Health, education and labour force participation are all strongly inter-correlated. Declining health accounts for much of the decline in labour force participation with age, according to a study by Kalwij and Vermeulen (2005) looking at labour force participation behaviour of individuals aged 50-64 in 11 European countries (but not

Finland), drawing on the Survey of Health, Ageing and Retirement in Europe (SHARE). Lleras-Muney (2005) shows evidence of education having a causal effect on decreasing mortality in the US. One implication is that education and training, including attention to foundation skills, may improve labour force participation not only directly, but also because it promotes the better health that would postpone retirement.

### ***Training in workplaces***

#### *On-the-job training has many benefits*

Research shows that for all groups of workers on-the-job training has a positive effect on perceived skills levels, employment security and labour force participation (Brunello, 2007; Leuven, 2004; Haelermans and Borghans, 2012 ; OECD, 2004 and Bassanini, 2006). But the same studies find little evidence of wage returns for workers who are older or not highly-skilled. Workplace foundation skills courses can help reach people who are not normally involved in continuing education or training. Voluntary participation in workplace learning seems to have the potential to positively change participant attitudes to learning, and how they use literacy and numeracy in the workplace, which can in turn change their actual skills levels, and their employability skills (Windisch, 2015).

#### *In Finland learning from co-workers is relatively common among those with weak foundation skills.*

Learning from co-workers does not seem to depend on gender or spoken language. Such learning is less common among older workers as young people often start on the job with no or very limited relevant work experience and therefore require a lot of guidance. Skills are positively associated with training (on-the-job, learning from co-workers, learning by doing) in Finland and in other countries, which shows that those with the lowest skills are the least likely to improve their skills through work (OECD, forthcoming).

#### *There are also benefits to focusing on improving digital skills of workers through training*

Kubeck (1999) compared the progress of older and younger adults after they had learned to use a computer. Although older adults had more initial difficulty in learning and understanding, they subsequently tended to be more interested in learning than the younger people, and made more progress. Opportunities for adult learners to use computers could therefore usefully be increased. The frequency with which adults use ICT is closely related to proficiency in digital skills, both because more frequent use of ICT is likely to improve proficiency in this domain, and because people with greater proficiency are likely to use ICT more often (OECD, 2015). More ICT use could lead to more literacy practices (especially reading) and therefore better literacy skills in the mid-long term. (See Chapter 2 on how literacy and numeracy practices can lead to better literacy and numeracy proficiency). Given the importance that digital skills have, in work, and to access online public services, ICT provision is important. Similarly adult education providers could steer their provision into offering courses in digital skills, for those out of the labour market. Finland has recently implemented some financial incentives, in the form of tax breaks for employers that train their staff (see Box 5.1), and this might provide a framework to steer the content of the training towards these transferable digital

skills, and away from narrower more firm-specific skills that employers might be expected to pay for themselves. Joint Purchase arrangements for training (see Box 5.1) would also provide a good tool to steer the provision of such courses.

## NOTES

- <sup>1</sup> Estimates calculated using demographic data from Statistics Finland (2015).
- <sup>2</sup> Surveys suggest that some physical and mental abilities decline from around the age of 50 (Skirbekk, 2003). In contrast, some verbal abilities and communicative skills remain more or less unchanged. Older workers can also rely on their professional experience to adapt and compensate for declining abilities (OECD, 2006).
- <sup>3</sup> Data from the Eurobarometer suggest perceived age discrimination on the part of employers in all surveyed countries. Around two thirds of Finns believe that negative perceptions by employers towards older people are an important factor for stopping work – around 10 percentage points above other Nordic countries and around 60% believe that a job applicant over 55 is at a disadvantage. Around 7% of workers older than 55 report having themselves faced age discrimination in the workplace, more than in other Nordic countries (European Commission, 2012).
- <sup>4</sup> Regarding ICT use some researchers have found that older adults experience greater anxiety than younger adults (Laguna and Babcock, 1997), or have less confidence (Dyck and Smither, 1994).
- <sup>5</sup> The PIAAC survey's background questionnaire includes two questions related to the adequacy of ICT skills for work. These are asked of all workers who have used a computer in their current or previous job. The first asks whether the respondent has "the computer skills needed to do [his/her] job well" and the second asks whether "a lack of computer skills affected your chances of being hired for a job or getting a promotion or pay raise". Both of these questions involve self-reports and subjective judgements, which might be influenced by cultural factors. However, the second question suggests some objective criteria to consider (job-related outcomes) when determining the effects of having limited computer skills.
- <sup>6</sup> In this case, having good digital skills means being proficient at Level 2 or 3 in the assessment of problem solving in technology-rich environments.



## References

- Aubert, P., E. Caroli and M. Roger (2006), “New Technologies, Organisation and Age: Firm-Level Evidence”, *The Economic Journal*, 116(509), 73-93.
- Bassanini, A. (2006) “Training, wages and employment security: an empirical analysis on European data”, *Applied Economics Letters*, Vol. 13, No. 8, pp. 523-27.
- Blau, D. and R. Goodstein, (2006), “Accounting for Trends in the Labor Force Participation Rate of Older Men in the United States”.
- Bonsang, E., S. Adam and S. Perelman (2012), “Does retirement affect cognitive functioning?”, *J Health Econ*, May, 31(3):490-501.
- Borghans, L. and B. Weel, (2002). “Do Older Workers Have More Trouble Using a Computer Than Young Workers?”, *Research in Labour Economics* 21, 139-173.
- Brunello, G. (2007) “On the Complementarity between Education and Training in Europe”, *IZA Discussion Paper* Nr 309, Bonn, IZA Institute for the Study of Labor.
- Dyck, J.L. and J.A. Smither (1994), “Age differences in computer anxiety: the role of computer experience, gender and education”, *Journal of educational computing research*, Vol. 10(3), pp. 239-248.
- European Commission (2012), “Active ageing: Finland”,  
[http://ec.europa.eu/public\\_opinion/archives/ebs/ebs\\_378\\_fact\\_fi\\_en.pdf](http://ec.europa.eu/public_opinion/archives/ebs/ebs_378_fact_fi_en.pdf)
- Haelermans, C. and L. Borghans (2012), “Wage effects of on-the-job training: a meta-analysis”, *British Journal of Industrial Relations*, Vol. 50, pp. 502–28; DOI: [10.1111/j.1467-8543.2012.00890.x](https://doi.org/10.1111/j.1467-8543.2012.00890.x).
- Hakola, T. and N. Määttänen (2007), *The effect of the pension reform on retirement age and income distribution – estimates from a dynamic programming model*, Finnish Centre for Pensions, Helsinki.
- Heckman J., R. LaLonde and J. Smith (1999), “The Economics and Econometrics of Active Labor Market Programs.” in Orley Ashenfelter and David Card, eds., *Handbook of Labor Economics* Volume 3A. Amsterdam: North-Holland. 1865- 2097.
- Kalwij, A. and F. Vermeulen (2005). Labour Force Participation of the Elderly in Europe: The Importance of Being Healthy. IZA discussion paper 1887.
- Kubeck, J. E. (1999), “Finding information on the World Wide Web: exploring older adults' exploration”, *Educational Gerontology*, Vol. 25(2), p. 167.
- Laguna, K., and R.L. Babcock (1997), “Computer anxiety in young and older adults: Implications for human computer interactions in older populations”, *Computers in Human Behavior*, Vol. 13(3), pp. 317-326.

- Leuven, E. (2004), “A review of the wage return to private sector training”, Paper prepared for the joint EC-OECD seminar on Human Capital and Labour Market Performance, Brussels. <http://78.41.128.130/dataoecd/4/24/34932279.pdf>.
- Lleras-Muney, A. (2005), “The Relationship Between Education and Adult Mortality in the United States”. *Review of Economic Studies* 72, 189-221.
- Luna (de), X.; A. Stenberg and O. Westerlund (2008), “Can adult education delay retirement from the labour market?”, *Swedish Institute for Social Research (SOFI)*, Stockholm University, WORKING PAPER 6/2008.
- Malin, A. (ed), (2014), Associations between age and cognitive foundation skills in the Nordic countries, Finnish Institute for Educational Research
- Maunu, T. and P. Sardar (2015) “Työvoimapolitiikan palveluilta sijoittuminen vuonna 2013” TEM analyysija. Työ- ja elinkeinoministeriö.
- Mazzonna, F. and F. Peracchi (2012), “Ageing, cognitive abilities and retirement”, *European Economic Review* 56 (2012) 691–710
- OECD (forthcoming), *A Review of England, Data for Policy: Country Studies of Adult Learning and Skills*.
- OECD (2015), *Adults, Computers and Problem Solving: What’s the Problem?*, OECD Publishing, Paris, [.http://dx.doi.org/10.1787/9789264236837-en](http://dx.doi.org/10.1787/9789264236837-en).
- OECD (2014), *OECD Economic Surveys: Finland 2014*, OECD Publishing, Paris. DOI: [http://dx.doi.org/10.1787/eco\\_surveys-fin-2014-en](http://dx.doi.org/10.1787/eco_surveys-fin-2014-en).
- OECD (2013), *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264204256-en> .
- OECD (2006), *Live Longer, Work Longer*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264035881-en>
- OECD (2004), “Improving Skills for More and Better Jobs: Does Training Make a Difference?”, *OECD Employment Outlook*.
- Peracchi, F. and F. Welch (1994), “Trends in labor Force Transitions of Older Men and Women”. *Journal of Labor Economics* 12, No. 2 (Apr. 1994): 210 – 242.
- Porkka, P. (2015), “Labour market training in Finland”, Background document prepared for the review of Adult Learning and Skills in Finland, Ministry of Employment and the Economy.
- Schils, T. and D. Fourage (2007). Participation in training and its effect on the decision to retire early. Seminar Paper at the Research Centre for Education and the Labour Market, Maastricht University.
- Skirbekk, V. (2003), “Age and Individual Productivity: A Literature Survey”, *Max Planck Institute for Demographic Research Working Paper*, WP 2003-028, Max-Planck Institute for Demographic Research, Rostock, Germany, August.
- Statistics Finland (2015), Population by age group, end-2014, [http://www.stat.fi/tup/suoluk/suoluk\\_vaesto\\_en.html](http://www.stat.fi/tup/suoluk/suoluk_vaesto_en.html) (accessed on June 23th 2015).

TE Services (2015), “Vocational labour market training”, [http://www.te-services.fi/te/en/jobseekers/career\\_education\\_training/vocational\\_labour\\_market\\_training/index.html](http://www.te-services.fi/te/en/jobseekers/career_education_training/vocational_labour_market_training/index.html) (accessed on 18 September 2015).

Windisch, H. C. (2015), "Adults with low literacy and numeracy skills: A literature review on policy intervention", *OECD Education Working Papers*, No. 123, OECD Publishing, Paris.

<http://dx.doi.org/10.1787/5jrxnjdd3r5k-en>

OECD SKILLS STUDIES

**Building Skills For All: A Review of Finland**  
**POLICY INSIGHTS ON LITERACY, NUMERACY AND**  
**DIGITAL SKILLS FROM THE SURVEY OF ADULT SKILLS**

